# FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT

## Grace Solar Energy Center

**SCH Number 2025010194**



## May 2026

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B2 Grace Solar Transmission Line Geotechnical Engineering Report
B3 Grace Solar BESS and Substation Geotechnical Engineering and Pile Load Testing Report - Rev. 1
C Biological Resources Technical Report
D Visual Resources Report
E Land Evaluation and Site Assessment
F Water Supply Assessment
G Air Quality and Greenhouse Gas Emissions Technical Report
H Transportation Analysis
I Aquatic Resources Delineation Report
J Cultural Resources Supplemental Survey Memorandum
K1 Phase I Environmental Site Assessment - Grace Solar Project
K2 Phase I Environmental Site Assessment - Grace Orchard Solar Project
L Limited Phase II Environmental Site Assessment Report - Palo Verde Mesa Solar Project
M Fire Prevention Safety Plan
N1 Hydrologic/Hydraulic Analysis
N2 Pre-Development Flood Study Report
O Noise Technical Report
P Paleontological Resources Survey Report
Q Mitigation Monitoring and Reporting Program
R Mitigation Monitoring and Reporting Program as Amended for the Proposed BESS Component

# ES Executive Summary

## ES.1 Introduction

Grace Orchard Interconnection LLC, Grace Orchard Solar II LLC, Grace Orchard Solar III LLC, and Grace Orchard Energy Center LLC, wholly owned subsidiaries of NextEra Energy Resources LLC, herein referred to as the Applicant or project proponent, proposes to entitle, construct, operate, maintain, and decommission the Grace Solar Energy Center (Project). The Project is a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would generate and deliver renewable electricity to the statewide electricity transmission grid.

In August 2017, the County approved the Palo Verde Mesa Solar Project and certified the EIR (SCH 2012081026) which includes a similar footprint to the Proposed Project. The proposed Project is within the scope of the prior EIR; however, because the Project requires substantial changes to the prior EIR that may result in new significant impacts or a substantial increase in the severity of impacts identified in the prior EIR, a supplemental EIR (SEIR) is required (CEQA Guidelines Section 15162).

This chapter provides a summary of the ~~Draft~~ Final SEIR for the Project. Included in this summary are areas of known controversy and issues to be resolved, a summary of Project alternatives, a summary of Project impacts and associated mitigation measures, and a statement of the ultimate level of significance after mitigation is applied.

The Project would aggregate approximately 3,705 acres, including approximately 3,310 acres of private land and 395 acres of land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office. The Project's solar facilities (solar site) would include up to 500 megawatts (MW) of PV solar generation and battery storage with a capacity of up to 500 MW. The Project would also include transmission lines, collector substation, operations and maintenance (O&M) building, access roads, and collection lines.

The Project would include two phases, including Phase 1 – Solar and Western Power Administration (WAPA) Tie-In and Phase 2 – Battery Energy Storage System (BESS) and Arlington Collocation. Under Phase 1, the Project would construct the solar facility, ancillary facilities, and an approximately 3.5-mile transmission line to interconnect with the existing Parker – Blythe 161 kV transmission line owned by WAPA on private land. The Phase 1 transmission line would interconnect through a tie-in with the existing Parker – Blythe 161 kV transmission line owned by WAPA using a new 161 kV switchyard. The Phase 1 solar facility and ancillary facilities could also utilize the Phase 2 transmission line. Under Phase 2, the Project would construct a BESS and ancillary facilities on private land and an approximately 10.5-mile transmission line to interconnect with the Southern California Edison (SCE) 230-kV Colorado River Substation located on BLM-administered land. The majority of the Phase 2 transmission line (8.6 miles) would utilize the existing open-circuit of the double-circuit Arlington transmission line; and therefore, would be located within an existing right-of-way (ROW). The 395-acre area on BLM-administered lands would be limited to the transmission line in Phase 2.

The Project is primarily within Riverside County's jurisdiction, requiring a Conditional Use Permit (CUP 03684R01) for construction, operation, and ultimate decommissioning of the Project.

Public lands under Phase 2 are designated as a Development Focus Area (DFA) by the Desert Renewable Energy Conservation Plan (DRECP) and associated Record of Decision (ROD) signed on September 14, 2016, and thus, have been identified for transmission and renewable energy development. The BLM is the lead agency under the National Environmental Policy Act (NEPA), 42

U.S.C. Section 4321 et seq, for the approximately 395-acres located on federal land under management of the BLM.

The Project would be operational as early as January 2027 and would operate for a minimum of 40 years, which is the typical lifespan for a solar project. At the end of 40-years the facilities would be decommissioned and removed and the area would be reclaimed and returned to conditions prior to Project development, per applicable regulations in effect at the time of decommissioning.

## ES.2 Project Objectives

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

- Utilize property within Riverside County to develop an economically feasible and commercially financeable project for the delivery of up to 500 MW of affordable wholesale solar PV energy generation and up to 500 MW of battery energy storage capacity to California ratepayers under long-term contracts with electricity service providers.
- Minimize environmental impacts and land disturbance associated with solar development by maximizing facility siting on relatively flat, previously disturbed agricultural lands with high solar insolation value, near an identified "solar energy zone" / "Development Focus Area" and in close proximity to road access and established utility corridors.
- Support California's efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established in 2006 under California Assembly Bill 32, the Global Warming Solutions Act of 2006, which requires the California Air Resources Board to reduce statewide emissions of GHGs to at least the 1990 emissions level by 2020.[1] This timeline was updated in 2016 under SB 32, which requires that statewide GHG emissions are reduced to at least 40% below the statewide GHG emissions limit by 2030.[2]
- Support California's aggressive RPS Program consistent with the timeline established by SB 100 (De León, also known as the "California Renewables Portfolio Standard Program: emissions of greenhouse gases"), as approved by the California legislature and signed by Governor Brown in September 2018, which increases RPS in 2030 from 50% to 60% and establishes a goal of 100% RPS by 2045.[3]
- Further the goals of AB 1279, the California Climate Crisis Act, to achieve net zero greenhouse gas emissions no later than 2045, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by 2035.
- Increase energy storage opportunities through the creation of high-capacity battery energy storage systems (BESS) that help to solve California's "duck curve" power production problem and to meet statewide energy goals and support grid reliability.

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1 Global Warming Solutions Act. September 2006. California State Assembly. Bill No. 32. www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

2 Global Warming Solutions Act: emissions limit. September 2016. California State Senate. Bill No. 32. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

3 Senate Bill No. 100. September 2018. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.
- Provide green jobs with living wages to Riverside County residents and the State of California.

# ES.3 Public Involvement

## ES.3.1 Notice of Preparation

In compliance with California Environmental Quality Act (CEQA) Guidelines Section 15082, a Notice of Preparation (NOP) was issued for the Project on January 10, 2025 (State Clearinghouse Number 2025010194). The NOP described the Project, its location, the environmental review process, potential environmental effects, and opportunities for public involvement. The NOP solicited input regarding the scope and content of the environmental information to be included in the SEIR.

## ES.3.2 CEQA Public Scoping

The NOP public scoping period closed on February 8, 2025. Riverside County conducted a public scoping meeting in-person and virtually at the Riverside County Planning Department on January 13, 2025, to inform the public about the Project, provide information regarding the environmental review process; and gather agency and public input regarding the scope and content of the Draft SEIR. Four people signed into the scoping meeting virtually, all of which were members of the Applicant team. No comments were provided verbally during the public scoping meeting. In total, eight different entities submitted written comment letters during the 30-day scoping period.

## ES.3.3 Areas of Controversy/Public Scoping Issues

Concerns expressed by the public and agencies during the NOP scoping period included these resource topics: Air Quality and Greenhouse Gas Emissions, Tribal Cultural Resources, Utilities and Service Systems, and Biological Resources. Concerns were also expressed regarding mitigation, cumulative impacts, and alternatives. Public scoping comments are summarized in Chapter 1, Introduction, Section 1.6, Scoping Comments, and in the individual resource topics addressed in Chapter 3, Environmental Analysis of this SEIR. An NOP scoping comments summary report is provided in Appendix A to this SEIR.

## ES.3.4 Review of the Draft SEIR

The public review and comment period for the Draft SEIR closed on April 6, 2026. Comments received during the Draft SEIR comment period include: 1 from an agency and 1 from an organization. Issues raised include concerns about the air quality analysis, as well as impacts to biological resources. Appendix S includes comments and responses to comments submitted on the Draft SEIR.

# ES.4 Project

## ES.4.1 Project Location

The Project site is located in eastern Riverside County, in southern California (see Figure 2-1, Project Location). The Project is located on private lands with the transmission line located on private land within the solar facility boundary under Phase 1 and on BLM-administered land under Phase 2. The Project site is located approximately 2.8 miles north of Interstate (I) 10, adjacent, on the west side of the City limits of Blythe. The Project is bounded on the north and west sides primarily by BLM lands, to the east and south by

private land. Blythe Airport is located south of the Project. There is an inactive lemon orchard within the center of the Project boundary (see Figure 2-6, Site Plan).

Buck Boulevard, a paved, county-maintained road, runs to the southeast corner of the Project boundary and Stephenson Boulevard, an unpaved, non-county road, runs through the Project boundary on the project boundary north of the intersection with 10th Avenue. Buck Boulevard would be improved as part of the Project and used as the primary Project access. Stephenson Boulevard would provide secondary access to the Project site under Phase 1. Under Phase 2, the proposed transmission line crosses Dracker Road then connects to the existing Arlington transmission line. The transmission line crosses Black Rock Road, a paved, county-maintained road and I-10, but this is the existing portion of the Arlington transmission line. Under Phase 2, the new portion of the transmission line would cross Dracker Road and connect to the proposed substation. There are a few roads within the Project boundary, such as 9th Avenue and Rannells Boulevard, identified by Riverside County as a road "accepted for public use". County roads located within the Project boundary would be improved as required by the County of Riverside. Figure 2-1 illustrates the location of the Project relative to major highways and access roads.

The Project site is also located near existing transmission infrastructure and solar development. Blythe, McCoy, and Arlington Solar Projects are all owned by NextEra and are located north of the Project. The Project is proposing to use 8.6 miles of the open circuit on the existing double circuit Arlington transmission line. NRG Blythe II, also known as Blythe Airport Solar; Blythe PV Project, also known as Blythe 21 Solar; and Blythe Mesa Solar are all located south of the Project. Desert Quartzite and Crimson Solar are recently approved projects located southwest of the Project.

Under Phase 1, the Project proposes to construct approximately 3.5 miles of a new 161 kV transmission line. The proposed transmission line would tie-in to the existing 161 kV Parker-Blythe WAPA line which is routed through the middle of the Project, paralleling Buck Boulevard. The existing 161 kV Parker-Blythe WAPA line connects from the existing SCE Blythe Substation, located approximately 1.5 miles south of the Project, to the Parker Substation, located approximately 59 miles northeast of the Project. Under Phase 2, the Project would connect to the statewide electrical grid and deliver energy through the 230-kV SCE Colorado River Substation located approximately 2 miles south of I-10.

## ES.4.2 Project Components

The Project consists of the solar site (located on private land) and a transmission line located either on private land or on BLM Land. The proposed solar site components include the following:

- Solar field with a capacity of 500 MW
- Crystalline silicon panels or bifacial panels
- Single axis tracker components
- Direct Current (DC) to Alternating Current (AC) power inverters at each solar block
- Transformer(s)
- Battery energy storage system (BESS) with a capacity of 500 MW
- On-site operations and maintenance (O&M) building
- Substation (including a generator and propane tank for emergency use)
- Underground or aboveground (or a combination of both) 34.5-kV collection system

- Underground or aboveground optical ground wire (OPGW)
- Staging area for construction trailers and construction parking
- Laydown areas throughout the Project site during construction
- Water tank adjacent to the O&M building and BESS
- Roadways consisting of internal and perimeter roads
- Access to the Project site for construction and O&M
- Integrated Supervisory Control and Data Acquisition (SCADA) system
- Weather Stations

The transmission line components include the following:

- 161 kV transmission line, approximately 52 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project to the electrical grid
- Interconnection facilities connecting the Project to the existing Parker-Blythe WAPA line
- 230-kV transmission line, approximately 40 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project the to the electrical grid through interconnection to the SCE Colorado River Substation
- Access road along the transmission line corridors for construction and O&M
- Communication cables or lines

# ES.5 Project Alternatives

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to a project should occur. As stated in this section of the guidelines, alternatives must focus on those that are potentially feasible and that may attain most of the basic objectives of the project. Each alternative should be capable of avoiding or substantially lessening any significant effects of the project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per Section 15126.6.

## ES.5.1 Alternatives Analyzed in Detail

**Alternative 1: No Project Alternative**. Under the No Project Alternative, construction of a solar generating facility and associated infrastructure would not occur. This alternative discusses existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the Project was not approved and the site would remain in its current undeveloped condition.

**Alternative 2: Reduced Development Alternative**. This alternative would modify the Project in the following ways:

- Reduction in solar facility site acreage by approximately 158 acres by including an additional 50-feet to 200-feet setback from the road in specific locations, such as along Buck Boulevard, Stephenson Boulevard, 5$^{th}$ Avenue, among others.
- Reduction of solar energy generation and integrated energy storage capacity (compared to 500 MW under the Project).

### ES.5.2 Alternatives Considered but Eliminated

Alternatives to the Project were identified through preliminary studies and a number of potential alternatives were identified. Some of these alternatives did not have the potential to meet the Project objectives, or the potential to avoid or minimize adverse environmental effects. Initial evaluation revealed that others are infeasible. The following alternatives were considered but eliminated from further evaluation, for the reasons summarized below. Detailed explanations are provided in Chapter 4, Alternatives.

- **Palo Verde Mesa Solar Alternative:** The Palo Verde Mesa Solar Alternative included in the certified Palo Verde Mesa EIR (SCH 2012081026 -County No. 532). However, the Applicant does not have the site control for the Palo Verde Mesa Design and the alternative transmission line would have greater impacts, therefore the Palo Verde Mesa Solar Alternative was eliminated from further analysis.
- **Alternative Solar Technologies:** The following alternative solar technologies were screened and eliminated from detailed analysis since they are infeasible or would have greater impacts: Solar Power Tower Technology, Solar Parabolic Trough Technology, and Distributed Solar Technology.
- **Alternative Renewable Energy Technologies:** Alternative renewable energy technologies, such as geothermal, biomass, tidal and wave power technologies, have been eliminated from consideration because they are not within the Applicant's area of expertise and would not be technically or economically feasible for the Applicant to implement. Additionally, the BLM DFA lands within the Palo Verde Valley area have been targeted for transmission and solar energy development and are not within a wind energy zone.
- **Conservation and Demand-Side Management:** This alternative is not technically feasible as a replacement for the Project because California utilities are already required to achieve aggressive energy efficiency goals. Further, 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.6 Environmental Impacts

Detailed descriptions of impacts of the Project are provided in Chapter 3, along with a discussion of cumulative impacts. The impact analysis in the EIR was prepared by topic area and presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. The Applicant proposed measures (APMs) identified for the Project would be implemented as part of Project design for all alternatives except for the No Action Alternative. DRECP conservation and management actions (CMAs) that are applicable for the components of the Project on BLM-administered land and mitigation measures (MMs) that are applicable for the components of the Project on private land are identified to reduce impacts of the Project would also be implemented for any alternative to the extent applicable. 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 Section 15382).

# ES.7 Alternatives Comparison and Environmentally Superior Alternative

The following alternatives have been determined to represent a reasonable range of alternatives to the Project that have the potential to feasibly attain most of the basic objectives of the Project, and avoid or substantially reduce Project impacts. The following alternatives are analyzed in detail in the SEIR:

- Alternative 1: No Project Alternative
- Alternative 2: Reduced Development Alternative

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

## ES.7.1 Alternatives Impact Summary

**Table ES-1. Summary of Comparison of Alternatives Impacts**

| Alternative | Description | Basis for Selection and Summary of Analysis |
|---|---|---|
| Project | Construction and operation of a solar facility would include up to 500 MW of PV solar generation and up to 500 MW of battery storage. The solar site would be located on private land. The Project would aggregate 3,705 acres, including approximately 3,310 acres on private land and 395 acres on BLM-administered land. The Phase 1 transmission line would interconnect through a tie-in with the existing 161 kV Parker – Blythe WAPA line. The Phase 2 transmission line would use the existing Arlington transmission line and interconnect with the SCE 230-kV Colorado River Substation on BLM-administered land. | N/A |
| Alternative 1: No Project Alternative | No development would occur on the Project site. The Project site would remain unchanged. | ▪ Required by CEQA<br>▪ Avoids need for CUP and PUP<br>▪ Greater impacts to GHGs[4]<br>▪ Less impact in all remaining resources<br>▪ Does not meet any of the Project objectives |
| Alternative 2: Reduced Development Alternative | The Project would be reduced through the removal of solar panel based on an increased setback from local roads. Panels would be setback an additional 50-feet to 200-feet from the road in specific locations, such as along Buck | ▪ Less impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hydrology and water quality, and wildfire<br>▪ Similar impacts to the remaining resources |

[4] If the energy needs that are unmet by the development of the Project are not replaced with comparable renewable sources, the development of other energy projects could result in greater emissions from, for example, the burning of fossil fuels and the replacement projects would not contribute to meeting the state's greenhouse gas reduction goals. This impact associated with greenhouse gas emissions could be greater than with the Project.

**Table ES-1. Summary of Comparison of Alternatives Impacts**

| Alternative | Description | Basis for Selection and Summary of Analysis |
|---|---|---|
| | Boulevard, Stephenson Boulevard, 5th Avenue, among others. | ▪ Reduces amount of solar energy production and integrated energy storage<br>▪ Requires CUP and PUP<br>▪ Would not meet all the Project objectives |

## ES.7.2 Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the project. Alternative 1, the No Project Alternative, would be environmentally superior to the Project on the basis of its minimization or avoidance of physical environmental impacts. However, the No Project Alternative cannot be the Environmentally Superior Alternative under CEQA (CEQA Guidelines Section 15126.6(e)(2)). The Reduced Development Alternative would have a reduced level of ground disturbance, which would further reduce construction-related disturbances and would further reduce potential aesthetic impacts. While the Reduced Development Alternative would not meet all the Project objectives, it would have fewer impacts when compared to the Project, therefore the Reduced Development Alternative is considered environmentally superior. A detailed explanation of the environmentally superior alternative is provided in Chapter 4, Alternatives.

## ES.7.3 Summary of Impacts and Mitigation Measures

Table ES-2 provides a complete list of the Project's environmental impacts, including the level of significance before and after mitigation, based on the analysis and conclusions presented in Chapter 3, Environmental Analysis. Project impact thresholds determined to have no impact are not carried forward for further analysis in this SEIR, as identified in each section, and are not included in Table ES-2. Resource categories not found to be significant, as discussed in Section 3.20, are also not included in Table ES-2.

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| *3.2 Aesthetics* | | | |
| **Threshold A:** Would the project have a substantial effect upon a scenic highway corridor within which it is located? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B:** Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view? | Less than Significant (Construction and Decommissioning); Potentially Significant (Operations) | **MM-VIS-1 Project Design.** To the extent possible, the Applicant or Project owner /operator shall implement proper design fundamentals to reduce the visual contrast to the landscape. These primarily focus on the reduction of unnecessary disturbance. Design strategies to address these fundamentals may include the following:<br>• The boundaries of all areas to be disturbed shall be delineated with stakes and flagging before construction, in consultation with the Designated Biologist and County Visual specialist.<br>• Spoils and topsoil where feasible shall be stockpiled in disturbed areas approved by the Designated Biologist.<br>• Project vehicles and equipment shall be confined to the flagged areas.<br>• Where removal of all vegetation is unnecessary, vegetation along roadways and boundaries of other disturbed areas shall be scalloped (refers to incorporating irregular (non-straight) edges of vegetation to make edges/transitions between managed and non-managed areas appear more natural) and feathered (refers to thinning edges of vegetation to make transitions from vegetated to non-vegetated area softer and less abrupt) to reduce the hard line visual impact.<br>• New and existing roads that are planned for construction, widening, or other improvements:<br>  ○ shall not extend beyond the minimum necessary and shall be flagged as described above.<br>  ○ All vehicles passing or turning around shall do so within the planned impact area or in previously disturbed areas. | Less than Significant (Construction and Decommissioning); Significant and Unavoidable (Operations) |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | ○ Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged or staked) before the onset of construction.<br>• Reduce the amount of disturbed area and blend the disturbed areas into the characteristic landscape.<br>Where feasible, replace soil, brush, rocks, and natural debris over disturbed area. | |
| **Threshold C:** Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold E:** Would the project expose residential property to unacceptable light levels? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Potentially Significant | **MM-VIS-1.** | Significant and Unavoidable |
| *3.3 Agriculture and Forest Resources* | | | |
| **Threshold A**: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B**: Would the project conflict with existing agricultural zoning or agricultural use? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold C:** Would the project cause development of non-agricultural uses within 300 feet of agriculturally zoned property | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| (Ordinance No. 625 "Right-to-Farm")? | | | |
| **Threshold D:** Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.4 Air Quality* | | | |
| **Threshold A:** Would the project conflict with or obstruct implementation of the applicable air quality plan? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B:** Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold C:** Would the project expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations? | Potentially Significant | **MM-AQ-1 Valley Fever Training.** Prior to any Project grading activity, the primary Project construction contractor shall prepare and implement a worker training program that describes potential health hazards associated with Valley Fever, common symptoms, proper safety procedures to minimize health hazards, and notification procedures if suspected work-related symptoms are identified during construction. The worker training program shall identify safety measures to be implemented by construction contractors during construction. At a minimum, safety measures shall include the following:<br>• Provide high efficiency particulate air (HEPA)-filtered air-conditioned enclosed cabs on heavy equipment. Train workers on proper use of cabs, such as turning on air conditioning prior to using the equipment. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • Provide communication methods, such as two-way radios, for use by workers in enclosed cabs.<br>• Provide personal protective equipment (PPE), such as half-mask and/or full-mask respirators equipped with particulate filtration, to workers active in dusty work areas.<br>• Provide separate, clean eating areas with hand-washing facilities for construction workers.<br>• Clean equipment, vehicles, and other items before they are moved off site to other work locations.<br>• Provide training for construction workers so they can recognize the symptoms of Valley Fever and promptly report suspected symptoms of work-related Valley Fever to a supervisor.<br>• Direct workers that exhibit Valley Fever symptoms to immediately seek a medical evaluation.<br>• Prior to initiating any grading, the construction contractor shall provide the County with copies of all educational training material. | |
| **Threshold D:** Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.5 Biological Resources* | | | |
| **Threshold A:** Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B:** Would the project have a substantial adverse effect, either directly or through habitat | Potentially Significant | **MM-BIO-1 Biological Monitoring.** The Applicant shall assign at least one Designated Biologist (i.e., agency-approved Qualified Biologist) who shall be approved by the lead | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)? | | agencies (U.S. Bureau of Land Management [BLM] and County of Riverside) and relevant permitting agencies (e.g., California Department of Fish and Wildlife, U.S. Fish and Wildlife Service [USFWS], and Regional Water Quality Control Board, as applicable). The Designated Biologist shall serve as the primary point of contact regarding biological resource compliance. The Designated Biologist shall have demonstrated expertise with the biological resources within the Project area, as well as hold a Memorandum of Understanding with the County of Riverside. Designated Biologist duties shall vary during construction, operation, maintenance, and future decommissioning of the Project. Additionally, Authorized Biologist(s) and Biological Monitor(s) trained and supervised by the Designated Biologist may be necessary to fulfill compliance with Mitigation Measures and permit conditions. Clear definitions of Authorized and Designated Biologists are outlined below. In general, the duties of the Designated Biologist shall include the following:<br>• Communicate with representatives of lead and permitting agencies, as appropriate.<br>• Conduct or oversee Worker Environmental Awareness Program.<br>• Conduct or oversee pre-construction surveys, inspection, and monitoring duties as defined in all Mitigation Measures.<br>• Halt any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources.<br>• Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions.<br>• During construction, prepare and submit monthly compliance reports and other reporting requirements. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | ***Definitions of Roles***<br><br>**Lead Agency–Approved Designated Biologist/Qualified Biologist:** A biologist who the lead agency has reviewed and determined has the skills and experience necessary to effectively survey and monitor for the biological resources that may be present on the Project site. The lead agency–approved Qualified Biologist shall be required to halt Project activities to protect resources, if necessary. The Applicant shall assign at least one lead agency–approved Qualified Biologist as a Designated Biologist. Lead agency–approved Qualified Biologist(s) may also serve as Biological Monitor(s).<br><br>**Authorized Biologist:** A biologist who has been approved based on a combination of qualifications and experience by the BLM and USFWS to handle listed species, or species proposed to be listed for movement purposes or to otherwise avoid harm and impacts to the species. An Authorized Biologist can fulfill the survey and monitoring duties similar to the lead agency–approved Qualified Biologist. The lead agency shall complete an initial review of the Authorized Biologists and determine if they have appropriate qualifications and experience to handle desert tortoises. Then lead agency shall submit those credentials to USFWS for review and approval at least 30 days prior to the need for the biologist to perform those activities in the field. USFWS shall provide approvals based on appropriate qualifications and experience to avoid and minimize adverse effects to the species.<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** The Applicant shall conduct an education program for all persons employed or otherwise working in the Project area before performing any work on the Project site. The WEAP shall consist of a presentation from the Designated Biologist or Biological Monitor(s) that includes a discussion of the biology and general behavior of special-status species, including information about distribution and habitat, sensitivity of the special-status species to human activities, legal protections, recovery efforts, and penalties for violations. All construction | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | crews and contractors shall be required to participate in WEAP training prior to starting work on the Project. The Applicant shall prepare and distribute a fact sheet handout containing this information for workers. WEAP training materials shall be provided in English and Spanish. Upon completion of the WEAP, employees shall sign a form stating that they attended the WEAP training and understand all protection measures. At a minimum, the WEAP shall do the following:<br>• Be developed by or in consultation with the Designated 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.<br>• Include a review of Mitigation Measures and permit requirements.<br>• Include a review of the special-status species and other sensitive resources that may occur in the Project area, as well as the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources.<br>• Include desert tortoise–specific training that includes a detailed description; distribution; general behavior; sensitivity to human activities; regulatory status, including prohibitions and penalties incurred for violations; mandatory conservation measures; and procedures if a desert tortoise is observed on site.<br>• Provide an explanation of the function of flagging that designates authorized work areas and specify the prohibition of construction activities.<br>• Discuss general environmental and safety protocols, such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • Discuss the federal, state, and local regulatory setting (e.g., Endangered Species Acts, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act) and the consequences of non-compliance.<br>• Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas.<br>• Provide contact information for the Designated Biologist and instructions for notification of any vehicle/wildlife collisions or dead or injured wildlife species encountered during Project-related activities.<br>Include a training acknowledgment form to be signed by each worker indicating that they received training and will abide by the guidelines. A record of all personnel trained shall be maintained throughout the construction period. Along with their signature, each worker shall receive a sticker for their hard hat indicating they received the training.<br>**MM-BIO-3 Minimization of Impacts to Native Vegetation.** The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to natural, or native, vegetation:<br>• Prior to ground-disturbing activities, work areas (including, but not limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with construction fencing (e.g., the common orange vinyl material) or staking to clearly identify the limits of work. No paint or permanent discoloring agents shall be applied to rocks or vegetation to indicate surveyor construction activity limits or for any other purpose. Fencing/staking shall remain in place for the duration of construction. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • All disturbances, access roads, staging areas, vehicles, and equipment shall be confined to the fenced/flagged authorized work areas.<br>• To the greatest extent practicable, construction activities shall minimize disturbance to soil and native vegetation.<br>• Best management practices shall be used where applicable for prevention and control of soil erosion and to minimize the introduction and spread of invasive plant species.<br>• Hazardous materials, including motor oil, fuel, antifreeze, hydraulic fluid, and grease, shall be contained, and spills or leaks shall be promptly corrected and cleaned up according to applicable regulations. Any such spills or leaks that occur shall be reported to the U.S. Bureau of Land Management and County of Riverside.<br>• Vehicles and equipment shall be properly maintained to prevent spills and leaks, and refueling shall not be conducted outside of the authorized work areas or within 100 feet of any sensitive resource (e.g., riparian areas).<br>• Upon completion of construction activities, 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 and plastic containers.<br>**MM-BIO-4 Minimization of Impacts to Wildlife.** The Applicant shall undertake the following measures, overseen by the Designated Biologist, during construction and decommissioning to avoid or minimize impacts to wildlife:<br>• **Wildlife Avoidance.** Project activities shall avoid interference with wildlife (including ground-dwelling species, birds, and bats) by allowing animals to escape from a work site prior to disturbance. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • **Sensitive Biological Resources.** Sensitive biological resource areas near all work activities shall be clearly communicated and marked (e.g., flagged) in the field. Avoidance buffers shall be established and maintained by the Designated Biologist.<br>• **Minimize Traffic Impacts.** The Applicant shall specify and enforce maximum vehicle speed limits to minimize risk of wildlife collisions and fugitive dust. Vehicles shall not exceed a speed limit of 15 miles per hour (mph) throughout the Project site on unpaved roads. To the extent possible, night-time construction-related activity shall be minimized, but if work must be conducted at night, the speed limit shall be 10 mph. Dust suppression shall occur during construction activities as needed.<br>• **Minimize Lighting Impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light toward surrounding wildlife habitat. New light sources shall be minimized, and lighting shall be designed to limit the lighted area to the minimum necessary (e.g., using downcast lights).<br>• **Avoid Use of Toxic Substances.** Use of chemicals, fuels, lubricants, or other toxic substances shall comply with all local, state, and federal regulations to minimize the possibility of contamination of habitat or primary or secondary poisoning of predators. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be nontoxic to wildlife and plants.<br>• **Minimize Noise and Vibration Impacts**. The Applicant shall conform to noise requirements specified in the noise analysis of the Environmental Impact Report to minimize noise to off-site habitats.<br>• **Water.** Potable and non-potable water sources, such as tanks, ponds, and pipes, shall be covered or otherwise | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks. Water sources (e.g., hydrants, tanks) shall be checked periodically by Biological Monitors to ensure they do not create longstanding ponded areas, which could attract wildlife and wildlife predators.<br>• **Food and Trash.** No deliberate feeding of wildlife shall be allowed. Further, to avoid attracting wildlife, all food-related trash items, including wrappers, cans, bottles, and food scraps (organic waste) shall always be contained and properly disposed of in self-closing, sealable containers with lids that latch to prevent wind and wildlife (e.g., ravens and coyotes) from opening the containers. Particular attention shall be paid to "micro-trash" (including such small items as screws, nuts, washers, and nails; coins; rags; small electrical components; small pieces of plastic, glass, and wire; and any debris or trash that is colorful or shiny). All trash receptacles shall be regularly inspected, emptied, and removed from the Project area at a minimum of once a week to prevent spillage and to maintain sanitary conditions.<br>• **Firearms and Dogs.** All personnel and any other individuals associated with the Project shall be prohibited from bringing any firearms to the Project site, except those in the possession of authorized security personnel or local, state, or federal law enforcement officials. No pets shall be permitted on the Project site except dogs that may be used to aid in official and approved monitoring procedures/protocols or service dogs under Title II and Title III of the Americans with Disabilities Act.<br>• **Wildlife Entrapment.** All pipes, culverts, and similar structures stored or installed .ground shall be inspected by the Designated Biologist or Biological Monitor(s) before the material is moved, buried, or capped. The Designated Biologist or Biological Monitor(s) shall inspect all open holes and trenches a minimum of once a day and just prior to backfilling. If open holes or trenches remain | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | overnight, an escape ramp shall be created every 100 feet to allow wildlife to exit. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers an animal that has become trapped, the worker shall halt activities and notify the Designated Biologist or Biological Monitor immediately.<br>• **Dead or Injured Wildlife.** Dead or injured special-status wildlife species shall be reported to the lead agency and permitting agencies, as applicable, within 24 hours of detection. The Designated Biologist or Biological Monitor shall complete a Wildlife Incident Form and safely move the carcasses out of the road or work area and dispose of the animal. Disposal of any special-status species requires advance coordination with the County of Riverside, U.S. Bureau of Land Management, and U.S. Fish and Wildlife Service. If an animal is entrapped, the Designated Biologist or Biological Monitor shall free the animal if possible, or work with construction crews to free it, in compliance with safety requirements, or work with applicable agencies to resolve the situation. Injured wildlife shall be transported to an approved wildlife rehabilitation center (noted below). The Applicant shall be responsible for paying the cost of transportation and rehabilitation of injured wildlife.<br>o Ramona Wildlife Shelter, 18740 Highland Valley Road, Ramona, California; 619.299.7012<br>o El Paseo Animal Hospital in Palm Desert, California; 760.491.1008<br>• **Pest Control.** No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site or in support of any Project activities. If rodent control must be conducted, the use shall be restricted to the interiors of buildings, and zinc phosphide shall be used | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | because of the lower risk of poisoning burrowing mammals.<br>• **California Natural Diversity Database.** All observations of special-status species, alive or dead, shall be recorded and reported to the California Natural Diversity Database by the Biological Monitor or Authorized Biologist.<br><br>**MM-BIO-5 Integrated Weed Management Plan.** The Applicant shall prepare and implement an Integrated Weed Management Plan to minimize and prevent noxious, non-native, and invasive weeds from infesting the site and spreading into surrounding habitat. The Integrated Weed Management Plan shall be approved by the U.S. Bureau of Land Management (BLM) for implementation on BLM-administered lands. If required, the Integrated Weed Management Plan shall also be approved by the County of Riverside for implementation on private lands. The Integrated Weed Management Plan shall identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds. All construction vehicles (e.g., trucks, trailers, machinery) shall be washed (either by water or pressurized air) off site before entering the Project site to limit the spread of weeds. All wattles and bales shall be certified weed-free and shall be removed at the completion of activities. The Integrated Weed Management Plan shall include a reporting schedule to be implemented by the Designated Biologist. The Integrated Weed Management Plan shall identify herbicides proposed for use and include conditions to avoid application of herbicides in or around any environmentally sensitive areas. The Applicant shall avoid use of products containing the active ingredients 2,4-D, diquat, glyphosate, hexazinone, or triclopyr. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | **MM-BIO-9 Desert Tortoise Protection.** No desert tortoise may be handled or relocated without authorization from the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS). The Applicant shall employ Authorized Biologists and Biological Monitors who are qualified desert tortoise biologist(s) for purposes of implementing the desert tortoise protection measures identified below. The Designated Biologist noted in MM BIO-1 may also serve as a qualified desert tortoise biologist if they meet the following qualifications. The Authorized Biologist and Biological Monitor desert tortoise biologist qualifications shall be subject to review and approval by the applicable lead and permitting agencies. Minimum qualifications shall include prior approval by CDFW and USFWS as an authorized desert tortoise biologist and/or at least 2 years of experience on trend plots or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by CDFW and USFWS (e.g., Desert Tortoise Council tortoise training workshop) is required.<br><br>The Biological Monitor shall monitor Project activities within desert tortoise habitat, ensure proper implementation of protective measures, and report incidents of non-compliance in accordance with a Biological Opinion and/or permits. Monitors shall have sufficient desert tortoise training and field experience to detect the presence of desert tortoises through observations of animals and sign, including scat and burrows. A Biological Monitor is typically not authorized to handle desert tortoises, determine presence/absence of desert tortoises, or conduct clearance surveys.<br><br>The Authorized Biologist is approved to conduct activities that may result in “take” of desert tortoise, including locating tortoises and their sign, recording and reporting tortoise and sign observations in accordance with approved protocol, and ensuring that the effects of the Project on desert tortoise and its habitat are minimized in accordance with a Biological | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Opinion or permit. For purposes of the federal Endangered Species Act, "take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An Authorized Biologist shall have thorough knowledge of desert tortoise behavior, natural history, and ecology, and demonstrate substantial field experience and training to successfully handle desert tortoises; excavate burrows to locate desert tortoises or eggs; relocate desert tortoises; reconstruct desert tortoise burrows; unearth and relocate desert tortoise eggs; and locate, identify, and record all forms of desert tortoise sign.<br><br>The Authorized Biologist(s) shall be responsible for overseeing compliance with desert tortoise protective measures, conducting pre-construction surveys for all work areas, monitoring for evidence of tortoises in construction areas, checking under vehicles and equipment, inspecting excavations and other potential entrapments, and ensuring worker compliance with all desert tortoise protection measures. Any incident that is considered by the Authorized Biologist(s) to be in non-compliance with desert tortoise protective measures shall be documented.<br><br>The Authorized Biologist(s) shall have the authority to halt any Project activity that is in violation of desert tortoise protective measures or that may result in take of a desert tortoise. The following incidents shall require immediate cessation of any Project activities: location of a desert tortoise within 100 feet (30 meters) during the non-active season and within 250 feet during the active season (September–October and April–May) of an active work area; imminent threat of injury or death to a desert tortoise; unauthorized handling of a desert tortoise, regardless of intent; and operation of construction equipment or vehicles outside of authorized work areas. Work activities may resume once the Designated Biologist or Authorized Biologist(s) determines that there is no threat to the desert tortoise and/or the tortoise has walked more than 100 feet (30 meters) away during the non-active season and at least a | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
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| | | 250 feet away during the active season from the work area, and the tortoise shall be visually monitored so that if it returns to the work site, it shall not be injured or killed. The Applicant shall be responsible for implementing the following requirements, under direction of the Authorized Biologist(s):<br>• **Worker Training.** The Worker Environmental Awareness Program described in MM BIO-2 shall incorporate desert tortoise–specific training.<br>• **Exclusion Fencing.** Prior to construction of the solar and battery energy storage system (BESS) site, it shall be fully enclosed by temporary or permanent desert tortoise exclusion fencing. All exclusion fencing shall adhere to the County approved desert tortoise exclusion fencing design that incorporates recommendations from the 2009 (or most current) USFWS design guidelines. To the extent feasible and permissible by County of Riverside flood control design guidelines, permanent exclusion fence shall be integrated with the site security fence for maximum durability. Temporary desert tortoise exclusion fencing may be installed along the linear facility routes within the approved right-of-way. Temporary fencing shall be removed after completion of construction. The qualified desert tortoise biologist(s) shall monitor the installation of all fencing. Once installed, exclusion fencing shall be inspected at least monthly until construction completion and following all rain events, and corrective action shall be taken if fence maintenance is needed. After an area is fenced and until desert tortoises are removed, the Designated Biologist shall be responsible for ensuring that desert tortoises are not being exposed to extreme temperatures or predators as a result of their pacing the fence. Remedies may include the use of shelter sites placed along the fence, immediate translocation, removal to a secure holding area, or other means determined by the U.S. Bureau of Land Management (BLM), USFWS, and CDFW, as applicable. Exclusion fencing shall incorporate tortoise guards, or | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | cattle guards, and/or gates at each road entry point. Gates shall always remain closed, except when vehicles are entering or leaving the Project site. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open if a qualified desert tortoise biologist is present to monitor potential tortoise activity.<br>• **Shade Structures.** Shade structures shall be installed every 1,000 feet (300 meters) along the exterior of the perimeter fence where tortoises may encounter newly installed fencing, or per the most current USFWS guidance. Shade structures shall be maintained for 2 years following completion of the perimeter fence.<br>• **Pre-Construction Surveys.** Pre-construction surveys shall be performed prior to ground disturbance to ensure no desert tortoises are present within the direct disturbance area. Pre-construction surveys shall be conducted in unfenced Project areas no more than 7 days prior to ground disturbance. Clearance surveys shall also be conducted after the solar and BESS site has been fully enclosed by temporary or permanent desert tortoise exclusion fencing.<br>• **Avoidance.** Any potentially occupied burrows shall be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If a live tortoise or an occupied tortoise burrow is identified in the work area, all Project activities that may result in take shall cease. The tortoise shall be allowed to leave on its own without handling or harassment.<br>• Unfenced Work Areas. If a tortoise is observed on or near the road accessing a work area, vehicles shall stop to allow the tortoise to move off the road on its own. The ground beneath vehicles parked outside of cleared areas within desert tortoise exclusion fencing shall be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle shall not | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | be moved until the desert tortoise leaves on its own. Any work conducted in an area that is not fully enclosed by exclusion fencing must be monitored by a qualified desert tortoise biologist who shall stop work if a tortoise enters the work area. Work activities shall only proceed when the tortoise has moved away on its own and there is no threat of injury or death. Work sites with potential hazards to desert tortoises (e.g., auger holes, steep-sided depressions) shall be enclosed by a temporary exclusion fence and not left open overnight.<br>• **Dead or Injured Tortoises.** If a dead or injured desert tortoise is found within the Project area, the Applicant or Designated Biologist shall notify by phone and email USFWS, CDFW, and BLM within 24 hours of detection. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, possible cause of death or injury if known, and other pertinent information.<br><br>**MM-BIO-10 Raven Management.** The Applicant shall provide funding to the Renewable Energy Action Team Account held by the National Fish and Wildlife Foundation to support the U.S. Fish and Wildlife Service's (USFWS) Regional Raven Management Program. The one-time fee shall be $105 per acre of direct impacts, and the fee shall be determined based on final calculation of impacted acreage. The Applicant shall also implement the following requirements, under direction by the Designated Biologist, where appropriate:<br>• The Applicant shall incorporate raven management into the Bird and Bat Conservation Strategy (BBCS) (MM BIO-8) to address activities that may occur during the pre-construction, construction, decommissioning, and operations and maintenance phases of the Project that may attract common ravens, a nuisance species that is a predator of desert tortoises and other sensitive species in the Project vicinity. The measures contained in the BBCS | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | specific to raven management shall be designed to do the following:<br>○ Identify conditions associated with the Project that might provide raven subsidies or attractants.<br>○ Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities.<br>○ Describe monitoring during construction and operations, including methods to identify individual ravens that prey on desert tortoises.<br>• The Worker Environmental Awareness Program described in MM BIO-2 shall incorporate discussion of ravens and responsibilities to control subsidies.<br>• Raven food sources shall be reduced by managing waste. Trash and food items shall always be contained in closed containers.<br>• Raven food sources shall be reduced by managing surface disturbance and dead wildlife. The Designated Biologist or Biological Monitor(s) shall, to the extent authorized, relocate wildlife from harm's way during ground-disturbing activities to minimize incidental kill to the extent feasible. Vehicle traffic speeds shall adhere to posted limits and not exceed 15 miles per hour on all unpaved roads. If dead wildlife remains and roadkill are found, they shall be collected and disposed of (e.g., buried, when possible).<br>• Water availability shall be reduced. Excess water shall not be used for fugitive dust control, and standing water issues shall be corrected promptly. Water tanks shall be maintained in proper operating condition. Designated Biologist and Biological Monitors shall monitor raven activity during construction. All raven sightings/encounters shall be documented in daily logs.<br>• All inactive raven nests (i.e., no eggs or nestlings present) shall be removed. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • The Designated Biologist shall notify the U.S. Bureau of Land Management (BLM), California Department of Fish and Wildlife (CDFW), and USFWS (Palm Springs Fish and Wildlife Office at 760.322.2070) of any active raven nests encountered within the Project area. Nests within 100 feet of active work areas shall be monitored weekly to identify any evidence of predation on desert tortoises, and results shall be reported to BLM, CDFW, and USFWS accordingly. Access shall be granted to National Fish and Wildlife Foundation contractors responsible for surveying and treating active raven nests. Treatment shall consist of flying to within 3 feet (1 meter) of a target nest with a ground-piloted aerial vehicle (i.e., drone) (U.S. made) outfitted with a remote fluid applicator. The fluid applicator system would apply a few milliliters of low-viscosity food-grade oil, which halts egg development due to oxygen deprivation.<br>• Contractors visiting the Project site on maintenance or compliance monitoring visits shall check for evidence of predation of desert tortoise (juvenile or hatchling desert tortoise carcasses). If carcasses are found, the contractors shall contact the Palm Springs Fish and Wildlife Office (760.322.2070) to report the matter.<br>• Adaptive management actions shall be implemented if ravens are found to roost or nest on Project infrastructure. These may include increased monitoring and reporting, refined strategies for refuse management, and design strategies and passive repellant methods.<br><br>**MM-BIO-13 Compensation for Impacts to Native Vegetation.** The Applicant shall provide habitat compensation for the final impact acreages to sensitive native vegetation from the Project. An estimate of required compensation acreages for impacts occurring on private lands is provided below; however, final compensation shall be based on final calculation of impacted acreage. Habitat compensation for impacts to native vegetation on U.S. Bureau of Land | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Management (BLM)–administered lands shall be based on BLM's review of Project conformance with Conservation and Management Action LUPA-BIO-COMP-1. Habitat compensation for Project impacts on private lands shall be provided for impacts to the following native vegetation:<br>• **Riparian Vegetation** (Blue Palo Verde–Ironwood Woodland): Impacts to riparian communities (blue palo verde–ironwood woodland) on private lands shall be compensated at a 3:1 ratio. An estimate 12.6 acres of Project impacts to riparian communities on private lands at a 3:1 compensation ratio would require an estimated 37.8 acres of habitat compensation. The final required compensation acreage for riparian communities shall be based on the final calculations of impacts to these communities on private lands.<br>• **Other Sensitive Vegetation Communities:** Impacts to the white bursage association and rigid spineflower–hairy desert sunflower desert pavement association on private lands shall be compensated at a 1:1 ratio. A estimate of 46.1 acres of permanent impacts to the white bursage association and 33.4 acres of permanent impacts to rigid spineflower–hairy desert sunflower desert pavement, and 0.6 acres of permanent impacts to arrow weed thickets would require an estimate of 80.2 acres of habitat compensation. The final required compensation acreage for other sensitive communities shall be based on the final calculations of impacts to these communities on private lands.<br>No habitat compensation shall be required for impacts to common native vegetation communities, non-native vegetation, or other land cover types, such as disturbed habitat, fallow lands, agriculture, or urban/developed lands, on private lands.<br>The Applicant shall provide funding or bonding for the acquisition and conservation of compensation lands. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Conservation instruments, associated documentation, and/or securities shall be submitted to the applicable agencies for review and approval prior to initiating ground disturbance, pursuant to the requirements of permits and authorizations issued by lead, responsible, and permitting agencies. | |
| **Threshold C:** Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service? | Potentially Significant | **MM-BIO-1 Biological Monitoring.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-3 Minimization of Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-4 Minimization of Impacts to Wildlife.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resource Management.** The Applicant shall assign a vegetation specialist to oversee and implement salvage and transplantation of plant species protected pursuant to the California Desert Native Plants Act (CDNPA) and revegetation of milkweed species used as host and nectar sources for Monarch butterfly. Where the area occupied by a CDNPA species was delineated (versus a point count), additional census surveys shall be required to determine the exact number of CDNPA plants to be removed. On the private lands under the jurisdiction of the County of Riverside, the Applicant shall obtain a permit from the County of Riverside pursuant to the CDNPA for the purposes of salvage or removal of protected species during construction, if required. Salvage and transplantation activities pursuant to the CDNPA on private lands shall be conducted in concert with such activities on U.S. Bureau of Land Management (BLM)–administered lands under BLM policy. Revegetation of temporarily disturbed areas is not anticipated to occur on the private lands within the solar and battery energy storage system site; | Less than Significant |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | however, salvaged materials from the private lands portion of the Project site may be transplanted within BLM-administered lands along the transmission line route as part of revegetation efforts of temporarily disturbed areas, with BLM approval. Revegetation of the BLM administered lands along the transmission route shall include a seed mix including native milkweed species (e.g., *Asclepias subulata* and *Asclepias albicans*).<br><br>**MM-BIO-7 Minimization of Impacts to Birds and Bats.** The Applicant shall undertake the following measures to avoid or minimize impacts to birds and bats.<br><br>• **Bird and Bat Conservation Strategy.** The Applicant shall prepare a Bird and Bat Conservation Strategy (BBCS) for review and approval by the applicable lead and permitting agencies. The BBCS shall include baseline data on the distribution of bird and bat species within the Project area, risk assessment, measures to avoid and minimize adverse impacts, a description of relevant monitoring and reporting, and a framework for adaptive management. The BBCS shall include design requirements consistent with the Avian Power Line Interaction Committee (APLIC) guidelines.<br><br>• **Nesting Bird Protection**. If vegetation removal or ground disturbance occurs during the nesting season (February 1 through August 31), pre-construction surveys for active nests shall be conducted by qualified biologists at the direction of the Designated Biologist. Nest surveys shall be completed no more than 3 days prior to initiation of vegetation removal or ground disturbance, and shall be repeated every 2 weeks in areas of ongoing construction activity. If an active nest is found, an exclusion buffer shall be established and marked in the field by the Designated Biologist. The Project shall maintain a buffer adequate to avoid otherwise prohibited take, possession, or destruction of any bird, nest, or egg. Nesting bird | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | management shall be described further in a Nesting Bird Management Plan or incorporated in the BBCS and submitted to the applicable lead and permitting agencies for review and approval.<br><br>**MM-BIO-8 Burrowing Owl Protection.** The Applicant shall implement the following measures to avoid the impacts to and take of burrowing owl and to mitigate impacts to burrowing owl should they occur.<br><br>**Measures to Avoid Burrowing Owl Impact and Take**<br><br>The Applicant shall implement the following measures to avoid impacts to and take, as defined by California Fish & Game Code Section 86, of burrowing owl:<br><br>• **Take Avoidance Pre-Construction Surveys.** A qualified avian biologist shall conduct a pre-construction take avoidance survey for burrowing owls no less than 14 days and no greater than 30 days prior to initiation of construction activities, including brushing, clearing, grubbing, and grading of the Project site, regardless of time of year. If construction activities have ceased for 30 days or more following the initial pre-construction survey or subsequent activities on the site would result in clearing or ground disturbance activities, a take avoidance survey shall be repeated prior to the activity. The pre-construction survey focused exclusively on detecting burrowing owls shall be conducted within Project construction or activity areas in accordance with the most current CDFW guidelines (CDFG 2012, or updated guidelines as they become available). If no burrowing owls are observed, a second survey shall be conducted within 24 hours prior to commencement of ground-disturbing activities to confirm absence. Burrowing owl surveys shall record potentially occupied burrows (i.e., suitable burrows with observed burrowing | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | owls or with burrowing owl sign such as pellets, feathers, or white wash within the last three years) or presence of burrowing owls within the Project area and within 150 meter (500 feet) of the Project. Burrows that are suitable for burrowing owl use but are not determined to be potentially occupied are not subject to the Burrow Avoidance Measures described below, and may be collapsed under the supervision of the Designated Biologist/Authorized Biologist after confirming they are not occupied by other special-status species.<br><br>• **Avoidance.** Should the pre-construction survey or subsequent surveys identify burrowing owl presence or potentially occupied burrows within the project site or activity area, the following measures shall be implemented to avoid impacts to and take of burrowing owl:<br><br>o ***Burrow Avoidance:*** If a potentially occupied burrowing owl burrow is detected within any Project disturbance area, or within a 150-meter buffer of the disturbance area, no-disturbance buffers shall be established based on the level of disturbance as directed in the 2012 CDFG Staff Report or in accordance with the most current CDFW guidelines. If the 2012 CDFG Staff Report's initial recommended buffers cannot feasibly be maintained, the Applicant shall prepare and implement a Burrowing Owl Avoidance Plan describing required methods to avoid take of burrowing owl, whose measures may include but need not be limited to buffer reductions as determined by a Designated Biologist/Authorized Biologist based on site conditions, increased burrow monitoring, and/or | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | the creation of artificial burrows. The Applicant shall comply with the plan to ensure that Project activities do not result in "take" (i.e., hunt, pursue, catch, capture, or kill or attempt to do so) of burrowing owl.<br>○ ***Construction Monitoring*:** Monitoring of the site for new burrows shall be conducted for the period following the initial pre-construction survey or subsequent surveys until construction activities are completed. If burrowing owls begin using a burrow on the site at any time after the initial pre-construction survey or subsequent surveys, the procedures described above for Burrow Avoidance shall be implemented. During construction, best management practices shall be employed, as directed by the Designated Biologist/Authorized Biologist, to discourage burrowing owls from colonizing new portions of the site. Such measures include, but are not limited to ensuring that the ends of all large pipe and culverts are covered when they are not being worked on and covering rubble piles, dirt piles, ditches, and berms.<br>○ ***Individual Burrowing Owl Avoidance.*** Burrowing owls associated with burrows shall be avoided through the Burrow Avoidance measures described above. Locations of observed burrowing owl individuals not associated with a burrow during the pre-construction survey, subsequent surveys, or during construction monitoring shall be avoided through the procedures described above for Burrow Avoidance. Construction activities shall not | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | proceed in the location of the observed burrowing owl individual until monitoring determines that the burrowing owl is no longer present.<br>**Additional Measures to Mitigate Burrowing Owl Impacts**<br>The Applicant shall implement the following measures to mitigate unavoidable impacts to burrowing owl:<br>• **CDFW Consultation.** If the Avoidance measures listed above under Measures to Avoid Burrowing Owl Impact and Take cannot be implemented or would not result in avoiding take of burrowing owl, the Applicant shall consult with CDFW and, if the species is a candidate, threatened or endangered species under CESA at such time, seek incidental take authorization from CDFW. Applicant shall implement all conditions of the Incidental Take Permit should it be issued.<br>• **Compensatory Mitigation.** Compensatory mitigation shall be provided, as specified in the California Burrowing Owl Survey Consortium's 1993 Burrowing Owl Survey Protocol and Mitigation Guidelines (1993) or as determined through an Incidental Take Permit, if necessary, at the following compensatory mitigation ratios: replacement of occupied habitat with occupied habitat (9.75 acres per potentially occupied burrow), replacement of occupied habitat with habitat contiguous to currently occupied habitat (13.0 acres per potentially occupied burrow), replacement of occupied habitat with suitable unoccupied habitat (19.5 acres per potentially occupied burrow). Compensatory mitigation shall be accomplished through one or more of the following actions:<br>o Conservation Bank Credit Purchase: Purchase of conservation bank credits sufficient to meet the compensatory mitigation ratios defined above at | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | a CDFW-approved conservation/mitigation bank with burrowing owl credits and a bank service area covering the Project site.<br>○ Permittee-Responsible Mitigation: Execute and fund the long-term protection and management of off-site habitat compensation lands sufficient to meet the compensatory mitigation ratios defined above. Applicant shall provide long-term protection of the habitat compensation lands through fee title acquisition, conservation easement, or both. A long-term habitat management plan shall be prepared for the habitat compensation lands, and a Property Analysis Record (PAR) or PAR-like analysis shall be prepared to estimate the long-term management costs for the lands. A non-wasting endowment shall be established to fund management of the lands in perpetuity, and a qualified entity shall hold the endowment and serve as long-term land manager for the lands.<br>**MM-BIO-11 Desert Kit Fox and American Badger Relocation.** The Applicant shall implement the following measures to protect desert kit fox and American badger:<br>• Biological Monitors shall perform pre-construction surveys for kit fox/badger dens in the Project disturbance area and a 100-foot (30-meter) buffer beyond the Project disturbance area, with landowner permission to access, within 30 days of initiation of construction activities.<br>• All potential desert kit fox/badger dens identified during pre-construction surveys shall be monitored for a minimum of 3 consecutive nights (between August 1 and January 14) or 5 consecutive nights (between January 15 and July 31) to determine occupancy status. Occupancy | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | monitoring shall be performed using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance(s). Each den shall be classified as inactive or active following the evaluation period.<br>• If no tracks are observed in the tracking medium or no photos of the target species are captured after the monitoring period, the den shall be classified as inactive. Inactive dens in the direct path of disturbance may be excavated by hand and backfilled to reduce the likelihood of reuse by badgers or kit fox. An Authorized Biologist shall ensure that desert tortoises are not present prior to excavation of inactive desert kit fox dens. If a desert tortoise is present, the Authorized Biologist shall implement protective measures described in MM BIO-9 (Desert Tortoise Protection). Dens not directly impacted by construction shall not be excavated.<br>• If an active den is found outside the natal season (August 1 through January 14), the den may be subject to passive relocation. Prior to any relocation of desert kit fox and American badger, the California Department of Fish and Wildlife (CDFW) must be notified of the active den and methods proposed for relocation. Relocation may occur by progressively blocking the den with natural materials (e.g., rocks, dirt, sticks, or vegetation) or artificial, non-injurious materials placed in front of the entrance for a minimum of 5 consecutive nights to discourage continued use. Additional deterrents, such as natural mixtures of aromatic organics (e.g., onions, garlic, and essential oils), transistor radios, and ultrasonic emitters, may be used. The use of one-way doors may be used. Installation of one-way doors shall take place in the afternoon while desert kit fox/badgers are inactive and deep within the den complex. After verification that passive relocation | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | has been successful and the den has been unoccupied for 5 consecutive nights, the den may be fully excavated.<br>• If an active den is found during the natal season (January 15 through July 31), a 500-foot (150 meter) no-disturbance buffer shall be established. All active dens found during the natal season shall be presumed natal and shall not be subject to passive relocation activities unless approval is obtained from CDFW.<br>• Buffers may be reduced, expanded, or temporarily modified to allow certain low-impact activities (e.g., vehicle access) to occur as determined feasible by the Designated Biologist without adversely affecting the den. All modifications to the size of exclusion buffers or allowance of certain Project activities within the exclusion buffer shall be documented by the Designated Biologist.<br>• Current guidelines from CDFW regarding minimizing transmission of canine distemper virus shall be followed.<br>**MM-BIO-13 Compensation for Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-14 Special-Status Plant Impact Avoidance and Minimization Measures**<br>**Pre-Construction Surveys:** Prior to ground-or vegetation-disturbing activities, focused protocol surveys for Harwood's eriastrum, which blooms March-June, shall be conducted within suitable habitat. Suitable habitat for this species is within the vicinity of the Phase 2 transmission line south of I-10. Prior to conducting the focused protocol survey, a reference population check shall be conducted. Reference population checks involve locating known populations of special-status plant species during a time frame when they are known to be blooming or exhibit other phenological characteristics that allow for species identification. Observations of reference populations during peak phenology | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | provide assurance to the lead agencies and resource agencies that these species would be identifiable if they are present in areas proposed for ground disturbance.<br><br>**Special-Status Plant Impact Avoidance and Minimization Measures.** The Applicant shall incorporate the following measures to avoid and minimize impacts to Harwood's Eriastrum:<br><br>1. ***Site Design Modifications:*** Incorporate site design modifications to minimize impacts to Harwood's eriastrum along the Phase 2 transmission line including: (1) limiting the width of the work area; (2) adjusting the location of staging areas, lay downs, spur roads and poles or towers; and (3) driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank. These modifications shall be clearly depicted on the grading and construction plans.<br>2. ***Establish Environmentally Sensitive Areas (ESAs).*** Prior to the start of any ground- or vegetation-disturbing activities, a qualified designated biologist shall establish ESAs to protect avoided Harwood's eriastrum that occur outside of the project disturbance areas and within 20 feet of project disturbance areas. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. ESAs shall also be clearly identified (with signage and by mapping on site plans) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure.<br>3. ***Special-Status Plant Worker Environmental Awareness Program (WEAP).*** The WEAP (MM-BIO-2) shall include training components specific to protection of Harwood's eriastrum. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | 4. ***Avoid Harwood's Eriastrum Plant Occurrences.*** Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas shall be placed at least 100 feet from any ESAs.<br>5. ***Monitoring and Reporting Requirements.*** The designated biologist shall conduct weekly monitoring of the ESAs that protect Harwood's eriastrum occurrences during construction and decommissioning activities.<br><br>**Mitigation for Impacts to Harwood's Eriastrum.**<br><br>If impacts to Harwood's eriastrum cannot be avoided, the Applicant shall mitigate impacts to Harwood's eriastrum through one or a combination of the following measures:<br><br>1. ***Off-site Compensation.*** The Applicant shall provide compensation lands consisting of occupied Harwood's eriastrum habitat at a 1:1 ratio for any occupied habitat affected by the Project. Occupied habitat shall be calculated in the Project area and on the compensation lands as including each occurrence. Off-site compensation shall be incorporated into the Projects' Habitat Compensation Plan for review and approval by the County and the BLM. Compensatory mitigation required for MM BIO-13 may be fulfilled by the compensatory mitigation lands acquired the measure to the extent that the mitigation lands also meet the requirements of this mitigation measure.<br>2. ***Salvage.*** The Applicants shall prepare and implement a Harwood's eriastrum Salvage and Relocation Plan to be reviewed and approved by the County and BLM prior to disturbance of any Harwood's eriastrum. The Applicants shall contract with biologists qualified to conduct this work and salvage all the topsoil of the identified occurrence of Harwood's eriastrum from the Project sites and transfer them to a suitable | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | unoccupied off-site location. This would fulfill the mitigation requirement.<br><br>***Horticultural Propagation and Off-Site Introduction.*** If salvage and relocation is not believed to be feasible for Harwood's eriastrum, then the Applicants shall consult with a qualified entity to develop and implement an appropriate experimental seed amplification and relocation strategy. | |
| **Threshold D:** Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | Potentially Significant | **MM-BIO-1 Biological Monitoring.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-4 Minimization of Impacts to Wildlife.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-7 Special-Status Plant Species Mitigation.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-BIO-8 Burrowing Owl Protection.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-BIO-9 Desert Tortoise Protection.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-11 Desert Kit Fox and American Badger Relocation.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-BIO-13 Compensation for Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B. | Less than Significant |
| **Threshold E:** Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service? | Potentially Significant | **MM-BIO-1 Biological Monitoring.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-3 Minimization of Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | **MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resources Management.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-BIO-13 Compensation for Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B. | |
| **Threshold F:** Would the project have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | Potentially Significant | **MM-BIO-1 Biological Monitoring.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-3 Minimization of Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-12 Stream Protection and Compensation.** Prior to ground-disturbing activities in waters potentially regulated by the state, the Applicant shall confer with the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB) and shall obtain appropriate authorization. The Applicant shall implement all conditions associated with regulatory agency agreements and authorizations, including compensatory mitigation, and, unless otherwise specified by CDFW and/or the RWQCB, shall implement the measures identified below to minimize and compensate for impacts to regulated waters:<br><br>• Construction crews shall minimize disturbance to wetlands, streambeds, and banks of any state-jurisdictional waters to the extent feasible.<br><br>• Vehicles and equipment shall not be operated in standing or flowing water.<br><br>• The Applicant shall prevent water containing mud, silt, or other pollutants from grading or other activities from | Less than Significant |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | entering ephemeral drainages or being placed in locations that may be subjected to high storm flows.<br>• Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from entering ephemeral drainages.<br>• No petroleum products or other pollutants from the equipment shall be allowed to enter any state jurisdictional waters.<br>• No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into off-site state jurisdictional waters.<br>• Stationary equipment, such as motors, pumps, generators, and welders, shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Cleanup equipment, such as brooms, absorbent pads, and skimmers, shall always be on site. The cleanup of all spills shall begin immediately.<br>• All excess materials or debris shall be removed from the work area after completion of construction.<br>• Project impacts to state jurisdictional ephemeral washes (non-wetland waters) on private lands shall be compensated at a 1:1 ratio. An estimated 0.1 acres of Project impacts to ephemeral washes on private lands at a 1:1 compensation ratio would require an estimated 0.1 acres of habitat compensation. The final required compensation acreage for ephemeral washes shall be based on the final calculations of impacts to these | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | communities on private lands. It's important to note that mitigation ratios described herein may change during regulatory permitting process.<br>• Project impacts to riparian vegetation shall be compensated according to MM BIO-13. | |
| **Threshold G:** Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | Potentially Significant | **MM-BIO-1 Biological Monitoring.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-3 Minimization of Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-4 Minimization of Impacts to Wildlife.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO- 6 Vegetation Resources Management.** See Section 3.5 Biological Resources, Threshold C.<br>**MM-BIO-7 Minimization to Impacts to Birds and Bats.** See Section 3.5 Biological Resources, Threshold C.<br>**MM-BIO-8 Burrowing Owl Protection.** See Section 3.5 Biological Resources, Threshold C.<br>**MM-BIO-9 Desert Tortoise Protection.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-10 Raven Management.** See Section 3.5 Biological Resources, Threshold B.<br>**MM-BIO-11 Desert Kit Fox and American Badger Protection.** See Section 3.5 Biological Resources, Threshold C.<br>**MM-BIO-12 Stream Protection and Compensation.** See Section 3.5 Biological Resources, Threshold F. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | **MM-BIO-13 Compensation for Impacts to Native Vegetation.** See Section 3.5 Biological Resources, Threshold B. | |
| Cumulative Impacts | Potentially Significant | **MM-BIO-1** through **MM-BIO-13**. | Less than Significant |
| *3.6 Cultural Resources* | | | |
| **Threshold A:** Would the project alter or destroy a historic site? | Potentially Significant | **MM-CUL-1** Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall be invited to attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be invited to be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site (on-site and off-site work associated with this project) including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. Activities will be documented in Tribal Monitoring Notes which will be required to be submitted to the County Archaeologist prior to grading final inspection. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.<br><br>**MM-CUL-2** The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the ~~Project archaeologist~~applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.<br><br>* A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other. ~~Tribal Cultural Resources are also considered cultural resources.~~<br><br>** If not already employed by the project developer, a County approved archaeologist ~~and a Native American Monitor from the consulting tribe(s)~~ shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described, and continue monitoring of all future site grading activities as necessary.<br><br>**MM-CUL-3** Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program (CRMP). A Cultural Resource Monitoring Plan shall be developed in consultation with the monitoring tribe(s) that addresses the details of all activities and provides procedures | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | that must be followed in order to reduce the impacts to cultural, tribal cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. ~~If feasible, and as agreed upon by agency staff, a combined CRMP will be prepared covering work both on private and BLM lands. This will be intended to ensure consistency, where possible, in cultural resources management strategies.~~ Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.<br><br>**MM-CUL-4** Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | to procedures stipulated in the Cultural Resources ~~Monitoring~~ Management Plan.<br><br>**MM-CUL-5** If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. There will be no photography of human remains or associated resources.<br><br>**MM-CUL-6** Temporary fencing shall be required for the protection of cultural site(s) P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33- 020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951-during grading activities. Prior to commencement of grading or brushing, the project archaeologist shall confirm the site boundaries and determine an adequate buffer for protection of the site(s). The applicant shall direct the installation of fencing under the supervision of the project archaeologist and Native American Monitor. The fencing can be removed only after grading operations have been completed.<br><br>**MM-CUL-7** Prior to issuance of grading permits: the developer/ applicant shall provide evidence to the Riverside | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate an area chosen in collaboration with the consulting tribes, that will be used, if needed, for reburial of ~~to be used for relocation of the bedrock milling features that cannot be avoided by this project. In addition, a permanent space within this area will be predetermined and designated on a confidential map for reburial of~~ any artifacts that have been identified ~~will be impacted and/or discovered~~ during grading and cannot be avoided. This area will be protected and not disturbed in the future. This is confidential information and the exact nature of this area will not be called out on the grading plans.<br><br>**MM-CUL-8** At the conclusion of all construction activities, the Project proponent and landowner shall record a deed restriction on the avoidance areas, P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33-020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951 (and the reburial location, if used) with the County to restrict development of these areas in the future. Deed restrictions shall not disclose the nature of the avoidance areas. A copy of the deed restriction(s) shall be submitted to the County planning staff as proof of compliance prior to the issuance of certificates of occupancy for the Project.<br><br>**MM-CUL-9** Prior to Grading Permit Final Inspection. In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and Human Remains) and Provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through the following methods. | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines.<br><br>Desert Training Center related resources- any artifacts related to Desert Training Activities shall be curated with the General Patton Memorial Museum.<br><br>Pre-contact resources-A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be included in the Phase IV Report. The details of any disposition of artifacts shall be documented in the Phase IV report. | |
| **Threshold B:** Would the project cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5? | Potentially Significant | **MM-CUL-1**.<br>**MM-CUL-2**.<br>**MM-CUL-3**.<br>**MM-CUL-4**.<br>**MM-CUL-6**.<br>**MM-CUL-7**.<br>**MM-CUL-8**.<br>**MM-CUL-9**. | Less than Significant |
| **Threshold C:** Would the project alter or destroy an archaeological site? | Potentially Significant | **MM-CUL-1**.<br>**MM-CUL-2**.<br>**MM-CUL-3**.<br>**MM-CUL-4**.<br>**MM-CUL-6**.<br>**MM-CUL-7**. | Less than Significant |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | **MM-CUL-8**.<br>**MM-CUL-9**. | |
| **Threshold D:** Would the project cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5? | Potentially Significant | **MM-CUL-1**.<br>**MM-CUL-2**.<br>**MM-CUL-3**.<br>**MM-CUL-4**.<br>**MM-CUL-6**.<br>**MM-CUL-7**.<br>**MM-CUL-8**.<br>**MM-CUL-9**. | Less than Significant |
| **Threshold E:** Would the project disturb any human remains, including those interred outside of dedicated cemeteries? | Potentially Significant | **MM-CUL-5**. | |
| **Cumulative Impacts** | Potentially Significant | **See MM-CUL-1 through MM-CUL-9**. | Less than Significant |
| *3.7 Energy* | | | |
| **Threshold A:** Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B:** Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.8 Geology and Soils* | | | |
| **Threshold B**: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| subject to seismic-related ground failure, including liquefaction? | | | |
| **Threshold C:** Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be subject to strong seismic ground shaking? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold D:** 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 lateral spreading or collapse? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold E:** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold G:** Change topography or ground surface relief features? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold I:** Result in grading that affects or negates subsurface sewage disposal systems? | No Impact | No mitigation would be required. | No Impact |
| **Threshold J:** Result in substantial soil erosion or the loss of topsoil? | Potentially Significant | **MM-BIO-12 Stream Protection and Compensation.** See Section 3.5 Biological Resources, Threshold F.<br><br>**MM-GEO-1**. Grading for new access roads or work areas in areas covered by desert pavement shall be avoided or minimized. If avoidance of these areas is not possible, the desert pavement surface shall be protected from damage or disturbance from construction vehicles temporary surface mats. A plan to identify and avoid damaging sensitive desert pavement shall be prepared and submitted to the lead agency | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | for review and approval prior to construction. This plan shall include:<br>• Defining all locations of surface disturbance including new access roads and grading locations.<br>• Developing specific measures to protect desert pavement from damage or disturbance by using temporary mats.<br>• Applying a nontoxic soil stabilizer before project operation. The Applicant shall develop, for review and approval by the lead agency, a plan that outlines the frequency of nontoxic soil stabilizer applications, based on the specifications of the selected soil stabilizer.<br>• Evaluating the potential for replacement of desert pavement with a similar gravel-sized layer where required. | |
| **Threshold L:** Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold M:** Be impacted by or result in an increase in wind erosion and blow sand, either on or off site? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Potentially Significant | **MM-GEO-1 and MM-BIO-12**. | Less than Significant |
| *3.9 Greenhouse Gas Emissions* | | | |
| **Threshold A:** Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| **Threshold B:** 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 | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.10 Hazards and Hazardous Materials* | | | |
| **Threshold A:** 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 | No mitigation would be required. | Less than Significant |
| **Threshold B:** 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? | Potentially Significant (Construction and Decommissioning)<br><br>Less than Significant (Operation) | **MM-HAZ-1 Soil Management Plan.** Prior to the issuance of a grading permit and before earthwork activity or soil disturbance occurs, the Project Applicant/developer or their designated contractor shall retain a qualified environmental consultant to prepare a soil management plan (SMP) that outlines the proper screening, handling, characterization, transportation, and disposal procedures for contaminated or potentially contaminated soils on site. Contaminated or potentially contaminated soils include those impacted by organochlorine pesticides from historical agricultural uses and fuels from former underground storage tanks as discussed in the Phase II ESA (CBRE 2020). Potential conditions and/or hazards that may be encountered during construction activities include but may not limited to buried piping, buried storage tanks, areas of soil staining, or other suspect conditions that can be identified visually and/or from odors within the Project's proposed disturbance area. The SMP shall include:<br>• Procedures for field screening, stockpiling, sampling, characterizing contaminated or potentially contaminated soils. | Less than Significant |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | • Procedures and requirements for onsite soil reuse, offsite soil reuse, and offsite soil disposal (landfilling).<br>• Health and safety and training procedures for workers who may come in contact with contaminated soils.<br>• Onsite soil management requirements to avoid fugitive dust and stormwater runoff, including stockpile management.<br>• Response and reporting procedures in the event a release of contaminated soils or violation of air quality or water quality rules occurs (Mojave Desert Air Quality Management District and Colorado Regional Water Quality Control Board, respectively).<br>• Requirements if contaminated soil is identified during Project construction activities. These include, but are not limited to:<br>o Stop work requirements for further evaluation of identified contamination;<br>o Notification requirements;<br>o Documentation requirements for sampling, analysis, and required actions in conformance with regulatory standards; and<br>o Protocols for resuming earthwork activities.<br>• Procedures for the identification, notifications, permitting, handling, abandonment, and disposal of underground storage tanks, piping, sumps, or other features, should any be identified during demolition and construction activities.<br>• Procedures to meet all applicable federal, state, and local regulations (including Riverside County Department of Environmental Health and Mojave Desert Air Quality | |

**Table ES-2. Summary of Project Impacts**

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Management District) associated with handling, excavating, stockpiling, and disposing of contaminated soils<br>• The proposed disposal facility that will accept the contaminated soils and procedures for authorization and transportation.<br>The SMP will be implemented by the Project Applicant or their designated contractor for all earthwork activities and activities that have the potential to encounter previously unidentified hazardous materials or wastes on the Project site and within off-site disturbance areas.<br>**MM-HAZ-2 Worker Environmental Awareness Program.** A Worker Environmental Awareness Program shall be prepared, and all construction crews and contractors shall be briefed on the plan prior to starting work on the Project. The plan shall address health and safety issues associated with normal and unusual (emergency) conditions. The program shall include, but not be limited, to the following information and guidance:<br>• Environmental health and safety protocol (including, but not limited to, hazards of valley fever, including the symptoms, proper work procedures, when and how to use personal protective equipment, and informing supervisors of suspected symptoms of work-related valley fever)<br>• An emergency response plan<br>• Environmental awareness training, which shall include environmental, cultural, health, and safety training<br>• Noise/ear protection protocol<br>• First aid training<br>• Fire protection and extinguisher maintenance, guidance, and documentation | |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | Disposal of hazardous materials and waste guidance in accordance with local, state, and federal regulations | |
| **Threshold C:** Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan.** Prior to initiation of construction activities, a construction traffic management plan shall be prepared and filed with the County of Riverside. The construction traffic management plan shall include strategies to reduce the number of trucks that would be generated during both the AM (7:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak hours. Potential traffic management measures may include:<br>• Warning signage to meet County and Caltrans requirements for driver awareness of construction activity in the vicinity.<br>• Stagger work shifts to reduce peak periods of congestion.<br>• Limit time for heavy truck deliveries.<br>• Use of flaggers at key locations to alert motorists to slow moving trucks.<br>• Informing emergency service providers of construction traffic schedule. | Less than Significant |
| **Threshold E:** 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? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold F:** Would the project result in an inconsistency with an Airport Master Plan? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold G:** Would the project require review by the Airport Land Use Commission? | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| **Cumulative Impacts** | Potentially Significant | **MM-HAZ-1. MM-HAZ-2. MM-TRAF-1**. | Less than Significant |
| *3.11 Hydrology and Water Quality* | | | |
| **Threshold A:** Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold B**: 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 | No mitigation would be required. | Less than Significant |
| **Threshold C:** Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold d:** Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| manner which would result in flooding on- or off-site? | | | |
| **Threshold e:** Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold f:** Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold i:** Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.12 Land Use and Planning* | | | |
| **Threshold B:** Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| adopted for the purpose of avoiding or mitigating an environmental effect? | | | |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required | Less than Significant |
| *3.13 Noise* | | | |
| **Threshold A**: For a project located within an airport land use plan or, where such a plan has not been adopted, within two (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 | No mitigation would be required. | Less than Significant |
| **Threshold C:** Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies? | Potentially Significant | **MM-NOI-1 Construction Restrictions.** Heavy equipment operation, noisy construction work relating to any Project features onsite, and truck trips associated with materials and equipment deliveries shall be restricted to the times delineated below, unless a special permit has been issued by the County of Riverside: during June through September, between 6:00 a.m. to 6:00 p.m.; and during October through May, between 7:00 a.m. to 6:00 p.m. Thus, construction activities outside of the County's allowable daytime hours would be limited to light-duty equipment and vehicles. During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. 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 | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | 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. | |
| **Threshold D:** Would the project result in the generation of excessive ground-borne vibration or ground-borne noise levels? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.14 Paleontological Resources* | | | |
| **Threshold A:** Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | Potentially Significant | **MM-PALEO-1 Paleontological Resources Impact Mitigation Program**. Prior to commencement of any site disturbing activity including grading or excavation, the Applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (2010) guidelines. The paleontologist shall prepare a Paleontological Resource Impact Mitigation Program (PRIMP) for the Project. PRIMP shall be consistent with the Society of Vertebrate Paleontology (2010) guidelines and shall outline requirements for pre-construction meeting attendance and worker environmental awareness training; where monitoring is required within the Project site based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; paleontological methods (including sediment sampling for microvertebrate fossils); and reporting, and collections management. The PRIMP shall be provided to the construction contractor, the Applicant and the lead agency. The qualified paleontologist shall attend the pre-construction meeting and a qualified paleontological monitor shall be on site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed, fine-grained Quaternary alluvial deposits of Pleistocene age. In the event that paleontological resources (e.g., fossils) are unearthed during construction activities, the | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | qualified paleontological monitor shall temporarily halt and/or divert ground disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the qualified paleontological monitor shall remove the rope and allow grading to recommence in the area of the find.<br><br>Paleontological specimens recovered from the Project site, if any, shall be processed in the laboratory. Processing shall include removal of any matrix so that the fossil can be identified to the lowest possible taxonomic level. The specimens shall then be identified and cataloged into a paleontological database. Specimens shall be prepared for curation prior to repository accessioning.<br><br>The qualified paleontologist shall produce a Paleontological Monitoring Report describing the paleontological discoveries in their stratigraphic and geographic context and detailing the procedures for preparing, curating, and accessioning the paleontological collection into a suitable repository. The report of monitoring results shall be submitted to the lead agency. If no significant paleontological resources are recovered during Project ground-disturbing activities, a final Monitoring Memorandum shall be produced and submitted to the lead agency. | |
| **Cumulative Impacts** | Potentially Significant | See **MM-PALEO-1**. | Less than Significant |
| *3.15 Public Services* | | | |
| **Threshold A:** Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection and services, police protection and sheriff services, schools, parks, libraries, and health services? | | | |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.16 Transportation* | | | |
| **Threshold A:** 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 | No mitigation would be required. | Less than Significant |
| **Threshold B:** Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold C:** 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)? | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan.** See Section 3.10 Hazards and Hazardous Materials, Threshold C. | Less than Significant |
| **Threshold D:** Would the project cause an effect upon, or a need for new or altered maintenance of roads? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold E:** Would the project cause an effect upon circulation during the project's construction? | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan.** See Section 3.10 Hazards and Hazardous Materials, Threshold C. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| **Threshold F**: Would the project result in inadequate emergency access or access to nearby uses? | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan**. See Section 3.10 Hazards and Hazardous Materials, Threshold C. | Less than Significant |
| **Cumulative Impacts** | Potentially Significant | See **MM-TRAF-1**. | Less than Significant |
| *3.17 Tribal Cultural Resources* | | | |
| **Threshold A(i):** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | Potentially Significant | **MM-CUL-1.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-2.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-3.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-4.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-5.** See Section 3.6 Cultural Resources, Threshold E.<br>**MM-CUL-6.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-7.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-8.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-9.** See Section 3.6 Cultural Resources, Threshold A. | Less than Significant |
| **Threshold A(ii):** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | Potentially Significant | **MM-CUL-1.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-2.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-3.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-4.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-5.** See Section 3.6 Cultural Resources, Threshold E.<br>**MM-CUL-6.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-7.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-8.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-9.** See Section 3.6 Cultural Resources, Threshold A. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| (ii) A resource determined by the lead agency in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1., the lead agency shall consider the significance of the resource to a California Native American tribe? | | | |
| *Cumulative Impacts* | Potentially Significant | **MM-CUL-1.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-2.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-3.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-4.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-5.** See Section 3.6 Cultural Resources, Threshold E.<br>**MM-CUL-6.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-7.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-8.** See Section 3.6 Cultural Resources, Threshold A.<br>**MM-CUL-9.** See Section 3.6 Cultural Resources, Threshold A. | Less than Significant |
| ***3.18 Utilities and Service Systems*** | | | |
| **Threshold B:** Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold C:** Would the project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects? | Less than Significant | No mitigation would be required. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| **Threshold E:** Would the project generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold F:** Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Threshold G:** Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?<br>iii. Communication Systems?<br>v. Maintenance of public facilities, including roads? | Less than Significant | No mitigation would be required. | Less than Significant |
| **Cumulative Impacts** | Less than Significant | No mitigation would be required. | Less than Significant |
| *3.19 Wildfire* | | | |
| **Threshold A**: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan**. See Section 3.10 Hazards and Hazardous Materials, Threshold C. | Less than Significant |
| **Threshold B:** Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project | Potentially Significant | **MM-FIRE-1 Maintenance Truck Equipment.** The Applicant shall ensure all maintenance trucks are equipped with a fire extinguisher or other firefighting equipment in accordance with state and federal regulations. Compliance with this | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | | measure shall be documented in monitoring logs provided to the California Department of Fish and Wildlife and Bureau of Land Management.<br><br>**MM-BIO-5 Integrated Weed Management Plan**. See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resources Management**. See Section 3.5 Biological Resources, Threshold C. | |
| **Threshold C:** Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | Potentially Significant | **MM-FIRE-1 Maintenance Truck Equipment.**<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resources Management.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-HAZ-2 Worker Environmental Awareness Program (WEAP).** See Section 3.10 Hazards and Hazardous Materials, Threshold B. | Less than Significant |
| **Threshold D:** 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 | No mitigation would be required. | Less than Significant |
| **Threshold E:** Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | Potentially Significant | **MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B .<br><br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resources Management.** See Section 3.5 Biological Resources, Threshold C. | Less than Significant |

## Table ES-2. Summary of Project Impacts

| Impact | Level of Significance before Mitigation | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|---|
| | | **MM-HAZ-2 Worker Environmental Awareness Program (WEAP).** See Section 3.10 Hazards and Hazardous Materials, Threshold B. | |
| Cumulative Impacts | Potentially Significant | **MM-TRAF-1 Construction Traffic Management Plan**. See Section 3.10 Hazards and Hazardous Materials, Threshold C.<br><br>**MM-FIRE-1 Maintenance Truck Equipment.**<br><br>**MM-BIO-2 Worker Environmental Awareness Program (WEAP).** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-5 Integrated Weed Management Plan.** See Section 3.5 Biological Resources, Threshold B.<br><br>**MM-BIO-6 Vegetation Resources Management.** See Section 3.5 Biological Resources, Threshold C.<br><br>**MM-HAZ-2 Worker Environmental Awareness Program (WEAP).** See Section 3.10 Hazards and Hazardous Materials, Threshold B. | Less than Significant |
| *3.20 Mineral Resources* | | | |
| **Threshold A**: Would the Project result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State? | No Impact | No mitigation would be required. | No Impact |
| **Threshold B**: Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | No Impact | No mitigation would be required. | No Impact |
| **Threshold C**: Would the Project potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines? | No Impact | No mitigation would be required. | No Impact |
| Cumulative Impacts | No Impact | No mitigation would be required. | No Impact |

# 1 Introduction

## 1.1 Overview

In compliance with the California Environmental Quality Act (CEQA), the County of Riverside (County) is the lead agency responsible for preparation of this ~~Draft~~ Final Supplemental Environmental Impact Report (SEIR) for the Grace Solar Energy Center (Project). In August 2017, the County approved the Palo Verde Mesa Solar Project and certified the EIR (SCH 2012081026) which includes a similar footprint to the proposed Project. The Palo Verde Mesa Solar Project (prior EIR) was never developed and in 2021 the land was transferred to Grace Orchard Interconnection LLC, Grace Orchard Solar II LLC, Grace Orchard Solar III LLC, and Grace Orchard Energy Center LLC, wholly owned subsidiaries of NextEra Energy Resources LLC, herein referred to as the applicant or project proponent. The proposed Project is within the scope of the prior EIR; however, because the Project requires substantial changes to the prior EIR that may result in new significant impacts or a substantial increase in the severity of impacts identified in the prior EIR, a supplemental EIR (SEIR) is required (CEQA Guidelines Section 15162). As the CEQA lead agency, the County is responsible for coordinating with the Applicant, the public, and responsible agencies during the CEQA process. This SEIR will inform the public and decision makers at local and state permitting agencies of potentially significant environmental impacts associated with the Project and identify means of reducing or eliminating those impacts. The information contained within this SEIR will be considered by applicable decision makers in determining whether to grant the requested Project approvals.

The Applicant is proposing to generate up to 500 megawatts (MW) of electricity from solar photovoltaic (PV) panels and construct a battery energy storage system (BESS) with a capacity of up to 500 MW. The Project would aggregate approximately 3,705 acres, including approximately 3,310 acres of private land and 395 acres of land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office. The Project would also include transmission lines, collector substation, operations and maintenance (O&M) building, access roads, and collection lines.

The Project would require an amendment to the existing Conditional Use Permit (CUP No. 3684) for construction, operation, and decommissioning. An amended Public Use Permit (PUP No. 916) from the County would also be required for portions of the transmission lines crossing County roads. An amended Development Agreement (DA No. 86) with the County, per Board of Supervisors Policy B-29, would also be required.

The Project would include two phases, including Phase 1 – Solar and Western Area Power Administration (WAPA) Tie-In and Phase 2 – Battery Energy Storage System (BESS) and Arlington Collocation. Under Phase 1, the Project would construct the solar facility, ancillary facilities, and an approximately 3.5-mile transmission line to interconnect with the existing Parker – Blythe 161 kV transmission line owned by WAPA on private land. The Phase 1 transmission line would interconnect through a tie-in with the existing Parker – Blythe 161 kV transmission line owned by WAPA using a new 161 kV switchyard. The Phase 1 solar facility and ancillary facilities could also utilize the Phase 2 transmission line. Under Phase 2, the Project would construct a BESS and ancillary facilities on private land and an approximately 10.5-mile transmission line to interconnect with the Southern California Edison (SCE) 230-kV Colorado River Substation located on BLM-administered land. The majority of the Phase 2 transmission line (8.6 miles) would utilize the existing open-circuit of the double-circuit Arlington transmission line; and therefore, would be located within an existing right-of-way (ROW). The 395-acre area on BLM-administered lands would be limited to the transmission line in Phase 2.

Although this SEIR will consider the environmental impacts of the Project as a whole, including components outside state and local agency jurisdiction, BLM will prepare and rely on its own environmental review document in accordance with the National Environmental Policy Act (NEPA).

# 1.2 California Environmental Quality Act

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

## 1.2.1 Purpose of the SEIR

An EIR is a public informational document used in the planning and decision-making process. A project-level EIR was approved by the County in August 2017 for the Palo Verde Mesa Solar Project (SCH 2012081026). Since 2017, the Project has transferred to the Applicant and includes changes to the Project details, which requires preparation of an SEIR.

Section 15162 of the CEQA guidelines provide that at least one of the following requirements must apply for the preparation of an SEIR:

> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
>
> > (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
> >
> > (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
> >
> > (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects

> of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
>
> (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This SEIR will analyze the environmental impacts of the changed Project. An SEIR has similar requirements as an EIR regarding adequacy, notice, and public review. The standards and process for an EIR are included below and apply for this SEIR. Section 15151 of the CEQA Guidelines provides the following standards for EIR adequacy:

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

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

The Riverside County Board of Supervisors will consider the information in the~~is~~ Draft SEIR, including the public comments, staff response to those comments, and any changes to the~~is~~ Draft SEIR, during the public hearing process. The County will consider these before deciding whether to certify this~~e~~ Final SEIR as complying with CEQA and take action on the Project. The final decision is made by the Board of Supervisors, who may approve, conditionally approve, or deny the Project on lands subject to County jurisdiction. The County will also consider whether to approve an amended CUP No. 3684, DA No. 86 and PUP No. 916 for the construction, operation, maintenance, and decommissioning of the Project on land subject to County jurisdiction.

Comments on the~~is~~ Draft SEIR ~~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.

Revisions in this Final SEIR are noted with ~~strikeout~~ for deletions of text and in underline for new text.

## 1.3 Project Objectives

The Project would provide Riverside County as well as the state of California with a renewable energy source that would assist California in complying with the Renewables Portfolio Standard (RPS), established

in 2002 under Senate Bill (SB) 1078, updated in 2015 under SB 350.[1] SB 350 requires that 50% of all electricity sold in the state be generated from renewable energy sources by the year 2030. SB 100 was approved in September 2018 and would increase the RPS to a 100% goal by 2045.[2] The Applicant's Project objectives, purpose, and need for the Project are:

- Utilize property within Riverside County to develop an economically feasible and commercially financeable project for the delivery of up to 500 MW of affordable wholesale solar PV energy generation and up to 500 MW of battery energy storage capacity to California ratepayers under long-term contracts with electricity service providers.
- Minimize environmental impacts and land disturbance associated with solar development by maximizing facility siting on relatively flat, previously disturbed agricultural lands with high solar insolation value, near an identified "solar energy zone" / "Development Focus Area" and in close proximity to road access and established utility corridors.
- Support California's efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established in 2006 under California Assembly Bill 32, the Global Warming Solutions Act of 2006, which requires the California Air Resources Board to reduce statewide emissions of GHGs to at least the 1990 emissions level by 2020.[3] This timeline was updated in 2016 under SB 32, which requires that statewide GHG emissions are reduced to at least 40% below the statewide GHG emissions limit by 2030.[4]
- Support California's aggressive RPS Program consistent with the timeline established by SB 100 (De León, also known as the "California Renewables Portfolio Standard Program: emissions of greenhouse gases"), as approved by the California legislature and signed by Governor Brown in September 2018, which increases RPS in 2030 from 50% to 60% and establishes a goal of 100% RPS by 2045.[5]
- Further the goals of AB 1279, the California Climate Crisis Act, to achieve net zero greenhouse gas emissions no later than 2045, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by 2035.
- Increase energy storage opportunities through the creation of high-capacity battery energy storage systems (BESS) that help to solve California's "duck curve" power production problem and to meet statewide energy goals and support grid reliability.
- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.
- Provide green jobs with living wages to Riverside County residents and the State of California.

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1 California Renewables Portfolio Standard Program. September 2002. California State Senate. Bill No. 1078. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1078.

2 Clean Energy and Pollution Reduction Act. October 2015. California State Senate. Bill No. 350. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350.

3 Global Warming Solutions Act. September 2006. California State Assembly. Bill No. 32. www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

4 Global Warming Solutions Act: emissions limit. September 2016. California State Senate. Bill No. 32. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

5 Senate Bill No. 100. September 2018. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

# 1.4 Summary of the Project Evaluated in this SEIR

For purposes of this SEIR, the term "Project" refers to the discretionary actions required to implement amended CUP No. 3684, PUP No. 916, and DA No. 86 proposed along with all the activities associated with its implementation including planning, construction, decommissioning, and operation. In summary, the Project, as evaluated throughout this SEIR, evaluates the impacts that would occur as a result of developing the Project site. Specifically, the Applicant is requesting the following approvals from the County to implement the Project (refer to Chapter 2, Description of the Project, for a complete description of the Project's construction and operational characteristics):

- CUP No. 3684 is an approved CUP for Palo Verde Mesa Solar Project, and an amendment is proposed for the construction, operation, and decommissioning of the proposed solar facility within the County's jurisdiction.
- PUP No. 916 is an approved PUP for Palo Verde Mesa Solar Project, and an amendment is proposed for the portions of the transmission lines that would traverse County roads.
- DA No. 86 is an approved DA for Palo Verde Mesa Solar Project, and an amendment is proposed for the proposed solar facility.

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

## 1.4.1 Riverside County Board of Supervisors

1. Approval by resolution of amended CUP No. 3684
2. Approval by resolution of amended PUP No. 916
3. Enter into an amended Development Agreement with the Applicant, per Board of Supervisors Policy B-29 (discussed below)
4. Certify this SEIR and make appropriate CEQA findings

**Board of Supervisors Policy B-29**. The Project is subject to Policy B-29, and the Applicant would need to enter into a development agreement with the County. The purpose of Policy B-29 is to ensure that the County does not disproportionately bear the burden of solar energy production and ensure the County is compensated in an amount it deems appropriate for the use of its real property. The policy states that the solar power plant owner shall annually pay the County $150 for each acre of land involved in the power production process. It also lists requirements for solar power plant owners relating to sales and use taxes payable in connection with the construction of a solar power plant. Once the Development Agreement (No. 86) is amended and enacted, the Project would comply with this policy.

## 1.4.2 Subsequent Project Approvals

Subsequent approvals associated with the Project and covered by this SEIR may include, but are not limited to, the following. A table of required permits is also included as Table 1-1 (see Section 1.8, Agencies Relying on the SEIR; Anticipated Permits and Approvals).

1. Conditional and public use permits by the County, approving development of specific uses conditionally permitted under existing zoning.

2. Grading permits, road improvements, and drainage improvements by the County and County Flood Control and Water Conservation District to allow implementation of the Project.
3. Under Phase 2, Grant of ROW by BLM for the construction, decommissioning, and operation of a transmission line on BLM-administered land.
4. Encroachment permits by the County to allow access within County ROWs, for construction of various roadway/circulation and utility improvements, as well as encroachment permits by the California Department of Transportation.

# 1.5 Public Review and Noticing

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

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

## 1.5.1 Notice of Preparation

In compliance with CEQA Guidelines Section 15082, a Notice of Preparation (NOP) was issued with a public review and comment period starting January 10, 2025, ending February 8, 2025. The notice briefly described the Project, location, environmental review process, potential environmental effects, and opportunities for public involvement. A map of the Project site was included.

The NOP was uploaded to the Governor's Office of Land Use and Climate Innovation (State Clearinghouse) website for issuance to state agencies. The NOP was filed with the County Clerk on January 7, 2024. The NOP was mailed to agencies, organizations, local governments, elected officials, Native American tribes, and individuals on the County's interested parties list. A copy of the NOP was posted on the Riverside County's website.

The NOP solicited input regarding the scope and content of the environmental information to be included in the Draft SEIR. A public scoping meeting was held on January 13, 2025. A full copy of the NOP and the list of the agencies, elected officials, and Native American tribes that received the NOP are provided in Appendix A.

A total of eight comment letters have been received within the scoping period to date and zero commenters provided verbal comments during the scoping meeting. No letters were received outside of the scoping period. Section 1.6, Scoping Comments, includes a summary of the written and oral comments received.

## 1.5.2 Public Scoping Meeting

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

January 13, 2025, 1:30 p.m.
Riverside County Planning Department, County Administrative Center

4080 Lemon Street
Riverside, California 92501

The public scoping meeting was held both in-person and virtually through the web-based platform Zoom to allow for maximum attendance. The CEQA Scoping Report, provided in Appendix A of this EIR, contains copies of the PowerPoint presentation and list of meeting attendees. Four people signed into the scoping meeting virtually, all of which were members of the applicant team.

### 1.5.3 Native American Tribal Outreach and AB 52 Compliance

On April 2, 2025, the County mailed certified letters to representatives of 15 Native American tribal groups that had interest in the Project. These tribes included the Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, Pala Band of Mission Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians), Gabrieleno Band of Mission Indians Kizh Nation, Gabrielino Tongva Indians of California Tribal Council, Cabazon Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, Twenty- Nine Palms Band of Mission Indians, Santa Rosa Band of Cahuilla Indians, Colorado River Indian Tribes (CRIT), Cahuilla Band of Indians, or the Ramona Band of Cahuilla, Augustine Band of Cahuilla Indians, Soboba Band of Luiseño Indians, Quechan Indian Nation, and the Agua Caliente Band of Cahuilla Indians. The letters included a brief description of the Project, information on how to contact the lead agency Project Manager, and a shapefile and aerial exhibit depicting the location of the Project. The letters noted that requests for consultation pursuant to AB 52 needed to be received within 30 days of the date of receipt of the notification letter; 4 responses were received, which came from the Augustine Band of Cahuilla Indians, Soboba Band of Luiseño Indians, Quechan Indian Nation, and the Agua Caliente Band of Cahuilla Indians. Additional details on the AB 52 consultation process are included in Section 3.17, Tribal Cultural Resources.

### 1.5.4 Review of Draft SEIR

A Notice of Completion wh~~a~~s ~~been~~filed with the State Clearinghouse to begin the public review period (PRC Section 21161) for the~~is~~ Draft SEIR on February 17, 2026. Pursuant to PRC Section 21092.3 and CEQA Guidelines Section 15087(c), a Notice of Availability of the~~is~~ Draft SEIR was posted in the County Clerk's office.

The~~is~~ Draft SEIR wh~~a~~s~~been~~ distributed directly to agencies, organizations, and interested individuals, and made publicly available for review and comment in accordance with Section 15087 of the CEQA Guidelines and PRC 21092(b)(3). In compliance with CEQA Guidelines Section 15129, a list of federal, state, and local agencies and other organizations contacted in preparation of the~~is~~ Draft SEIR is provided in Chapter 6, List of Preparers and Organizations Consulted.

The public review and comment period for the Draft SEIR closed on April 6, 2026. Comments received during the Draft SEIR comment period include: 1 from an agency and 1 from an organization. Issues raised include concerns about the air quality analysis, as well as impacts to biological resources.

~~The Draft SEIR and the studies upon which it is based are available for review at the locations shown as follows:~~

- ~~Riverside County Planning Department, 4080 Lemon Street, 12th Floor, Riverside, California 92501 (951) 955-3200~~
- ~~Riverside County Planning Department, Palm Desert Office, 77588 El Duna Court, Suite H, Palm Desert, California 92211 (760) 863-8277~~

### 1.5.5 Preparation and Certification of Final SEIR and MMRP

Following consideration of the comments received during the Draft SEIR 45-day public comment period, the Final SEIR ~~will be~~has been prepared per CEQA requirements and ~~will~~ includes responses to all comments that raise significant environmental issues. Consideration of the Final SEIR and requested Project approvals by the County Board of Supervisors is anticipated in Spring 2026~~5~~.

The Final SEIR ~~will~~includes comments received on the Draft SEIR and responses to those comments, along with any modifications to the Draft SEIR. 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~~was prepared for the Project and is included as part of the Final SEIR.

The County Board of Supervisors will consider all comments received on the Draft SEIR and responded to in the Final SEIR before deciding whether to certify the SEIR and whether or not to approve the Project.

## 1.6 Scoping Comments

### 1.6.1 Scoping Comments Summary

This section summarizes the verbal and written comments received from the public and agencies during the scoping period for the Project. A total of eight scoping comments have been received within the scoping period to date. The Scoping Report includes all scoping comments received during the scoping period (refer to Appendix A).

Scoping comments included the following:

#### State Water Resource Control Board

- Concern regarding potable water
- Request for information to determine if a discretionary action is needed

#### California Department of Fish and Wildlife

- Request for an Initial Study and new biological information

#### City of San Jacinto

- No comments

#### Western Riverside Council of Governments

- Request to be removed from the distribution list

#### Riverside Department of Waste Resources

- Recommendation for a qualitative analysis of potential solid waste impact and discussion of mitigation/compliance in the SEIR
- Identification of waste haulers, transfer stations, and landfills applicable to the Project
- Recommendation of measures to reduce solid waste impacts and meet state requirements

### Southern California Association of Governments

- Request to review the SEIR once available
- Recommendation to assess consistency with SCAG goals and consistency with Connect SoCal 2024
- Identification of Connect SoCal 2024 key elements and relevant growth forecasts
- Recommendation to use the 2024 Final Program EIR for Connect SoCal 2024 for guidance regarding mitigation

### Defenders of Wildlife

- Request for the environmental documents of the original Palo Verde Mesa Project
- Request for more information regarding how the approved Palo Verde Mesa Project is being changed

### Native American Heritage Commission

- Assembly Bill (AB) 52 and Senate Bill (SB) 18 applicability

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

## 1.7 Environmental Impact Report Format and Content

This SEIR was prepared in accordance with state administrative guidelines established to comply with CEQA. (Refer also to PRC Section 21080.5; 14 CCR 15251[o].)

This SEIR is divided into the following major chapters. Figures are provided as necessary in each section to graphically represent the topic at hand.

- **Executive Summary:** This chapter 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.
- **Chapter 1. Introduction:** This chapter provides an overview of the Project evaluated in the SEIR and a summary of the objectives for the Project. This chapter also discusses agency use of the document, provides a summary of the contents of the SEIR, and provides a summary of the scoping comments.
- **Chapter 2. Description of the Project:** This chapter gives an overview of solar technology, details the location and characteristics of the Project, and provides a description of the surrounding land uses. It includes construction, decommissioning, and operational aspects of the Project and relevant background information.
- **Chapter 3. Environmental Analysis:** This chapter contains a detailed environmental analysis in topical sections which provide a description of the regulatory framework; existing conditions; impacts from construction, operation, maintenance, and future decommissioning of the Project; identifies and recommends potentially feasible mitigation measures, where needed; and includes a discussion of cumulative impacts.
- **Chapter 4. Alternatives:** This chapter provides a description of the alternatives to the Project that were evaluated in the document. The chapter also presents alternatives that were not evaluated and provides a screening analysis that was used to identify such alternatives. This chapter provides a comparative analysis (matrix) to distinguish the relative effects of each alternative and its relationship

to the Project's objectives and impacts. The alternatives analysis also identifies the "environmentally superior alternative," as required by CEQA Guidelines Sections 15126.6(d) and (e)(2).

- **Chapter 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.
- **Chapter 6. List of Preparers and Organizations Consulted:** This chapter provides a list of individuals that prepared or contributed to this ~~Draft~~ Final SEIR.
- **Chapter 7. References:** This chapter lists reference materials used to prepare the ~~Draft~~ Final SEIR.
- **Appendices:** The NOP and comments received, technical reports and studies, and other relevant information are included as appendices to support the environmental analyses. In this Final SEIR, a new Appendix S includes comments and responses to comments submitted on the Draft SEIR.

### 1.7.1 Terminology Used in this Document

CEQA documents include the use of specific terminology. To aid the reader in understanding terminology and language used throughout this document, the following CEQA terms are defined below:

- **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 Project that the Project could 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 quality, biological resources (i.e., flora and fauna), ambient noise, water quality, 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 Project implementation but that may occur later in time or be farther removed in distance.
- **Significant impact on the environment**: A substantial, or potentially substantial, adverse change in a physical condition that is the result of Project implementation. This can include substantial or potentially substantial adverse changes to air quality, biological resources (flora or fauna), water quality, 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 (MMs)**: Project-specific actions that, if adopted, avoid or substantially reduce the 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):** Standard 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 Project. Any BMPs discussed in the SEIR are inherently

part of the 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 Section 15355). The following statements also apply when considering cumulative impacts:
  - The individual impacts may be changes resulting from a single project or a number of separate projects.
  - The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place overtime.

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. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR
>
> (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.

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 less than significant.
- **Significant and unavoidable:** An impact that cannot be eliminated or lessened to a less-than-significant level through incorporation of mitigation measures.

## 1.8 Agencies Relying on this SEIR; Anticipated Permits and Approvals

The majority of the Project would be located on private lands under County jurisdiction, which would require discretionary approvals from the County. The Applicant is seeking a minimum 40-year amended CUP (No. 3684), and Development Agreement (No. 86) for the construction, operation, and

decommissioning of the solar facility, as well as a PUP (No. 916) for portions of the transmission lines that would cross County Roads. Under Phase 2, a ROW grant would be required for a transmission line located on BLM-administered land.

Ancillary ministerial permits, including encroachment permits, grading permits, and construction permits, are anticipated from the County. These permits and approvals are local ministerial actions that follow approval of the Project and certification of the SEIR. Other state and local agencies or regulatory entities that could exercise authority over specific elements of the Project are described in Table 1-1.

Table 1-1 provides a list of permits and other approvals that will (or may) be needed for the Project. The County, as the CEQA lead agency, will act first on the Project before any of the responsible agencies. County decision makers (Board of Supervisors) have the authority to approve the Project and certify the SEIR as being in compliance with CEQA and will make any required findings or statement of overriding considerations, prior to the County or any other agency relying on the SEIR for issuing permits/land use approvals. Then, the County decision makers will use the SEIR for decision making regarding the Project. If the Project is approved by all required permitting agencies, the County would be responsible for reviewing and approving all pre-construction compliance plans and ensuring that the Project modifications and operations are conducted in accordance with the Project's mitigation measures and other permit conditions.

**Table 1-1. Permits and Approvals for the Project**

| Agency Type | Agency Name | Permit | Applicability |
|---|---|---|---|
| Federal | Bureau of Land Management | Right-of-Way Grant | For use of federal land for a transmission line under Phase 2. |
| Federal | Bureau of Land Management | National Environmental Policy Act (NEPA) | To be used by BLM (NEPA lead agency) to evaluate the environmental effects of constructing, operating, maintaining, and decommissioning the transmission line under Phase 2. BLM needs to issue a Record of Decision approving the NEPA selected alternative authorizing the BLM to proceed with issuance of a ROW grant for the Project. |
| Federal | U.S. Fish and Wildlife Service | Biological Opinion or Concurrence | Determination whether the transmission line on BLM land under Phase 2would jeopardize existence of federal listed endangered or threatened species, and if necessary, issue an Incidental Take Statement authorizing incidental "take" of the listed species. |
| Federal | U.S. Army Corps of Engineers | Clean Water Act (CWA), Section 404 Jurisdictional Determination | Determination of whether the Project includes waters of the United States subject to federal jurisdiction under Section 404 of the CWA. |
| Federal | U.S. Environmental Protection Agency (EPA) | Hazardous Waste ID Number | EPA ID No. and register as a Hazardous Waste Generator with Department of Toxic Substances Control (if required). |

**Table 1-1. Permits and Approvals for the Project**

| Agency Type | Agency Name | Permit | Applicability |
|---|---|---|---|
| State or Regional | State Historic Preservation Office | National Historic Preservation Act Section 106 Review (36 CFR 800) | Determination of whether a transmission line on BLM land under Phase 2 contain cultural resources listed on or eligible for listing on the National Register of Historic Places. |
| State or Regional | California Department of Fish and Wildlife | Incidental Take Permit | For compliance with Section 2081 of the California Endangered Species Act (if required). |
| State or Regional | California Department of Transportation, District 8 | Air Space Encroachment Permit/Air Space Lease Agreement | Air Space encroachment permit and/or air space lease agreement would be required to configure the transmission line overhead across I-10 under Phase 2. |
| State or Regional | California Department of Transportation, District 8 | Oversize/ Overweight Vehicle Transportation Permit | Transport of oversized loads. |
| State or Regional | Regional Water Quality Control Board, Region 8 | Waste Discharge Requirements (WDR) | WDR required for Project discharges to waters of the State. |
| State or Regional | California Department of Fish and Wildlife | Section 1602 Streambed Alteration Agreement | Authorization allowing disturbance of state jurisdictional streambeds, if required. |
| State or Regional | Regional Water Quality Control Board, Region 8 | National Pollutant Discharge Elimination System Construction General Permit | For construction activity equal to or greater than 1 acre that may result in a discharge to waters of the United States. |
| State or Regional | Regional Water Quality Control Board, Region 8 | General Waste Discharge Requirement | For activities, discharges, or proposed activities from a property or business that could affect California's surface, coastal, or ground water. |
| State or Regional | Mojave Desert Air Quality Management District (MDAQMD) | Authority to Construct and Permit to Operate | For construction and operation of the Project. |
| Local | Mojave Desert Air Quality Management District (MDAQMD) | Fugitive Dust Control Plan | MDAQMD requirement prior to construction. |
| Local | Riverside County | Conditional Use Permit (CUP) | Amendment to the existing CUP for construction of the solar facility on private land under County jurisdiction. |

**Table 1-1. Permits and Approvals for the Project**

| Agency Type | Agency Name | Permit | Applicability |
|---|---|---|---|
| Local | Riverside County | Public Use Permit (PUP) | Amendment to the existing PUP for construction of the transmission line across County Roads. |
| Local | Riverside County | California Environmental Quality Act (CEQA) SEIR | SEIR prepared for the Project to be used by the County (CEQA lead agency) to evaluate the environmental effects of constructing, operating, maintaining, and decommissioning the Project. |
| Local | Riverside County | Development Agreement (DA) | Amended to existing DA as required by Riverside County's B-29 policy. |
| Local | Riverside County | Construction (Building/ Grading Permit) | The County authorizes construction activities under the master Construction Permit. This permit encompasses grading, building, electrical, mechanical, landscaping, and other activities. The County's review for compliance with ordinance standards is undertaken as part of this review. |
| Local | Riverside County | California Desert Native Plants Permit to Harvest Native Plants | Required if harvesting native succulents is planned within the Project site. |
| Local | Riverside County | Encroachment Permit | Encroachment permit would be required for the transmission line crossing of Black Rock Road under Phase 2. |

### 1.8.1 Related Federal Review and Consultation Requirements

Under Phase 2, the Project includes installation of a transmission line located on federal public lands administered by BLM designed to support the Project. The Project would use the existing open circuit of the double-circuit Arlington transmission line then interconnect with the Southern California Edison Colorado River Substation located on BLM-administered lands. The portion of the 230 kV transmission line outside of the Project boundary would be located on approximately 8.6 miles of federal lands managed by BLM Palm Springs-South Coast Field Office. Construction, decommissioning, operation, and maintenance of the transmission line on BLM-managed lands are analyzed in this SEIR and additionally in an environmental review document prepared under NEPA.

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

## 1.9 Primary Contact Person

The primary contact person for this EIR is Dat Tran (personal contact information is listed below):

Dat Tran, Project Planner
Riverside County Planning Department
4080 Lemon Street, 12th Floor
Riverside, California 92501
Phone: (951) 955-1119
Email: DTran@Rivco.org

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# 2 Description of the Project

**Project Title**

Grace Solar Energy Center

**Lead Agency Name and Address**

County of Riverside, Planning Department
4080 Lemon Street, 12th Floor, Riverside, California 92501
951.955.3200

## Contact Person and Phone Number

**Lead Agency Contact**

**Dat Tran, Project Planner**
County of Riverside
4080 Lemon Street, 12th Floor, Riverside, California 92501
951.955.1119
DTran@Rivco.org

**Applicant/Project Proponent**
Grace Orchard Interconnection, LLC
Grace Orchard Solar II, LLC
Grace Orchard Solar III, LLC
Grace Orchard Energy Center, LLC
700 Universe Boulevard, Juno Beach, Florida 33408

**Primary Contacts**

Brendan Lewis, Senior Project Manager, Development
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# 2.1 Introduction

Grace Orchard Interconnection LLC, Grace Orchard Solar II LLC, Grace Orchard Solar III LLC, and Grace Orchard Energy Center LLC, wholly owned subsidiaries of NextEra Energy Resources LLC, herein referred to as the "applicant" or "project proponent", proposes to entitle, construct, operate, maintain, and decommission the Grace Solar Energy Center (Project or Proposed Project). The Project is a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would generate and deliver renewable electricity to the statewide electricity transmission grid. The proposal also includes future decommissioning, which is anticipated to occur after 40 years or more of operation.

The Project is an amendment to the previously approved Palo Verde Mesa Solar Project (Approved Project), which was approved by the County of Riverside (County) in August 2017 and supported by an Environmental Impact Report (EIR No. 532). The Proposed Project is within the scope of the prior EIR; however, because the Project requires substantial changes to the prior EIR that may result in new significant impacts or a substantial increase in the severity of impacts identified in the prior EIR, a supplemental EIR (SEIR) has been prepared. This Chapter addresses the changes to the Approved Project and provides specific details regarding the Proposed Project.

# 2.2 Description of the Project

The Project would aggregate approximately 3,705 acres, including approximately 3,310 acres of private land and 395 acres of land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office (Figure 2-1, Project Location). The Project's solar facilities (solar site) would include up to 500 megawatts (MW) of PV solar generation and battery storage with a capacity of up to 500 MW. The Project would also include transmission lines, collector substation, operations and maintenance (O&M) building, access roads, and collection lines.

The Project would include two phases, including Phase 1 – Solar and Western Area Power Administration (WAPA) Tie-In and Phase 2 – Battery Energy Storage System (BESS) and Arlington Collocation. Under Phase 1, the Project would construct the solar facility, ancillary facilities, and an approximately 3.5-mile transmission line to interconnect with the existing Parker – Blythe 161 kV transmission line owned by WAPA on private land. The Phase 1 transmission line would interconnect through a tie-in with the existing Parker – Blythe 161 kV transmission line owned by WAPA using a new 161 kV switchyard. The Phase 1 solar facility and ancillary facilities could also utilize the Phase 2 transmission line. Under Phase 2, the Project would construct a BESS and ancillary facilities on private land and an approximately 10.5-mile transmission line to interconnect with the Southern California Edison (SCE) 230-kV Colorado River Substation located on BLM-administered land. The majority of the Phase 2 transmission line (8.6 miles) would utilize the existing open-circuit of the double-circuit Arlington transmission line; and therefore, would be located within an existing right-of-way (ROW). The 395-acre area on BLM-administered lands would be limited to the transmission line in Phase 2.

The Phase 2 transmission line is not located within a BLM Renewable Energy Corridor, and is located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects, as designated by the Desert Renewable Energy Conservation Plan (DRECP). The DRECP Final Environmental Impact Statement (EIS) was approved by a Record of Decision (ROD) signed on September 14, 2016 (Figure 2-2, Special Designations) (BLM 2016a). On August 1, 2023, the BLM received a Standard Form 299 application for a BLM ROW grant from the Applicant and an amended Standard Form 299 application on September 9, 2025 to construct, operate, maintain, and decommission the transmission line, which would be located

on BLM land under Phase 2. The BLM will perform a separate review of the components on BLM-administered land (CACA-106313356) under the National Environmental Policy Act (NEPA).

### 2.2.1 Proposed Changes to the 2017 Palo Verde Mesa Solar Project

An overview of the proposed changes of the Proposed Project to the Approved Project are listed in Table 2-1, below. Details of the Proposed Project components are provided in Section 2.3.

**Table 2-1. Proposed Changes to the 2017 Palo Verde Mesa Solar Project**

| | Approved Palo Verde Mesa Project | Grace Solar Energy Center |
|---|---|---|
| Project Name | Palo Verde Mesa Solar Project | Grace Solar Energy Center |
| Total Project Site (acres) | 3,278 acres | 3,705 acres |
| Privately owned land (Riverside County) (acres) | 3,250 acres | 3,310 acres |
| BLM-administered land (acres) | Limited to 28.2 acres within the ROW for the transmission line | 395 acres |
| Solar Energy Facility | Single-axis tracking system | Single-axis tracking system |
| MW of Power | 450 MW | 500 MW |
| Battery Storage | None | 500 MW |
| PV Panel Dimensions | Tracker: 295 feet long and 140 feet wide | Individual Panel: 7.8 feet high by 3.7 feet wide |
| Transmission line Route | East of Blythe Airport running south, south of I-10, extending west to SCE Colorado River Substation[1] | WAPA Tie-In: Starting from the proposed substation routed northeast to the north side of the lemon orchard parcel, then southeast to the Parker-Blythe WAPA line.<br>Arlington Collocation: Starting east of Dracker Road from the proposed substation extending horizontally west of Blythe Airport, then, running south, south of I-10, extending west to SCE Colorado River Substation. |
| Total Transmission line (miles) | 14.5 | WAPA Tie-In: 3.5<br>Arlington Collocation: 10.5 |
| Transmission line on site (miles) | 2.7 | WAPA Tie-In: 3.5<br>Arlington Collocation: 1.9 |
| Transmission line off site (miles) | 11.8 | WAPA Tie-In: 0<br>Arlington Collocation: 8.6 |
| Interconnection | Colorado River Substation | WAPA Tie-In: Parker – Blythe WAPA Line<br>Arlington Collocation: SCE Colorado River Substation |
| Primary Access | Intersection of Buck Blvd. and 10th Ave. | Intersection of Buck Blvd. and 10th Ave. |
| Alternate Access | Intersection of Stephenson Blvd. and 10th Ave. | WAPA Tie-In: Intersection of Stephenson Blvd. and 10th Ave.<br>Arlington Collocation: Intersection of Dracker Rd. and Black Rock Rd. |

**Table 2-1. Proposed Changes to the 2017 Palo Verde Mesa Solar Project**

| | Approved Palo Verde Mesa Project | Grace Solar Energy Center |
|---|---|---|
| Substation/Switchyard Footprint (acres) | 4.1 | 3.5 |
| Substation Location | South of intersection of Dolly Street and 6th Avenue in the northeastern corner of the intersection of 10th Ave and Buck Blvd | Located on private land, west of solar array |
| O&M | 3,500 square feet O&M building | 3,500 square feet O&M building |
| Traffic | Construction: 1,164 trips per day<br>Operation: 12 permanent full-time employees | Construction: 635 trips per day<br>Operation: 6 permanent full-time employees |
| Water Use | Construction: Approximately 500 per year for 3 years = 1,500 AF<br>Operation: Approximately 302 AF per year | Construction: Approximately 600 AF<br>Operation: Approximately 2 AF per year |

**Notes**: Western Area Power Association = WAPA; Southern California Edison = SCE; Operations and Maintenance = O&M; acre-feet = AF.

## 2.2.2 Project Location

The Project site aggregates a total of 3,705 acre and is located in eastern Riverside County (County), in southern California (Figure 2-1). The Project is located on private lands (3,310-acres) with the transmission line located on private land within the solar facility boundary under Phase 1 and on BLM-administered land (395-acres) under Phase 2. The Project site is located approximately 2 miles north of Interstate (I) 10, adjacent, on the west side to the Blythe city limits (Figure 2-1). The Project is bounded on the north and west sides primarily by BLM lands, to the east and south by private land. Blythe Airport is located south of the Project. There is privately-owned lemon orchard located within the center of the Project boundary (Figure 2-6).

The Project site includes primarily fallowed agricultural fields with evidence of possible soil disking, plowing, and herbicide application as well as regular maintenance and disturbance associated with management activities on the private parcels. The undeveloped land on the BLM-administered parcels under Phase 2 is generally native creosote scrub and include numerous drainages, with some recreational disturbance by undesignated off-highway-vehicle (OHV) routes and open routes as designated by the BLM. There is mesquite habitat bordered by large trees planted along the edge of private parcels southeast of the Project site. Tree species, such as *Olneya tesota* (Ironwood), were also identified onsite, primarily near the washes and along the transmission line under Phase 2 (Appendix C). There are no buildings or structures on the Project site, but there is an existing underground dedicated water conveyance system in the southeast corner of the Project site which connects to an offsite local canal.

Buck Boulevard, a paved, non-county road north of 10th Avenue, runs through the Project boundary north of the intersection with 10th Avenue, and Stephenson Boulevard, an unpaved, non-county road, runs through the Project boundary on the project boundary north of the intersection with 10th Avenue. Buck Boulevard would be improved and used as the primary access road for the Project. Stephenson Road would provide secondary access to the Project under Phase 2. Under Phase 2, the proposed transmission line is routed west from the proposed substation and crosses Dracker Road. Dracker Road, a non-county road that runs along the west side of the Project boundary, would be the secondary access under Phase 2 to access the proposed transmission line corridor. On the west side of Dracker Road, the Project transmission line

would then connect to the existing Arlington transmission line and use the open circuit of the existing double-circuit Arlington transmission line. The existing Arlington transmission line crosses Black Rock Road, a paved, county-maintained road and I-10. There are a few roads within the Project boundary, such as 9th Avenue and Keim Boulevard, that are identified by the County as a road "accepted for public use" by Riverside County. Figures 2-6 and 2-7 illustrate the location of the Project relative to access roads.

### 2.2.3 Regional Setting and Adjacent Land Uses

The Project site is located along the western edge of the Colorado Desert, within the Colorado River Valley, west of Blythe and east of Desert Center. The Colorado River Valley extends from the Rocky Mountains in Colorado to the Colorado River Delta in the northern Gulf of California. The elevation of the Colorado River Valley ranges from less than 250 feet above mean sea level (amsl) at the southwest extent of the Colorado River to approximately 8,000 feet amsl at the northeast extent of the Colorado River. The surrounding mountains rise to more than 14,000 feet amsl at the northeast extent and 2,000 amsl at the southwest extent.

The topography of the Project site generally slopes downward toward the southeast toward McCoy Wash. Ground surface elevations at the Project site range from approximately 310 feet amsl in the southeastern end of the site to 430 feet amsl near the northwestern portion of the site. Land uses near the Project site include transportation (I-10 and Blythe Airport), active agricultural, renewable energy, energy transmission, and unprogrammed recreational and wilderness areas. The community of Mesa Verde is located approximately 2.6 miles south and the City of Blythe is located approximately 4.5 miles southeast of the Project boundary. Additionally, there is a single residence located just north of the Project boundary and the Rancho Ventana RV Resort approximately 2 miles northeast of the Project boundary. Other nearby community resources include a gas station north of the community of Mesa Verde, Palo Verde College approximately one mile east of the Project boundary, Blythe Airport approximately one mile south of the Project boundary, and Blythe Municipal Golf Course adjacent to the Rancho Ventana RV Resort. A lemon orchard is within Project boundary (Figure 2-1). Additionally, vacant, undeveloped land is scattered around the Project area, including the McCoy Wash. Undeveloped land in this area generally include native creosote scrub.

The Project is located near existing transmission infrastructure and solar development. The Blythe, McCoy, and Arlington Projects are all owned by NextEra and are located north of the Project. NRG Blythe II, also known as Blythe Airport Solar, and the Blythe PV Project, also known as Blythe 21 Solar, are owned by Clearway Energy Group, LLC and located south of the Project. Blythe Mesa Solar Project is owned by Blythe Mesa Solar II, LLC and is also located south of the Project. Desert Quartzite, owned by Desert Quartzite, LLC (EDF Renewables), and Crimson Solar, owned by Sonoran West Solar Holdings, LLC (Recurrent Energy), are located to the southwest of the Project. The distances from each of these sites to the Project are listed in Table 2-22, below. Figure 2-3, Energy Projects Along I-10, shows the Project in relation to other existing, approved, and proposed energy projects.

**Table 2-2. Surrounding Projects**

| Project Name | Status | Direction from Project Site | Approximate Distance from Project Boundary |
|---|---|---|---|
| Blythe Solar Power Project | Existing | North | Directly adjacent |
| McCoy Solar Energy Project | Existing | Northwest | 2.1 miles |
| Arlington Solar Energy Center | Existing | Northwest | 3.2 miles |

**Table 2-2. Surrounding Projects**

| Project Name | Status | Direction from Project Site | Approximate Distance from Project Boundary |
|---|---|---|---|
| Blythe Mesa Solar | Existing | South | Directly adjacent |
| NRG Blythe II (Blythe Airport Solar) | Existing | South | 0.2 miles |
| Blythe PV Project (Blythe 21 Solar) | Existing | South | 3.6 miles |
| Desert Quartzite Solar | Existing | South | 4.2 miles |
| Crimson Solar[1] | Approved | Southwest | 5.6 miles |

**Notes:** [1]Crimson Energy Storage Project is existing and is part of the larger Crimson Solar Project, which is to be constructed in the future.

Under Phase 1, the Project proposes to construct approximately 3.5 miles of a new 161 kV transmission line. The proposed transmission line would tie-in to the existing Parker-Blythe 161 kV transmission line which is routed through the center of the Project, paralleling Buck Boulevard. The existing Parker-Blythe 161 kV transmission line connects from the existing SCE Blythe Substation, located approximately 1.5 miles south of the Project site, to the Parker Substation, located approximately 59 miles northeast of the Project site.

Under Phase 2, the Project would utilize approximately 1.9-miles of a new 230 kV transmission line and approximately 8.6 miles of the open-circuit on the existing double-circuit Arlington transmission line. Under Phase 2, the Project would interconnect to the electrical grid and deliver energy to the 230 kV Southern California Edison (SCE) Colorado River Substation located approximately 5.3 miles southwest of the community of Mesa Verde.

## 2.2.4 Land Use and Zoning

### Riverside County – Private Lands

**General Plan Land Use.** The Project is located within the Palo Verde Valley Area Plan Boundary of the Riverside County General Plan. The private lands associated with the Project are designated as Open Space-Rural and Agriculture per the Riverside County General Plan (Figure 2-4, Riverside County General Plan - Land Use). All parcels within the Project site are designated as Agriculture and most of the Assessor Parcel Numbers (APNs) along the Phase 2 transmission line are designated as Open Space-Rural. Under Phase 2, the exceptions along the transmission line include APN 879-090-034, 879-090-033, 879-090-001, and 879-090-031, which are designated as Agriculture.

**Zoning.** Under Phase 1, Private lands within the Project site are zoned W-2-10 Controlled Development Areas, other than APN 821-090-018, which is zoned as A-1-10 Light Agriculture (Figure 2-5, Riverside County Zoning). Under Phase 2, all of the transmission line parcels are zoned N-A Natural Assets, other than APNs 818-210-003 and 818-210-004, which are zoned W-2-10 Controlled Development Areas.

In accordance with Riverside County Ordinance No. 348, solar power plants on lots 10 acres or larger are permitted through a Conditional Use Permit (CUP) within the A-1-10 Light Agricultural, N-A Natural Assets, and W-2-10 Controlled Development Areas zoning designations (County of Riverside, Ordinance No. 348). The Project, approximately 3,310 acres, would be located on private lands under the County's jurisdiction. The Applicant is seeking a CUP, Development Agreement (DA), and Public Use Permit (PUP) for the construction, operation, maintenance, and decommissioning of the proposed solar facility and transmission lines. Riverside

County will be the lead agency in preparing the California Environmental Quality Act (CEQA) document to evaluate the environmental effects of constructing, operating, maintaining, and decommissioning the Project.

**Farmland and Agricultural Preserves.** The Project is not located on lands subject to active Williamson Act contracts or County Agricultural Preserves. However, the Project includes an area mapped by the Department of Conservation Farmland Mapping and Monitoring Program as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, located in the lemon orchard in the center of the Project site.

**Surrounding Land Use/Zoning.** Most of the private lands adjacent to the Project site are designated as Open Space-Rural and Agriculture in the Riverside County General Plan Land Use Element (Figure 2-5). Blythe Airport, located south of the Project site, is designated as Public Facilities.

In terms of zoning, the private parcels to the north, east, and west of the Project site are zoned N-A Natural Assets and W-2-10 Controlled Development Area. The private parcels south of the Project site are zoned N-A Natural Assets Zone, W-2-10 Controlled Development Area, A-1-10 Light Agriculture, and M-H Manufacturing-Heavy. There are also parcels zoned A-2-10 (Heavy Agriculture) and R-R (Rural Residential) in the general vicinity of the Project. The existing solar facilities adjacent to the Project are located on land zoned N-A and W-2-10. All the listed nearby zones, other than R-R, which is the closest to the city limits of Blythe, allow development of solar facilities with a CUP on a lot 10 acres or larger.

BLM-administered lands are located directly north, west, and south of the Project site, as shown on Figures 2-4 and 2-5.

## Bureau of Land Management (Phase 2 Only)

**DRECP.** The DRECP is a collaborative, interagency landscape-scale planning effort in seven California counties—Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The DRECP was developed to (1) advance federal and state natural resource conservation goals and other federal land management goals in the Colorado/Sonoran desert regions of Southern California; (2) meet the requirements of the federal Endangered Species Act, California Endangered Species Act, Natural Community Conservation Planning Act, and Federal Land Policy and Management Act ; and (3) facilitate the timely and streamlined permitting of renewable energy projects in the Mojave and Colorado/Sonoran desert regions of Southern California. The DRECP Land Use Plan Amendment (LUPA) and supporting Environmental Impact Statement (EIS), identified lands within the California desert that would be appropriate for conservation and lands that would be appropriate for transmission and renewable energy development, called DFAs. The LUPA includes most of the California Desert Conservation Area (CDCA). The DRECP Final EIS was approved by a ROD signed on September 14, 2016 comprehensively evaluated transmission and utility-scale renewable energy development in the California desert including the DFA where the Project is located (BLM 2016a). The EIS considered impacts to all resources potentially impacted by transmission and renewable development. It included Conservation and Management Actions (CMAs) designed to reduce the effects of development on sensitive resources as well as highlighting other types of mitigation that might be required to further reduce impacts.

Under Phase 2, the 395-acre portion of the Project site located on BLM administered land is located within a DFA as designated by the DRECP. A majority of Project's transmission line would be located within the Arlington existing ROW (Figure 2-2). Development of the portion of the Project located on BLM lands would be evaluated in an environmental review document as required under NEPA, which may tier from the DRECP EIS. The environmental review document would also include CMAs that would be applicable only to the components of the Project on BLM administered land. CMAs are only discussed in this SEIR as necessary.

## 2.2.5 Project Objectives and Benefits

The Project would provide Riverside County, as well as the state of California, with a renewable energy source that would assist California in complying with the Renewables Portfolio Standard (RPS), established in 2002 under Senate Bill (SB) 1078, updated in 2015 under SB 350.[1] SB 350 requires that 50% of all electricity sold in the state be generated from renewable energy sources by the year 2030. SB 100 was approved in September 2018 and would increase the RPS to a 100% goal by 2045.[2] The Applicant is proposing to construct the Project to meet the following objectives:

- Utilize property within Riverside County to develop an economically feasible and commercially financeable project for the delivery of up to 500 MW of affordable wholesale solar PV energy generation and up to 500 MW of battery energy storage capacity to California ratepayers under long-term contracts with electricity service providers.
- Minimize environmental impacts and land disturbance associated with solar development by maximizing facility siting on relatively flat, previously disturbed agricultural lands with high solar insolation value, near an identified "solar energy zone" / "Development Focus Area" and in close proximity to road access and established utility corridors.
- Support California's efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established in 2006 under California Assembly Bill 32, the Global Warming Solutions Act of 2006, which requires the California Air Resources Board to reduce statewide emissions of GHGs to at least the 1990 emissions level by 2020.[3] This timeline was updated in 2016 under SB 32, which requires that statewide GHG emissions are reduced to at least 40% below the statewide GHG emissions limit by 2030.[4]
- Support California's aggressive RPS Program consistent with the timeline established by SB 100 (De León, also known as the "California Renewables Portfolio Standard Program: emissions of greenhouse gases"), as approved by the California legislature and signed by Governor Brown in September 2018, which increases RPS in 2030 from 50% to 60% and establishes a goal of 100% RPS by 2045.[5]
- Further the goals of AB 1279, the California Climate Crisis Act, to achieve net zero greenhouse gas emissions no later than 2045, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by 2035.
- Increase energy storage opportunities through the creation of high-capacity battery BESS that help to solve California's "duck curve" power production problem and to meet statewide energy goals and support grid reliability.

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1 California Renewables Portfolio Standard Program. September 2002. California State Senate. Bill No. 1078. Available: leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200120020SB1078.

2 Clean Energy and Pollution Reduction Act. October 2015. California State Senate. Bill No. 350. Available: leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350.

3 Global Warming Solutions Act. September 2006. California State Assembly. Bill No. 32. www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

4 Global Warming Solutions Act: emissions limit. September 2016. California State Senate. Bill No. 32. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

5 Senate Bill No. 100. September 2018. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

- Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.
- Provide green jobs with living wages to Riverside County residents and the State of California.

## 2.3 Project Components

The Project consists of the solar site located on private land with transmission lines located either on private land or on BLM Land. Figure 2-6 shows the general site plan for the Project. The proposed solar site components include the following:

- Solar field with a capacity of 500 MW
- Crystalline silicon panels or bifacial panels
- Single axis tracker components
- Direct Current (DC) to Alternating Current (AC) power inverters at each solar block
- Transformer(s)
- Battery energy storage system (BESS) with a capacity of up to 500 MW
- On-site operations and maintenance (O&M) building
- Substation (including a generator and propane tank for emergency use)
- Underground or aboveground (or a combination of both) 34.5-kV collection system
- Underground or aboveground optical ground wire (OPGW)
- Staging area (temporary) for construction trailers and construction parking
- Laydown areas throughout the Project site during construction
- Water tank adjacent to the O&M building and BESS
- Roadways consisting of internal and perimeter roads
- Access to the Project site for construction and O&M
- Integrated Supervisory Control and Data Acquisition (SCADA) system
- InWeather stations

The transmission line components include the following:

- 161 kV transmission line, approximately 52 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project to the electrical grid
- Interconnection facilities connecting the Project to the existing Parker-Blythe WAPA line
- 230-kV transmission line, approximately 40 new poles, and ancillary componentry (e.g., fiber optic cabling, cross arms, conductors, etc.) connecting the Project the to the electrical grid through interconnection to the SCE Colorado River Substation
- Access road along the transmission line corridors for construction and O&M
- Communication cables or lines

## 2.3.1 Solar Site (Private Lands)

### Solar Generator

The Project would install up to 500-MW PV-system blocks to convert solar energy directly to electrical power for export to the state's electrical grid. Solar power is generated through PV modules converting sunlight striking the modules directly to low-voltage DC power, which is subsequently transformed to alternating current AC power via an inverter that is placed on site. Current technology panels are approximately 7.8 feet high (93.6 inches) by 3.7 feet wide (44.4 inches) wide. PV cells are located on panels that are on a mounting structure. The PV panel modules are mounted on steel support posts that are pile-driven into the ground.

There are different types of mounting structures for the modules, depending on whether the modules would be fixed in one position or track the sun's position during the day. A solar tracking mechanism would be used to maximize the solar energy conversion efficiency by keeping the modules perpendicular to the sun's energy rays throughout the day. The completed assembly of PV modules mounted on a framework structure is called a "tracker," as it tracks the sun from east to west. The PV module rows would be oriented north-south based on the mounting structure design; however, exact module support structure types would be determined during the final Project design. The single-axis tracker configuration is more complicated and is discussed in more detail below. A fixed support structure is also possible. For the purposes of this application, the fixed structure would orient the panels in a permanent position facing south at a certain angle to optimize production throughout the year without any mechanical movement or drive motors. The Project may use a mixture of both trackers and fixed support structures, dependent on design constraints.

At this time, there are two types of tracker systems that may be selected for the Project: a ganged tracker system or a standalone tracker system. A ganged tracker system uses one actuator to control multiple rows of PV modules through a series of mechanical linkages and/or gearboxes. A standalone tracker system uses a single actuator for each row of PV modules. The exact tracker manufacturer and model would be determined in the final design. All trackers are intended to function the same in terms of following the position of the sun.

Module layout and spacing is optimized to balance energy production vs. peak capacity and would depend on the sun's angle and shading caused by the horizon surrounding the Project. The spacing between the rows of trackers is dependent on site-specific features and tracker selection. Spacing would be identified in the final design.

For maximum efficiency, panels are typically installed between 16 and 24 inches off the ground when at their lowest point, which would result in a maximum height of 8.5 to 15 feet from ground level, depending on the module resulting from the final engineering design. However, engineering constraints may require an increase in height for some panels; therefore, for analysis purposes it has been assumed that panels may be approximately 10–14 feet to the top from ground level once installed. Solar panels on multiple rows would be 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.

The PV modules are made of semiconductor material encapsulated in glass wherein the photovoltaic effect converts light (photons) into electrical current. Photovoltaics are best known as a method for generating electric power by using solar cells to convert energy from the sun into electricity. Energy from the sun is transmitted to the Earth as photons, which contain different levels of energy corresponding to different frequencies of the solar spectrum. When a photon is absorbed by a PV cell, the energy of the

photon is transferred to an electron in an atom within the PV cell. This added energy allows the electron to escape from the atom to become part of the current in an electrical circuit.

### Power Conversion Stations (Inverters)

Within the proposed solar arrays there would be power conversion stations (PCS), also known as inverters, which would contain at a minimum one inverter and one transformer. PV modules generate a low-voltage DC electrical output that is not suitable for direct connection to the AC utility grid used in the United States. The electrical collection system would be designed to convert the output power from the PV modules from DC to AC, transform the power from low voltage to medium-level voltage, and supply auxiliary power to the tracker systems. The DC output from the PV arrays would be transmitted to inverters through a combination of aboveground and underground DC electrical cables. The number of modules connected to each inverter is dependent on the specific model of modules, inverters, and their capacities, which would be selected in the final design. To allow for greater electrical production in off-peak hours and an overall increase in power production, the DC quantity would exceed the AC plant rating in the range of 25% to 40%. The resulting AC current from each individual inverter package would then be routed through cable or solid busbars to the adjacent medium-voltage step-up transformer. The output voltage from each inverter would be increased to the desired substation feed voltage (34.5 kV) by these step-up transformers. From the inverter pads, the collected 34.5 kV of AC power would be delivered to the on-site Project substation. Currently, there would be approximately 145 inverters, having the following individual cabinet dimensions width: 21.3 feet, depth: 6.5 feet, and height: 7.2 feet. The final engineering design might adjust this information.

Inverters are usually housed within an enclosed structure, which helps to reduce the resulting operational noise levels. PCS would also likely include an exhaust fan, as well as a heating, ventilation, and air conditioning (HVAC) system, which is typically mounted to the exterior of the enclosure. Noise levels generated by PCS would be associated with operation of the inverters, transformer, exhaust fans, and HVAC systems.

### Electrical Collection System

The Project would require the construction of a 34.5kV collection system. Each array unit would be connected using underground 34.5 kV collection lines parallel and adjacent to the subarea access roads. Electrical collection lines would likely be installed within the access road corridor, using direct bury methods, although conduit could be used in some situations.

### Battery Storage

Battery storage systems absorb, hold, and then reinject electricity into the electrical system. Energy storage plays an increasingly important role in renewable energy and helps to create a more flexible and reliable grid system. Energy storage can smooth electricity prices through arbitrage or energy shifting, manage evening energy ramps, mitigate the risk of curtailment, provide black start capability, and provide backup power.

The Project would use an up to 500-MW AC- or DC-coupled centralized BESS configuration. Selection of an AC- or DC-coupled system is ultimately determined through off-taker preference and contract terms. The BESS would include batteries housed within containers in a centralized location near the proposed on-site substation. The BESS would likely consist of containers housing batteries connected in strings and mounted on racks. The BESS would occupy approximately 23.2 acres and would include structures up to 20 feet in height.

The AC-coupled system would be connected to a bidirectional inverter to convert DC energy to AC energy, allowing for energy to flow in or out of the batteries to provide charge and discharge. This AC energy would then be stepped up to 34.5 kV via the pad mount transformer integrated into the power conversion unit. Power switches and relays would protect the system. The system would consist of several housing units, like shipping containers. The containers would be placed on concrete pads or piles, as determined by the geotechnical engineer in compliance with manufacturer requirements The equipment enclosures would be located on private land, on the west side of the solar arrays, close to the on-site substation. AC-coupled BESS design standards typically include monitoring equipment, thermal management systems, active and/or passive exhaust venting, multiple fire detection units including gas/heat/smoke detectors, and fire protection systems, which adequately address fire risk associated with the unit (California Fire Code 2022). AC-coupled BESS units typically require their own inverters on their own skid. However, inverters for the AC-coupled BESS units would be adjacent to the container instead of within the container. Other BESS equipment (e.g., auxiliary transformer to control the HVAC system) may also be adjacent to the container instead of within the container. The water system design would adhere to Riverside County Fire Department (RCFD) requirements for fire protection and operations. AC-coupled BESS would be incorporated and consolidated within or adjacent to the Project substation area within the substation yard.

If a DC-coupled system is used, battery units would be stored in numerous smaller containers. Those containers would make use of the solar inverters, feeding them in DC power. Therefore, the battery containers would be distributed throughout the solar arrays on both private land, adjacent to their respective inverters. The containers would be similar in size (20–40 feet long) to the solar inverter skids. The battery and solar inputs would be metered separately prior to signal inversion. The charge and discharge of the DC-coupled batteries would be controlled by signal from the inverters. As is typical for the industry, inverters would be controlled by a central control system. The protections to the batteries would be internal to the battery management systems and control boxes located within the containers and inverters. Different battery storage technologies, such as lithium-ion (Li-ion), sodium sulfur, and lead acid batteries, can be used for grid applications.

BESS enclosures would be accessed from the outside via cabinet doors for maintenance needs. There would be approximately 705 battery containers. However, because the size of each battery enclosure varies widely by manufacturer, the final number of enclosures to be installed would not be known until a manufacturer has been selected. The batteries could be charged from the electrical grid or directly from the PV solar energy generated by the Project. Energy stored in the BESS would then be discharged into the grid when the energy is needed, providing important electrical reliability services to the local and regional area.

**Batteries Housed within BESS Enclosures.** While the final storage technology has not yet been selected; the BESS would include lithium-ion battery modules or another commercially available battery technology available at the time of construction. A battery supplier has not been selected at this time due to changing markets; however, past suppliers have included CATL, LG Chem, Samsung, Tesla, and Lishen batteries. Inverter suppliers would be selected among renowned international players like Power Electronics, GE, ABB, Parker Hannifin, S&C Electric, Eaton, Princeton Power, DynaPower, and Ideal Power. The final supplier(s) would be selected prior to Project construction and would be subject to an industry-standard prequalification process. Batteries would be housed within outdoor BESS enclosures, which are typically made of metal. Each BESS enclosure would house hundreds of battery modules. Individual dimensions of BESS enclosures, depending on the technology, are estimated to be 20 feet by 9 feet. Foundations will be constructed with either steel piles, concrete grade beams, concrete piers, or concrete slabs, with individual

dimensions of approximately 20 feet by 9 feet. Each BESS enclosure is typically capable of storing between 2 to 5 megawatt-hours of energy.

## External Access Roads

The Project would use existing roads to the extent possible. Primary access to the Project would be along I-10 from the Airport/Mesa exit, then east to Buck Boulevard. Under Phase 1, alternate access would be along I-10 from the Airport/Mesa exit, then east to Stephenson Boulevard. Under Phase 2, the transmission line would be accessed from the west, from the Airport/Mesa exit along Hobsonway, then north on Dracker Road. Access road design will adhere to the requirements of RCFD and BLM to the extent necessary. A raised access road with roadside ditches and culverts at drainage crossings would be constructed east of Dracker Road to the BESS and collector substation. This new access road would also allow access to the new east to west portion of the proposed transmission line between the collector substation and the existing Arlington transmission line.

Primary Project access roads would be approximately 24 feet wide and composed of approximately 6 inches of type II class B aggregate base compacted to 95% maximum dry density.

County roads would also be improved as required by Riverside County within existing 30-foot-wide or 60-foot-wide County ROWs. The road improvements would be completed per Riverside County specifications, which would include a 24-foot-wide road with class 2 aggregate base and additional graded shoulder area outside the road.

## Internal Roads

Internal roads would be constructed to allow fire and maintenance vehicle access. Internal access roads to the on-site substation and energy storage system would consist of 20-foot-wide roads with compacted gravel or dirt. Internal maintenance pathways between solar modules would be 16 feet wide. Internal access roads would maintain public access to nearby private properties. Up to a 20-foot-wide perimeter road separating the solar arrays from the perimeter fence would be constructed within the entire perimeter of the solar site. The roads would be constructed to allow fire (per RCFD standards) and maintenance vehicle access.

## Solar Facility Fencing, Site Security, and Lighting

The boundary of the solar site would be secured by a permanent security fence with posts set in concrete. The fence would be a 6-foot-tall chain link fence with 1-foot-tall strands of barbed wire along the top. The security fence would include wildlife exclusion fencing at the bottom, specifically for desert tortoise exclusion around the perimeter of the solar facility and breakaway fencing within the 100-year floodplain. No flow obstructing fencing would be located within 100-year floodplains. Where required within the floodplain, the fencing would include galvanized fence material up to 24 inches high and 12 inches deep for desert tortoise exclusion, and either breakaway or flow through fencing. Breakaway fence design would include hog rings between the galvanized fence material and security fence intended to break away with water velocity during potential flood events. Outside of the floodplain, perimeter fencing would just include security fence above desert tortoise exclusion fencing. Desert tortoise guards would also be installed as access gates. The security fence would be installed near the start of construction before large components are brought onto the site for assembly and installation but may be preceded by mowing, vegetation clearance, and grading as required. The ingress/egress would be accessed via a locked entrance gate. Security may be enhanced with motion detectors, facility lighting, and cameras in key locations.

Nighttime lighting would be limited to areas required for operation, safety, or security. Low-elevation (less than 14-foot) controlled security lighting would be installed at primary access gates, the on-site substation, and the entrance to the energy storage structure(s). The lighting would only switch on when personnel enter the area (either motion sensor or manual activation [i.e., switch]). All safety and emergency service signs would be lit when the lights are on. Electrical power to supply the access gate and lighting would be obtained from SCE. Lighting would only be in areas where it is required for safety, security, or operations. All lighting would be shielded and directed downwards to minimize glare and illumination of the night sky or potential impacts to surrounding viewers. Off-site security personnel could be dispatched during nighttime hours or could be on site, depending on security operating needs.

The Project would use portable lighting for any emergency work that must occur on panels at night. The level and intensity of lighting during operations would be the minimum needed. Portable lighting may be used occasionally and temporarily for maintenance activities during operations and also during construction activities.

## Laydown/Staging Areas

The solar site would have construction areas for use throughout the approximate 28-month construction period. The main laydown area would include construction trailers for the management of construction, a parking area, site security facilities, and portable toilet facilities that would serve the Project's sanitation needs during construction. This area would accommodate delivery of materials, vehicles, etc. Material delivery for the solar field would be ongoing; panels and framing structures would be delivered throughout the solar field adjacent to the subunit locations. The laydown area has been preliminary identified to include approximately 8.0 acres adjacent to the BESS and collector substation.

Additional temporary staging areas for material laydown including boxes of solar panels, steel, aluminum framing, conduit for underground electrical, transformers, and other project materials may be located throughout the Project area. The staging areas would be subsumed by the build-out of the panel array with some exceptions. Materials such as boxes of panels, steel, and aluminum framing would be laid out between rows of panels and along the access roads.

## Substation

The substation is anticipated to be located on the east side of Dracker Road, next to the Project solar panels and would cover approximately 2.6 acres. The substation would be separately fenced off from the rest of the solar project facilities and would include a switchyard component within the internal substation fence line. The fence would be a 6-foot-tall chain link fence with 1-foot-tall strands of barbed wire along the top. The substation serves to interconnect an electrical generator to the grid. The substation would convert the energy produced by the solar panels from medium-voltage (34.5 kV) to high-voltage (either 161 kV or 230 kV). It would include transformers, breakers, switches, meters, and related equipment.

The substation may include a backup emergency generator for use if the regional transmission system fails. The substation would be surrounded by security fencing and locked gates to comply with electrical codes.

A small control enclosure, approximately 48 feet by 14 feet and 11 feet in height, would be located nearby the substation and would be accessible to authorized high-voltage personnel only. The control building would house electrical control equipment, battery/DC systems for device operation, safety relays, and other similar electrical equipment. This building would interconnect with the main control room in the operations building for monitoring of the substation.

The substation must have access to communication systems in the area to comply with Federal Energy Regulatory Commission/California Independent System Operator/Utility monitoring and control requirements. Compliance may be accomplished by underground lines, aboveground lines, and or wirelessly. Access to the substation would use the same access roads as the Project. Existing road(s) would be used to the extent possible. At the substation, the generated electricity would be routed via a transmission line for delivery to either the Parker-Blythe 161 kV transmission line or the SCE 230kV Colorado River substation.

## Operations and Maintenance Facility and Storage Building

The Project would include an up to 3,500-square-foot O&M building with a maximum height of 20 feet. The O&M building would be constructed as a steel frame structure located on the west side of the Project site. The O&M building would support approximately six (6) full-time, onsite Project technicians. Operations would be monitored remotely via the Project's SCADA system, and periodic inspections and maintenance activities would occur. The O&M building may contain a backup generator and a propane tank for emergency use or in the event of a blackout. The O&M building would consist of staff offices, restrooms, a break room, and an office supply storage area and would include an HVAC system. The O&M building would provide storage for tools, maintenance supplies, and spare parts, but would not include storage of hazardous waste. A septic system would be located at the O&M building to serve sanitary wastewater treatment needs. A water tank would be located in proximity to the O&M building to provide a sufficient water reservoir for fire safety as required by the RCFD. The water for the water tank would be supplied by the same source as construction and operation, either by groundwater wells or the onsite water conveyance system. Employee parking would be provided adjacent to the O&M building in accordance with Section 18.12, Off-Street Vehicle Parking of Riverside County Ordinance No. 348 (County of Riverside 2023). O&M vehicles would include 0.75-ton pickup trucks and small utility vehicles to perform on-site welding, lubricating, panel washing, and other maintenance activities. In addition, flatbed trucks, dump trucks, and front-end loaders may be present on site at various times. Heavy-haul transport equipment would be brought to the site as needed for any major maintenance or equipment repair or replacement.

## Stormwater Drainage

Watershed and drainage analysis and calculations, as well as watershed protection and erosion control design drawings, would be prepared for the Project area during the engineering and civil design phase of the Project. Erosion would be controlled during construction by implementing a Storm Water Pollution Prevention Plan (SWPPP), as required by the Regional Water Quality Control Board for projects disturbing more than 1 acre. The SWPPP would use berm-like structures to slow excessive runoff on the eastern side of the site where elevations decrease and flatten before discharge at culverts along existing roads. Other stormwater drainage features, such as a detention/retention basin, may be required per the County's site development requirements depending on change in hydrological conditions on site.

## Supervisory Control and Data Acquisition System (SCADA)

The SCADA system is critical to proper operations and maintenance of the Project and uses propriety software, a fiber optic transmission system, a telephone, radio and/or microwave communications network and/or other of means of communication such as radio-links or phase loop communication systems. The SCADA system functions as a remote start, stop, reset, and tag out for facility, thus minimizing the manpower required to monitor site diagnostic information generated from the Project panels. The SCADA system would also control the Project substation allowing for fully centralized

operation of the Project to meet all California Independent System Operator and utility interconnection requirements. The SCADA system for the Project would be implemented via new fiber optic cabling either overhead or underground along the transmission line corridor. The system would be used entirely by the Project and would have no third-party uses.

Under Phase 2, the new primary fiber optic cabling would connect overhead from the Project substation along the east to west portion of the transmission line, then would be routed underground to cross Dracker Road. An underground trench and bore would be necessary across Dracker Road under Phase 2. The primary fiber optic cabling would then rise overhead on the west side of Dracker Road and remain overhead until the SCE Colorado River substation, where it would connect to the existing substation through an underground duct bank. Per SCE requirements, the Project would also require a secondary (redundant) communications path. Technology is changing rapidly in the field of plant control communications, but for the purposes of this project description, it is assumed that some kind of physical connection would be needed. The new redundant fiber would be installed underground from the proposed substation to the existing Arlington pull box located east of Dracker Road. The redundant fiber would be buried adjacent to the proposed substation access road and connect to the splice point at the existing Arlington pull box. Ground disturbance associated with fiber cabling installation would be restricted to the BLM authorized ROW and contained within previously disturbed areas to the greatest extent practicable.

## 2.3.2 Transmission Line and Interconnection

The Project would include transmission line alignments, access roads, and collector line routes. The transmission lines and associated ancillary facilities, such as access roads, spur roads, and temporary construction facilities, would either be located on private land or within a BLM authorized ROW. The transmission lines and access within the transmission line corridors would support the solar facility and/or BESS, which are located on private land.

### Transmission Lines

#### WAPA Tie-In (Phase 1)

Under Phase 1, the 161 kV transmission line and associated access roads would be located entirely on private lands within the solar facility boundary. The WAPA Tie-In includes approximately 3.5 miles of a new 161 kV transmission line. The proposed transmission line would tie-in to the existing Parker-Blythe 161 kV transmission line owned by WAPA which is routed through the middle of the Project, paralleling Buck Boulevard. The existing 161 kV Parker-Blythe WAPA line connects from the existing SCE Blythe Substation, located approximately 1.5 miles south of the Project, to the Parker Substation, located approximately 59 miles northeast of the Project. The new transmission line would include approximately 52 new poles between the proposed substation and tie-in location.

The transmission line would use self-supportive steel monopoles ranging up to 104 feet. Typical spans between poles would be approximately 350 feet. Self-weathering non-reflective steel would be used, which is intended to blend with the surrounding landscape. New poles would either have drilled pier foundations or would be direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter.

### Site Access Roads

Access to the transmission line and structure sites would be required during construction and for the long-term maintenance of the transmission line. Under Phase 1, access for the transmission line improvements and construction would occur within the solar facility boundary. Similar to the solar facility, primary access would be from Buck Boulevard and secondary access would be from Stephenson Boulevard. Existing paved and unpaved roads would be used to the extent practical, to transport material and equipment to and from the structure locations. When necessary, spur roads would run from the solar facility access roads to each structure location. Spur roads would be unpaved dirt roads located within the solar facility and used by maintenance crews and vehicles for inspection and maintenance purposes after Project construction.

### Temporary Construction Facilities

Temporary construction facilities would be necessary for construction of the transmission line and would include structures pads at each new transmission line structure location and pull sites at each angle structure for stringing of the transmission line. The transmission line work areas would be temporary for construction and would be decommissioned after construction. The final number of temporary construction work areas would be determined during final design of the transmission line.

### Interconnection

The Project transmission line would tie-in to the existing Parker-Blythe 161 kV transmission line, which runs north to south through the Project boundary, parallel to Buck Boulevard. The proposed transmission line would connect into a new 161 kV switchyard, with a three-breaker ring-bus, located adjacent to the existing transmission line. The new switchyard would be approximately 0.9 acres located within the limits of disturbance of the solar field and would include a 169-foot x 220-foot perimeter fence.

### WAPA Upgrades

No upgrades are anticipated to be required to the existing WAPA line.

## Arlington Collocation (Phase 2)

Under Phase 2, the Project would utilize a 230 kV transmission line located on BLM land. The transmission line and associated access roads would primarily be located in a DRECP designated DFA and would use the existing Arlington transmission line ROWROW.

Only 1.9 miles of new poles would be required on BLM land as the transmission line would use 8.6 miles of the open circuit on the existing Arlington transmission line east of the Project boundary, for a total transmission line length of 10.5 miles. After leaving the Project substation and reaching the existing Arlington alignment, the Project transmission line would be installed on existing double circuit structures and use the previously approved McCoy/Arlington ROW Grant corridor to the extent possible. Use of the existing transmission line would reduce new disturbance areas.

The Project transmission line would use self-supportive steel monopoles. A total of 40 new or replaced poles are proposed, with heights ranging from 39 feet to 104-feet tall. The new poles nearest to the proposed substation would be approximately 70 feet tall. Typical spans between poles would be approximately 200 to 500 feet. Self-weathering non-reflective steel would be used, which is intended to blend with the surrounding landscape. New poles would either have drilled pier foundations or would be

direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter.

One section of the transmission line near Blythe Airport would require construction of four new poles to transition to a horizontal line configuration, as opposed to vertical, which allows for a lower pole height in this area. Construction of these poles were previously permitted under the McCoy/Arlington ROW Grant. Additionally, a double circuit duct bank as approved under the Arlington Solar Energy Center would be located just outside the Colorado River Substation, which would accommodate one duct bank for the Project's transmission line prior to interconnecting to the Colorado River Substation. Two new riser poles would also be installed on either side of the duct bank. Additional poles may be necessary to enter the SCE Colorado River Substation, dependent on further coordination with SCE. New temporary workspaces outside the existing McCoy/Arlington ROW would also be required to pull the line and maintain adequate safety buffers from the energized Arlington transmission line.

### Site Access Roads

Access to the transmission line and structure sites would be required during construction and for the long-term maintenance of the transmission line. Under Phase 2, access for the transmission line improvements and construction would occur from Dracker Road from the north and Wiley's Well Road which would provide access to the transmission line and the Colorado River Substation, exiting from I-10 from the south. Existing paved and unpaved roads would be used to the extent practical, to transport material and equipment to and from the locations within the ROW. The Project would use the existing unpaved access road within the Arlington transmission line ROW. The transmission line access and spur roads, approximately 20 feet wide, would be constructed to provide access to each transmission pole. When necessary, spur roads would run from the access road to each structure location. Access and spur roads would be unpaved dirt roads located within the temporary construction ROW. After Project construction, the access road would be used by maintenance crews and vehicles for inspection and maintenance purposes.

### Temporary Construction Facilities

Temporary construction facilities would be necessary for construction of the transmission line and would include structures pads at each new transmission line structure location, pull sites at each angle structure for stringing of the transmission line, on the west side of Dracker Road where the new transmission line would connect to the existing Arlington transmission line, and near the intersection of Dracker Road and Black Rock Road, adjacent to the existing Arlington transmission line, for a helicopter pad. The transmission line work areas would be temporary for construction and would be decommissioned after construction. The final number of temporary construction work areas would be determined during final design of the transmission line.

### Interconnection

The Project executed a Large Generator Interconnection Agreement on May 3, 2023, with SCE for interconnection at the Colorado River Substation. The Project would use a new loop-in to connect to the existing SCE Colorado River Substation, which connects to the electrical grid managed by the California Independent Systems Operator. There would be 1.9 miles of new transmission line between the collector substation and the existing Arlington transmission line. The Project would then use approximately 8.6 miles of the open circuit on the existing double-circuit Arlington transmission line. Four new poles would be required where the electrical line configuration changes from vertical to horizontal near the Blythe Airport, as previously permitted as part of the Arlington Solar Facility. New poles also would be required

as the transmission line enters the existing SCE Colorado River Substation. Minor upgrades to the SCE Colorado River Substation would be required but would be limited to within and adjacent to the existing facility. A total of 40 new or replaced poles are proposed, with a maximum height of 140 feet. The new poles nearest to the collector substation would be approximately 70 feet tall. New poles would either have drilled pier foundations or would be direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter. Safety lighting may be required on new transmission line poles if required by the Federal Aviation Administration (FAA).

**SCE Upgrades**

SCE would upgrade the existing substation, transmission, and telecommunication facilities to support the interconnection of the Project to the SCE Colorado River Substation. SCE would install structures and equipment inside and adjacent to the existing substation. Work within the existing substation fence line would include a bus extension, a new 220 kV switch rack position to terminate the transmission line, and a new 220 kV line position. The bus extension includes six approximately 40-foot dead end structures, two sectionalizing circuit breakers and foundations, four sets of gang-operated disconnect switches, two sectionalizing circuit breaker support structures, one local breaker failure backup (LBFB) per circuit breaker, and new bus differential protection. The new switch rack position includes one approximately 65-foot dead end structure with a set 15-foot ground wire support post, three CCVTs, three 220kV line drops, one set of lightning arrestors, line protection relay, two circuit breakers, one group operated disconnect switch with a grounding attachment, three group operated disconnect switches, 14 bus support post insulators, and one LBFB per circuit breaker. Transmission upgrades would include an approximately 620-foot-long transmission line in two spans with one approximately 100-foot-tall tubular steel pole (TSP) inside the existing substation to dead end structures. Telecommunications upgrades would include installation of underground fiber optic cable for primary and secondary telecommunication. Approximately 1,950 feet of underground fiber optic cable and associated conduit would be added to extend the main fiber optic cable into the communication room at the existing substation. Telecommunication work would also include installation of required light wave, channel, and associated equipment, including terminal equipment, supporting protection, remote terminal unit (RTU), and SCADA requirements at the existing substation and the Project. These upgrades would be the responsibility of SCE.

### 2.3.3 Temporary and Permanent Disturbance

The Project would aggregate approximately 3,705 acres, with 3,310 acres of private land and 395 acres of BLM-administered land. The actual temporary and permanent disturbance onsite and offsite is described in Table 2-3.

**Table 2-3. Project Temporary and Permanent Disturbance**

| Project Component | Temporary (acres) | Permanent (acres) |
|---|---|---|
| **County of Riverside – Private Land** | | |
| Solar PV Field[1] | - | 2,715.4 |
| BESS | - | 23.2 |
| Substation | - | 2.6 |
| Drainage Basin | - | 7.2 |
| Laydown Yard | - | 8.0 |
| Phase 2 Transmission Line | 0.4 | 0.1* |
| Access Roads | - | 134.7 |
| County Road Improvements | - | 41.1 |
| **Total** | **0.4** | **2,932.3** |
| **BLM-Administered Land** | | |
| Phase 2 Transmission Line | 84.2 | 0.1* |
| Access Roads | - | 19.1 |
| **Total** | **84.2** | **19.2** |
| **BLM and Private Land Total** | **84.6** | **2,951.5** |

**Notes:** BESS = Battery Energy Storage System; PV = photovoltaic; O&M = operations and maintenance; Phase 1 = Solar and Western Area Power Administration Tie-In; Phase 2 = BESS and Arlington Collocation.

[1] Solar PV Field includes collection system, inverters, solar arrays, O&M building, fenced areas, and limits of disturbance. The Phase 1 transmission line and associated switchyard are located within the limits of disturbance of the Solar PV Field.

[2] Permanent transmission line disturbance area includes less than 0.1 acres of private land and less than 0.1 acres of BLM-administered land.

# 2.4 Construction Activities

The following sections provide detail about the timeline and process for construction of the Project. Once construction is complete, the Project would be in operation for approximately 40 years, the typically lifespan of solar facilities.

## 2.4.1 Construction Schedule and Workforce

Construction of the Project would begin once all applicable approvals and permits have been obtained. It would take approximately 28 months from the start of construction to completion of the Project.

The construction schedule would have five distinct phases, some of which would overlap. The phases, duration of each phase, and equipment needed for each phase are identified below in Table 2-4.

**Table 2-4. Construction Activity, Duration, and Equipment**

| Activity | Duration (days)[1] | Equipment |
|---|---|---|
| Phase 1: Site Preparation, Fencing, and Ingress/Egress | 180 | Bull Dozers<br>Graders<br>Concrete Trucks<br>Trencher<br>Rubber-tired loaders<br>Skid Steers |

**Table 2-4. Construction Activity, Duration, and Equipment**

| Activity | Duration (days)[1] | Equipment |
|---|---|---|
| Phase 2: Civil Improvements – Grading/Roads/Earthwork | 154 | Bull Dozers<br>Graders<br>Off-Highway Trucks<br>Skid Steers<br>Excavators<br>Scrapers |
| Phase 3: PV Panel and BESS Construction | 310 | Skid Steers<br>Buggies<br>Pile Drivers<br>Cranes<br>Rough Terrain Forklifts<br>Helicopter |
| Phase 4: Testing and Commissioning | 79 | N/A |
| Phase 5: Decommissioning and Reclamation | 350 | Cranes<br>Crawler Tractors<br>Excavator<br>Buggies<br>Rough Terrain Forklifts<br>Rubber-Tired Loaders<br>Skid Steers<br>Off Highway Trucks<br>Graders |

**Notes:**
[1] Some phases of construction may occur concurrently; therefore, the duration months are not additive.

Generally, construction work schedules are expected to be up to 12 hours per day up to 7 days a week. Typically, the workday would consist of shifts beginning as early as 6:00 a.m. and ending as late as 6:00 p.m. While construction workers could be onsite for up to 12 hours per day, equipment would not be operating more than 10 hours per day. Additionally, to meet schedule demands or to reduce impacts, it may be necessary to work early mornings, evenings, or nights during certain construction phases.

The work schedule may be modified throughout the year to account for changing weather conditions (e.g., changing to nightwork in the summer months to avoid work during the hottest part of the day for health and safety reasons). If construction work takes place outside these typical hours, activities would comply with Riverside County standards for construction noise levels (Ordinance 847) (County of Riverside 2007). The Project would use restricted nighttime lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area.

The construction workforce would average 50-100 employees with a maximum daily workforce of 600 employees. The construction contractor would make reasonable efforts for the construction workforce to be largely recruited from within Riverside County and elsewhere in the surrounding region to the extent practicable.

## 2.4.2 Pre-construction Activities

### Geotechnical Studies

Detailed geotechnical desktop evaluations has been prepared for the Project (Appendix B1, B2, B3). The studies evaluated geologic and geotechnical conditions for the Project site through review of published and non-published reports, aerial photographs, in-house data, and the assessment of the potential geologic hazards in the Project area. The studies evaluated the potential for existing environmental impacts related to geologic or soils conditions to affect the Project and discussed measures that could be implemented to reduce or mitigate the potential impacts with respect to the design and construction of the Project (Appendix B1, B2, B3).

### Surveying

Surveying includes two main objectives: (1) obtaining detailed topographic information for supporting the stormwater modeling and grading design, and (2) construction layout surveying with staking. Prior to the commencement of construction, a land surveyor would obtain or calculate benchmark data, grades, and alignment from plan information and provide control staking to establish the alignments, benchmarks, and elevations. Surveying would be completed by a surveyor licensed to perform work in the State of California. The Project would develop detailed topographic information for the Project site using photogrammetry and field cross sections. Concurrent with the acquisition of topographic data, aerial photographs would be obtained and analyzed to determine changes in land use and stream channel configurations. The detailed design documents would furnish data for the horizontal and vertical control points and horizontal alignments, profiles, and elevations. The final site plan for the Project would be based on the detailed topographic survey of the site that is performed as a part of the permitting and engineering design process. During construction, the surveyor would reestablish and set additional control points to maintain the horizontal and vertical control points as needed.

Road corridors, buried electrical lines, PV array locations, and the locations of other facilities would be located and staked to guide construction activities.

### Staking and Flagging

Preconstruction survey work would consist of staking and flagging the following: (1) ROW and construction area boundaries, (2) work areas (permanent and short term), (3) cut and fill, (4) access and roads, (5) transmission structure centers, (6) foundation structure, and (7) desert tortoise or endangered plant avoidance areas, if any. Staking and flagging would be maintained until final cleanup.

## 2.4.3 Site Preparation and Grading

Site preparation activities include installing desert tortoise exclusion fencing and completing pre-construction biological clearance surveys, preparing, and constructing site access roads, establishing temporary construction trailers and sanitary facilities, and preparing construction staging areas. Mobilization would include bringing construction equipment to the site prior to start of construction.

### Fencing

Prior to ground disturbing activities, the desert tortoise exclusion and security fence would be constructed around the entire perimeter of the solar site, including laydown and substation areas. Fencing within the 100-year floodplain would include the breakaway or flow-through fencing design. At main access points, gates with tortoise guard crossings would be constructed to ensure that the fence is a contiguous barrier

to entry by desert tortoise. At the conclusion of fence construction, protocol-level desert tortoise clearance surveys would be conducted in accordance with CDFW and USFWS requirements.

## Vegetation Removal/Clearing

Vegetation would be removed only where the Applicant or their engineering, procurement, and construction contractor (EPC) determines necessary in the solar array for localized ground contouring and for construction and maintenance of access roads, the O&M building, equipment enclosures and pads, stormwater improvements, the substation, and where it could interfere with facility operation. In other areas, vegetation would be trimmed or knocked down as needed for construction safety and allowed to re-grow to a height that would not interfere with facility operations or create a fire risk. Throughout the remainder of the developed area on the Project site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level, and to assist in erosion control. During construction of the solar and energy storage facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible.

The lemon trees within the existing orchard would be removed and chipped during overall site clearing and grubbing. Approximately 26,000 cubic yards of wood chips would result from the lemon tree clearing activity, which would either be hauled offsite or buried onsite. If hauled offsite, approximately 1,733 truck trips would be required for tree clearing activity.

Vegetation would be allowed to re-grow within the solar panel field to the extent that it does not interfere with the panels themselves, by growing into electrical connections and creating a fire hazard or disrupting the panel's performance. However, this is relatively unlikely given the shading the panels would be providing on the soil. Vegetation height would be limited (if required) to comply with RCFD requirements. Vegetation and weed management plans would be prepared for review and approval prior to the start of construction.

## Grading

Because the Project site is fairly level, grading is expected to be minor in most instances. However, grading would occur throughout the site, at a minimum for access roads, inverter pad locations, transmission tower foundations, internal roadways, and work areas. In addition, grading would be required for all ancillary facilities, including the O&M building, parking area, water storage facility, septic field, laydown area, substation, and BESS yard. At locations where transmission pole and tracker foundations would be installed, minor cuts may be required where the foundations would be driven. Minor earth work would also occur to install aggregate base access roads and transmission line access roads. The road surface would be at-grade to allow any water to sheet flow across the site as it currently does. Cut and fill quantities would be balanced across the Project site and import or export of soil is not anticipated. Material for roads and the top of pads would be sourced from a local quarry. Grading would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment.

When feasible, construction activities would implement drive and crush rather than grading. Construction equipment would drive over and crush native plants to minimize impacts to the roots of desert shrubs. Drive and crush is expected to reduce the recovery time of desert shrubs within the temporary construction areas. Within the solar site, where there are areas where drive and crush is not feasible, other site preparation techniques may be used where feasible that would minimize the required volume of earth movement. These techniques may include a "disc and roll" technique that uses equipment to till the soil over much of the solar facility site and then roll it level, as well as "micrograding" or "isolated cut

and fill and roll" of other areas of the site to trim off high spots and use the material to fill in low spots. However, there is potential that large areas of the site may need to be graded if conditions require.

### Water

Construction water would be used primarily for dust control and soil compaction, with minor amounts for sanitary and other purposes. Water consumption during construction would require approximately 600 acre-feet (AF) total and would be used for dust suppression and earthwork over an approximately 28-month period. The majority of the construction water use is anticipated to occur during site grading. During construction, restroom facilities would be provided by portable units to be serviced by licensed providers.

Construction water would be supplied to the site by either groundwater wells or an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. If necessary, the Project would use existing wells or in the event that wells are not in an adequate condition for use, then new wells would be constructed.

## 2.4.4 Solar Module Electrical Construction Activities

Underground cables to connect panel strings would be installed using ordinary trenching techniques, which typically include a rubber-tired backhoe excavator or trencher. Wire depths would be in accordance with local, state, and federal requirements, and would likely be buried below grade by excavating a trench to accommodate the conduits or direct buried cables. After excavation, cable rated for direct burial or cables installed inside a polyvinyl chloride conduit would be installed in the trench, and the excavated soil would likely be used to fill the trench and lightly compressed.

All electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. Commissioning of equipment would include testing, calibrating 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.

Certified electricians in the construction workforce would perform appropriate electrical construction activities starting with combiner box connections. Utility journeymen may be required to perform or supervise the higher-voltage electrical construction activities for the on-site substation and transmission line.

## 2.4.5 Transmission lines and SCADA Construction

Pre-construction activities for the transmission lines, SCADA, and associated infrastructure would consist of surveying and marking the ROW and structure locations and mobilizing equipment and materials.

Project access roads would be used to access and maintain the transmission line and SCADA facilities. Existing paved and unpaved roads would be used to the extent practical, to transport material and equipment for the SCADA facilities.

Vegetation clearing and ground disturbance would be required at each transmission line structure site. Vegetation clearing and ground disturbance would be required to excavate tower holes and pour concrete foundations where applicable. Vegetation would be cleared as required to install the structure and structural foundations.

The transmission line structures would be located within the transmission line corridors. New poles would either have drilled pier foundations or would be direct embed. Direct-embed excavations would range from 4 feet to 6 feet in diameter while drilled pier diameters would range from 8 feet to 11 feet in diameter. The tower foundations, if applicable, for the transmission line structures would require ground disturbance. Foundation excavations would be made using mechanized equipment, with the poles requiring one to four holes, 4 to 11 feet in diameter. Structure foundations would be excavated with a vehicle-mounted power auger or backhoe. In rocky areas, the foundation holes would be excavated by drilling. Foundations would be installed by placing reinforced steel and structure steel components into each foundation hole, positioning the steel components, and encasing them in concrete. Excess spoil material would be used for fill where suitable. The foundation excavation and installation activities would require access to the site by a power auger or drill, a crane, material trucks, and ready-mix concrete trucks.

Water would be used for soil compaction and dust abatement at each structure site and along access roads. Water for footer compaction and dust abatement would be obtained from on-site wells or off-site water sources and trucked to each construction location.

After the structures are erected, insulators, hardware, and stringing sheaves would be delivered to each structure site. The structures would be rigged with insulator strings and stringing sheaves at each ground wire and conductor position.

Tensioners, line trucks, wire trailers, and tractors needed for stringing and anchoring the ground wire or conductor would be necessary at each tensioning site. The tensioner, in concert with the puller, would maintain tension on the shield wires or conductors while they are pulled through the structures. The pulling site would require approximately half the area of the tension site. A puller, line trucks, and tractors needed for pulling and temporarily anchoring the shield wires, optical ground wire, and conductor would be necessary at each pulling site. There would be no blading at pull sites if the terrain is sufficiently level.

Wire stringing for the transmission line under Phase 2 may also require use of a helicopter. The helicopter would be a small 2-person aircraft with low load capacity and a small propeller. The helicopter is only anticipated to be needed to string the transmission line across I-10, but in the event other portions of the transmission line need aerial support, it would be used for those areas as well.

### 2.4.6 Restoration

A Site Restoration and Revegetation Plan and an Integrated Weed Management Plan would be finalized prior to construction. The plans would include approved mitigation measures and best management practices. Infestations of non-native and invasive species would be treated in accordance with the Integrated Weed Management Plan. If needed, only County-approved herbicides would be used within the Project site. Under Phase 2, only BLM and County-approved herbicides would be used for the Project. Any use of specific herbicides would be outlined in the Integrated Weed Management Plan. After construction is completed, relatively minimal O&M activities are required during operations. Access roads and aisle ways would need to be maintained, but the areas covered by panels may support some revegetation.

At the end of the Project's useful life, the Applicant would decommission the facilities and may remove above ground facilities, including the PV arrays and supporting electrical and facility systems. Following facility decommissioning and removal, the area would be reclaimed per applicable regulations in effect at the time of decommissioning.

## 2.4.7 Fire Safety

There is limited potential for wildfire at the Project site. Vegetation is sparse, thus fire risk from vegetation is minimal. The Project would coordinate with RCFD, and other applicable jurisdictions as appropriate to define measures to control the risk of fire. Under Phase 2, the Project would also coordinate with the BLM regarding fire safety. The Project's Fire Prevention and Safety Plan (Appendix M) would be updated prior to construction.

During construction activities, a water truck or other portable trailer-mounted water tank would be kept on site and available to workers for use in extinguishing small human-made fires. All supervisory vehicles working on site would also carry a portable fire extinguisher. Additional emergency response would be provided externally by local municipalities, if required.

## 2.4.8 Construction Access and Traffic

During construction, an average of 50-100 workers per day would commute to the Project site, with a maximum of 600 workers during peak construction. The peak number of construction-related automobile trips would be up to 635 one-way trips per day. It is estimated that one-way trips would be approximately 10 to 90 miles, dependent on where workers reside (assumed to be either Blythe or Palm Desert).

All materials for the Project's construction would be delivered by truck. Most truck traffic would occur on designated truck routes and major streets. Construction traffic would include periodic truck deliveries of materials and supplies, recyclables, trash, and other truck shipments, and construction worker commuting vehicles. Most construction equipment and vehicles would be brought to the sites at the beginning of the construction process during construction mobilization and remain on site throughout the duration of the construction activities for which they were needed. Generally, the equipment would not be driven on public roads while in use for the Project.

The number of truck deliveries expected over the Project's construction period would average approximately 8 to 85 one-way truck trips per day. Construction truck deliveries and shipments would typically avoid the peak traffic hours in the morning and evening. Materials would typically be delivered starting a few weeks before the start of the associated task, apart from electrical gear, which would be shipped prior to installation. It is estimated that distances for a single truck round trip would average approximately 20 miles for local deliveries, approximately 452 miles for each round trip for deliveries from the Port of Los Angeles or the Port of Long Beach, and approximately 1,200 miles from the United States/Mexico border crossing at Nuevo Laredo, Texas, or other locations in the state of Texas. Local deliveries would include deliveries for project materials such as mulch and water trucks. Deliveries from the Port of Los Angeles would include project materials such as solar panels, solar array structures, transmission line poles, and substation components. Deliveries from the United States/Mexico border crossing at Nuevo Laredo, Texas, or other locations in the state of Texas would include batteries for the BESS and potentially U.S. made solar panels. All construction-related traffic would be temporary and short term and would be removed from the roadway network upon completion of the Project.

The construction vehicles used on site per phase are presented in Table 2-5.

**Table 2-5. Off-Road Equipment Required during Project Construction**

| Project Phase | Equipment Type | Number of Pieces | Hours per Day |
|---|---|---|---|
| Phase 1: Site Preparation, Fencing, and Ingress/Egress | Bull Dozers | 1 | 10 |
| | Graders | 1 | 10 |
| | Concrete Trucks | 3 | 5 |
| | Trencher | 1 | 10 |

**Table 2-5. Off-Road Equipment Required during Project Construction**

| Project Phase | Equipment Type | Number of Pieces | Hours per Day |
|---|---|---|---|
| | Rubber-Tired Loaders | 1 | 10 |
| | Skid Steers | 5 | 10 |
| Phase 2: Civil Improvements – Grading/Roads/Earthwork | Bull Dozers | 8 | 10 |
| | Graders | 2 | 10 |
| | Off-Highway Trucks | 2 | 10 |
| | Skid Steers | 5 | 10 |
| | Excavators | 3 | 10 |
| | Scrapers | 4 | 10 |
| Phase 3: PV Panel and BESS Construction | Skid Steers | 10 | 10 |
| | Buggies | 30 | 10 |
| | Pile Drivers | 15 | 10 |
| | Cranes | 1 | 5 |
| | Rough Terrain Forklifts | 10 | 10 |
| | Helicopter | 1 | 4 |
| Phase 4: Testing and Commissioning | N/A | N/A | N/A |
| Phase 5: Decommissioning and Reclamation | Cranes | 1 | 5 |
| | Crawler Tractors | 2 | 10 |
| | Excavator | 5 | 10 |
| | Buggies | 20 | 10 |
| | Rough Terrain Forklifts | 8 | 10 |
| | Rubber-Tired Loaders | 2 | 10 |
| | Skid Steers | 5 | 10 |
| | Off Highway Trucks | 5 | 10 |
| | Graders | 1 | 10 |

*For the Arlington Collocation, a helicopter may be used to string the transmission line and would not be used during the entire duration of Phase 3. The helicopter would be used for 4 days maximum. The helicopter would not be required for construction of the WAPA Tie-In.

## Construction Waste and Hazardous Materials

The Project would implement industry standard techniques for the shipping, handling, maintenance, and storage of the batteries, which would be outlined within the Construction Spill Prevention, Control, and Countermeasures Plan, if needed. Appropriate spill containment and cleanup kits would be maintained during Project operations. During construction, all hazardous materials would be stored on site in storage tanks/vessels/containers that are specifically designed for the characteristics of the materials to be stored. The storage facilities would include secondary containment in case of tank/vessel failure.

Construction of the Project would involve the use of some hazardous materials, such as fuels and greases for construction equipment. Such substances may be stored in temporary aboveground storage tanks or sheds located on the Project site. The fuels stored on site would be in a locked container within a secure temporary staging area. A Waste and Hazardous Materials Management Plan outlining waste materials and disposal processes and procedures for solid and hazardous wastes during construction and operation of the Project would be finalized prior to construction.

The small quantities of chemicals to be stored at the Project site during construction include equipment and facilities maintenance chemicals. These materials would be stored in their appropriate containers in a secured location such as portable outdoor hazardous materials storage cabinets equipped with secondary containment to prevent contact with rainwater. 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. Disposal of excess materials and wastes would be performed in accordance with local, state, and federal regulations; excess materials/waste would be recycled or reused to the maximum extent practicable.

If quantities exceed regulatory thresholds, the Project would ensure that storage is undertaken in compliance with the Project's Spill Prevention, Control, and Countermeasure Rule and the Hazardous Materials Business Plan. 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 are anticipated to be produced, used, stored, transported, or disposed of during construction. Safety Data Sheets for all applicable materials 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.

Construction of the Project would generate non-hazardous solid wastes typical of power generation or other industrial facilities. Produced wastes would include worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, insulation material, empty containers, paper, glass, and other miscellaneous solid wastes, including the typical refuse generated by workers. These materials would be disposed of by means of contracted refuse collection and recycling services. Waste collection and disposal would occur in accordance with applicable regulatory requirements to minimize health and safety effects.

In accordance with the 2022 California Green Building Standards Code (CCR Part 11, Title 24; CBSC 2022), Riverside County Waste Recycling Program states that construction projects, such as this Project, must recycle, reuse, compost, and/or salvage a minimum of 65% by weight of the construction and demolition (C&D) waste generated on site. Projects that require a building permit and generate C&D waste within the county are required to complete a Waste Recycling Plan (Form B) prior to issuance of the permit, which identifies the expected material types and locations for recycling of wastes, and a Waste Reporting Form (Form C) upon project completion and prior to final inspection, to demonstrate actual quantity of C&D waste diverted (Riverside County Department of Waste Resources 2022). Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted. Some non-hazardous wastes can be reused or recycled, such as asphalt, which can be crushed and used as fill, or metal, which can be recycled. Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at county landfills. Landfilled wastes would not exceed 35% of the total C&D waste generated. Hazardous waste and electrical waste would be transported to a hazardous waste handling facility (e.g., electronic-waste recycling). As required by the C&D Diversion Program, and as outlined on Form B – Waste Recycling Plan, all contractors and workers would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste, and the project site would be equipped with the appropriate equipment, space, and bins for properly sorting wastes for recycling, reuse, or disposal.

# 2.5 Operation and Maintenance

## 2.5.1 Operation and Maintenance Activities

Maintenance activities generally include road maintenance; vegetation management; scheduled maintenance of inverters, transformers, and other electrical equipment; and occasional replacement of faulty modules or other site electrical equipment. The access roads would be regularly inspected, and any degradation due to weather or wear and tear would be repaired. The Project may apply a dust palliative on dirt access roads if indicated. Washing of solar panels is expected to occur up to once annually, if necessary.

### 2.5.2 Operation and Maintenance Workforce

It is anticipated that operations and maintenance of the Project would require up to six full-time, onsite workers to operate and maintain the plant, including performing daily visual inspections and minor repairs. Water required for O&M activities would be provided by the same source as construction. Potable water would be brought to the site in water bottles or as a potable water service delivery. The O&M workforce would generate small amounts of sanitary wastewater that would be handled by an on-site septic system and leach field. Only limited deliveries would be necessary for replacement PV modules, BESS, and equipment during operations.

Overall, minimal maintenance requirements are anticipated. Maintenance and other operational staff would use standard size pickup trucks and vehicles.

### 2.5.3 Site Security During Operation

The Project facility would have either an on-site O&M facility and be monitored by on-site O&M personnel and/or remotely by the Applicant or an affiliated company. The Project security fence would be a chain link fence with barbed wire on top. The fencing would be designed for appropriate wildlife protection, based on consultation with state and federal wildlife agencies. Desert tortoise exclusion fencing would also be constructed as part of the security fencing around the entire perimeter of the solar site. Fencing would also include the breakaway or flow-through fence design within the 100-year floodplain. At main access points, gates with tortoise guard crossings would ensure that the fence is a contiguous barrier to entry by desert tortoise.

Should the security system detect the presence of unauthorized personnel, an on-call security representative may be dispatched to the facility, and appropriate local authorities would be notified. A Knox-Box containing keys for the Project would be installed to permit emergency access to the site.

### 2.5.4 Vegetation Treatment and Weed Management

Vegetation would be maintained on site through a combination of trimming and herbicide application to be approved by Riverside County and applied in accordance with the manufacturer's recommendations. Areas that were trimmed during construction would be maintained at a height of approximately 12 inches, which would be trimmed once or twice a year, as necessary. Equipment includes a commercial-sized raised deck mower, or similar.

Invasive, nonnative, and/or noxious weeds would be controlled per the terms of the Project's Integrated Weed Management Plan. Under Phase 2, t Project would comply with existing BLM plans and permits, including the Vegetation Treatments Using Herbicides (BLM 2007a, 2007b) and Vegetation Treatment Using Aminopyralid, Fluroxypyr, and Rimsulfuron (BLM 2016b).

### 2.5.5 Water During Operation and Maintenance

During operations, water use would be nominal, and only used for periodic dust control, restrooms, and maintenance applications. Wastewater would be generated from bathroom facilities located within the O&M building. Domestic wastewater would be treated and disposed at the site using a septic disposal system consisting of septic tanks and leach field and permitted through the Riverside County Department of Environmental Health. Water consumption from the O&M building would be approximately 635,938 gallons per year, or approximately 2 AF per year. No panel washing during long-term operations is anticipated; however, it may be necessary if excessive particulate accumulates due to significant weather

impacts. No wastewater requiring treatment would be generated during panel washing as water would be absorbed into the surrounding soil or evaporate.

Operation water would be supplied by the same sources as construction, either by either groundwater wells or an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. To ensure water use through construction and operation, the Applicant purchased a 320-acre property associated with the water source, located in the City of Blythe (Fully Executed Purchase Agreement Gila Farm-AM Growers-Mesaville Solar 4862-1921-4645 v.1) and secured use of the water supply (RRG-NE-Completion Certificate – Water System Executed MLB 6-28-23 with Gila Farmland, LLC and A&F Growers, LLC). If necessary, the Project would use existing wells or in the event that the wells are not in an adequate condition for use, then new wells would be constructed.

## 2.5.6 Hazardous Materials and Waste

Limited amounts of hazardous materials would be stored or used on the site during operations; these materials may include diesel fuel, gasoline and motor oil for vehicles, mineral oil to be sealed within the transformers, and lead acid-based and/or lithium-ion batteries for emergency backup.

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

A Waste and Hazardous Materials Management Plan outlining waste materials and disposal processes and procedures for solid and hazardous waste amendment during construction and operation of the Project would be finalized prior to construction.

Operation and maintenance of the Project would generate non-hazardous solid wastes typical of power generation or other renewable energy industrial facilities. Waste collection and disposal would be in accordance with applicable regulatory requirements to minimize health and safety effects. Solid waste generation from the O&M building would be approximately 3.41 tons per year[6].

## 2.5.7 Fire Safety

There is limited potential for wildfire at the Project site. Vegetation is sparse, thus fire risk from vegetation is minimal. The Project would coordinate with RCFD, and other applicable jurisdictions as appropriate to define measures to control the risk of fire. Under Phase 2, the Project would also coordinate with BLM regarding fire safety.

Project operations would typically have a low risk of introducing fires because most of the materials within the solar arrays are noncombustible (aluminum, steel, or glass) and vegetation is removed or cut short to maintain sufficient distance from vehicles and equipment to avoid starting fires. Access to a water system would adhere to requirements prescribed by the RCFD. Other fire protection measures may include aboveground water storage tanks adjacent to the O&M building and/or sprinkler and fire protection systems within the O&M building, if required by RCFD. The Project would also include the installation of

[6] Waste disposal estimates were calculated using the default statewide rate identified in CalEEMod Appendix G, tab G-36, for light industry land uses. The default rate would be 1.24 tons/ksf/year.

a water tank in proximity to the O&M building to provide a sufficient water reservoir for fire safety as required by the RCFD. The size of the water tank is pending confirmation from the RCFD. The systems would be compatible with the building's electrical system. Furthermore, there would be portable carbon dioxide fire extinguishers mounted at the power conversion system units.

Project facilities 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's Fire Prevention and Safety Plan would be updated prior to construction and again prior to operation. The plan would comply with applicable Riverside County regulations and would be coordinated with the RCFD and BLM, as necessary.

## 2.6 Decommissioning

The Project has an anticipated operational life of 40 years, after which the Applicant may choose to update site technology and seek an extension of the CUP to recommission the Project, or to decommission the site and remove the systems and their components. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and County regulations. Because the PV arrays' supporting equipment would sit on the surface of the land, the land would be largely unaltered from its natural state when the arrays are removed after the Project's lifetime. The Applicant would work with the County to put an agreement in place to ensure the decommissioning of the Project site after its productive lifetime. The Project would use BMPs to ensure the collection and recycling of materials and to avoid the potential for modules and batteries to be disposed of as waste.

## 2.7 Applicant Proposed Measures

The Applicant has committed to implementing various applicant proposed measures (APMs) as part of the Project to avoid and minimize the potential effect of construction and operation to environmental resources. Therefore, the APMs are considered part of the project description.

The impact analysis in this SEIR assumes implementation of all the APMs. However, where other impacts are identified that are not addressed by these APMs, or where the APMs are not adequate to reduce impacts to less-than-significant levels, additional mitigation measures would be recommended. All mitigation measures and APMs would be incorporated into the Project's Mitigation Monitoring and Reporting Program (MMRP), and the Applicant would or their designee would implement all monitoring and reporting obligations for the APMs and mitigation measures as detailed in this SEIR.

**Applicant Proposed Measures**

**APM-AIR-1:** The Applicant will prepare and implement a dust control plan that includes the use of dust palliatives to ensure compliance with Mojave Desert Air Quality Management District Rule 403. The dust control plan is expected to focus on reducing fugitive dust from construction activities.

**APM-AIR-2:** The Applicant will use construction equipment that meets U.S. Environmental Protection Agency Tier 3 or higher emissions standards.

**APM-BIO-1.** The Applicant will conduct pre-construction survey for desert tortoise. This includes an approved biologist(s) walking ten-meter transects of the entire Project site in accordance with the latest U.S. Fish and Wildlife Service protocols (USFWS 2019). This will provide 100% coverage of the Project site.

**APM-BIO-2.** All construction equipment brought to the site will be cleaned and inspected daily to ensure any soil or debris which may spread invasive or exotic weed species has been removed.

**APM-BIO-3**. Worker Environmental Awareness Program ("WEAP"). The Applicant or the construction contractor will implement a WEAP to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site construction personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP will be implemented during site mobilization, ground disturbance, grading, construction, operation, and commissioning.

**APM-BIO-4.** Construction Monitoring. An approved biologist will conduct construction monitoring during all construction activity types to ensure that construction activities are always contained within the staked and flagged construction areas. The construction monitor will have the authority to stop work and report directly to the Applicant's Environmental Manager or construction contractor to ensure compliance with the applicant-proposed measures, and mitigation measures. The construction monitor will provide the Applicant's Environmental Manager with weekly updates and quarterly monitoring reports. After construction has been completed, the construction monitor will provide the Applicant's Environmental Manager with a final monitoring report. The Applicant's Environmental Manager will provide BLM,, or the County and BLM, with weekly status updates on the status of construction and monitoring efforts and will provide the County, or the County and BLM, with copies of the quarterly monitoring reports and the final monitoring report. The County will be responsible for ensuring that construction monitoring is conducted during all construction activities.

**APM-BIO-5.** If construction-related activities are to occur during the bird breeding season (February 1 through August 31), a qualified biologist will conduct a nesting bird survey prior to the start of any site disturbing work. If an occupied nest is located within the work area or within a 300-foot buffer surrounding the work area, work will be avoided until the nest fails naturally or the nestlings fledge on their own. Dependent on species and disturbance tolerance, a biological monitor may monitor and actively buffer the nest during construction-related activities. The results of the survey will be submitted to the County, or the County and BLM.

**APM-BIO-6.** Den Collapse. In the event desert kit fox dens are found during the preconstruction surveys or during construction and in compliance with California Department of Fish and Wildlife approved guidance for desert kit fox on other nearby similar projects, a hazing program shall be implemented by an approved biologist to entirely rule out the potential for kit fox to be using the den(s) and allow for excavation and collapse. The hazing program shall consist of plugging all den entrances lightly with light paper filled trash bags in addition to the use of wildlife cameras. Wildlife cameras will be setup first for three consecutive days to determine if kit fox are currently using a burrow. If no activities are recorded, then the den entrances will be plugged with sandbags to adequately prevent kit fox from re-entering the den... The dens and cameras will be checked first thing each morning for another three consecutive days. If no activity is observed and the bags are observed in place each morning from the prior night's hazing process, the den entrances will be plugged with sandbags and/or excavated and collapsed to prevent kit fox use. If kit fox activities are recorded, and it is within the kit fox breeding season (December until September), then the cameras will be left in place and adequate buffer (500 feet) will be established until the no activity is observed for three consecutive days. The approved biologist will document the hazing program within the weekly status updates required under APM-BIO-4.

**APM-CUL-1:** A cultural resources monitoring and discovery plan will be prepared prior to construction of the Project. The plan will include a description of areas to be monitored during construction, a discovery plan that will address unanticipated cultural resources, and provisions for the education of construction workers, similar to the WEAP.

**APM-HAZ-1a:** Appropriate spill containment and clean-up kits shall be kept on site during construction and maintained during the operation of the Project.

**APM-HAZ-1b:** In accordance with the Emergency Planning & Community Right to Know Act, the Applicant will supply the local emergency response agencies with a hazardous materials management plan and an associated emergency response plan and inventory specific to the site; the plan will be filed with the County, or the County and BLM, and implemented.

**APM-HAZ-1c:** During construction of the Project, Best Management Practices for handling, storing, and disposing of hazardous materials and waste will be followed.

**APM-HAZ-1d:** The Applicant will prepare a Spill Prevention Control and Countermeasure Plan that identifies the procedures for primary and secondary containment for oil products stored on site as well as training in spill management in the event of an unexpected release. The plan will be filed with the County, or the County and BLM.

**APM-HAZ-1e:** The Applicant will develop an Environmental Health and Safety Plan for the construction and operation of the Project to ensure all activities comply with all County, state, and federal regulatory requirements. Illness and injury prevention programs will be developed for construction and operation.

**APM-HAZ-2:** Project facilities will be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health and safety requirements. In compliance with County of Riverside requirements, a project-specific fire prevention plan for both construction and operation of the Project will be completed prior to initiation of construction.

**APM-NOI-1:** The Applicant will limit most construction activity to daytime hours of 6:00 a.m. and 6:00 p.m. consistent with Riverside County noise ordinance limitations.

**APM-VR-1: Lighting Control.** Consistent with safety and security considerations, the Applicant will design and install all permanent exterior lighting such that (a) lamps and reflectors are not visible from beyond the Project site, including any off-site security buffer areas; (b) lighting shall not cause excessive reflected glare; (c) direct lighting shall not illuminate the nighttime sky, except for required Federal Aviation Administration aircraft safety lighting (which shall be an on-demand, audio-visual warning system that is triggered by radar technology); (d) illumination of the Project and its immediate vicinity shall be minimized; (e) skyglow caused by Project lighting will be avoided; and (f) the lighting shall comply with County policies and ordinances. All permanent light sources shall be below 2,500 Kelvin color temperature (warm white) and shall have cutoff angles not to exceed 45 degrees of nadir.

**APM-VR-2: Surface Treatment of Project Structures/Buildings.** The Applicant will treat the surfaces of all non-temporary, large Project structures and buildings (O&M building, inverters, electrical enclosures, transmission line poles and conductors) visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors; (b) their colors and finishes do not create excessive glare; and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

**APM-WAT-1:** The Applicant will prepare and implement a Storm Water Pollution Prevention Plan ("SWPPP"). The SWPPP will evaluate potential for erosion and sedimentation to occur on site and downstream because of construction, as well as potential for construction-related releases of fuels, oils, solvents, concrete wash-out, greases, paints, and other potential water quality pollutants to become entrained in storm water, or otherwise result in the degradation of surface water or groundwater quality. The evaluation shall implement specific measures to minimize potential effects on water quality. These measures may include, but would not be limited to, installation of temporary settling basins, stabilization of disturbed soils, replanting vegetation after disturbance, limitations on construction during wet periods, installation of temporary erosion control devices (fiber rolls, staked straw bales, detention basins, check dams, geofabric, dikes, and temporary revegetation), covering stockpiled loose material during rain events, equipment maintenance to prevent leaks, application of erosion protection to cut and fill slopes, and other Best Management Practices. Sediment shall be retained on site by sediment basins, traps, or other measures. No disturbed surfaces shall be left without erosion control measures in place during the rainy season. Spill kits to absorb the potential hazardous spills will be on hand during construction to minimize soil contamination and eventual groundwater contamination.

The development and operation of the Project described in this Project Description would be made subject to the mitigation measures developed by the Applicant and submitted to the County as APMs. As the Project continues to receive feedback from the County throughout the CEQA process, measures may be revised or additional APMs may be provided.

## 2.8 References

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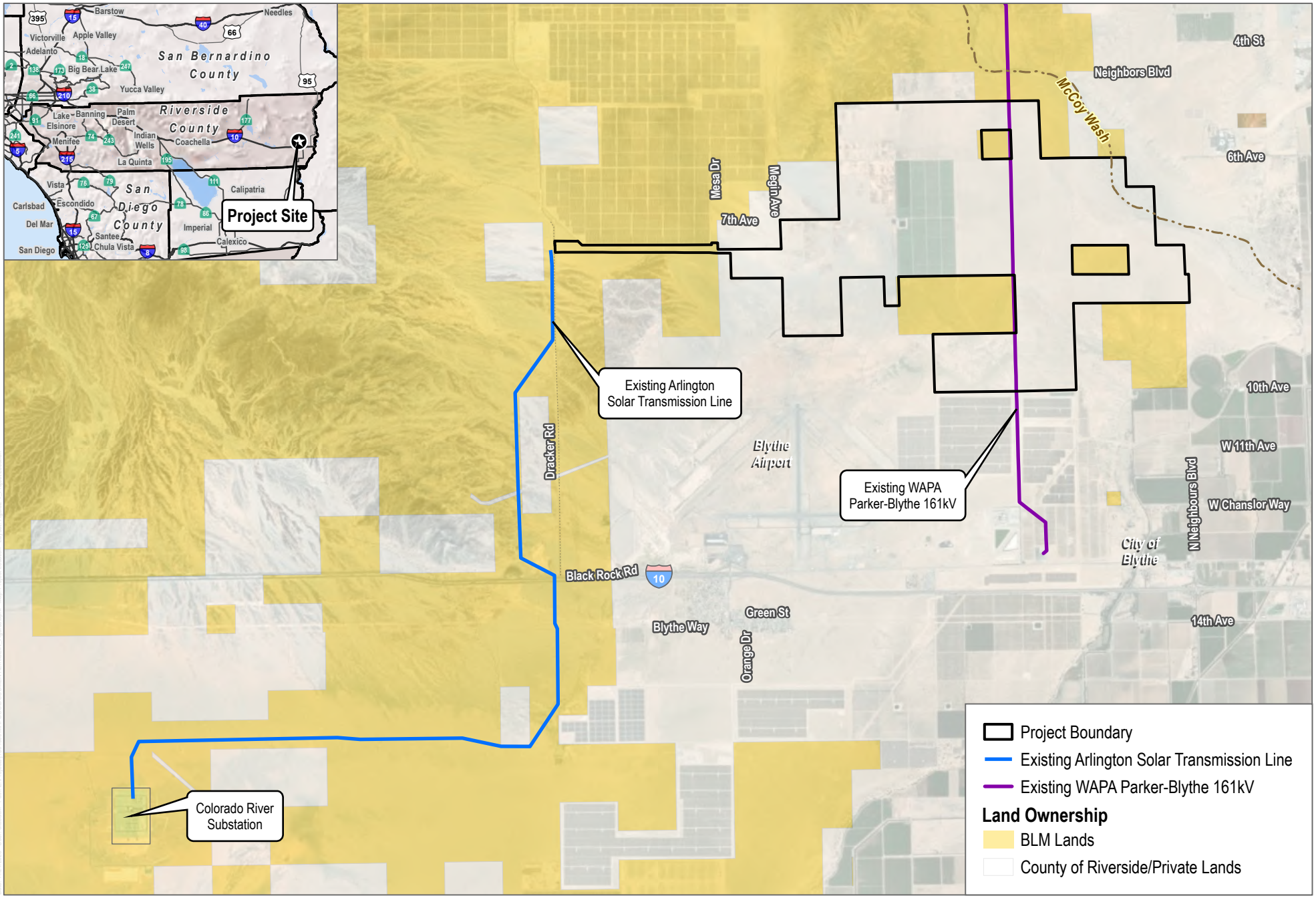
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SOURCE: Maxar 2023

DUDEK

0 0.5 1 Miles

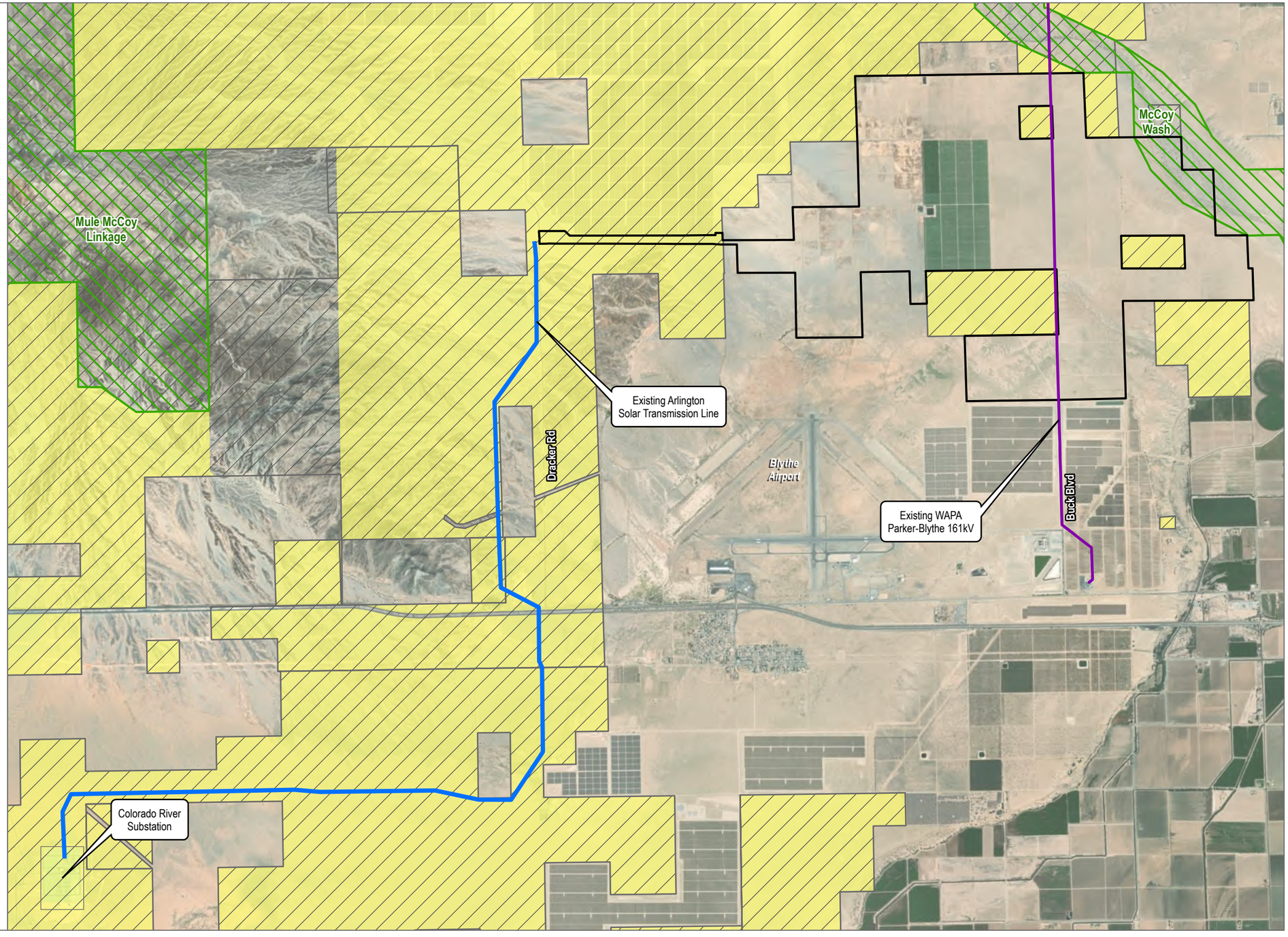
**FIGURE 2-1**

Project Location

Grace Solar Energy Center

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Project Boundary
BLM Lands
Area of Critical Environmental Concern
Development Focus Areas (DRECP)
Existing WAPA Parker-Blythe 161kV
Existing Arlington Solar Transmission Line



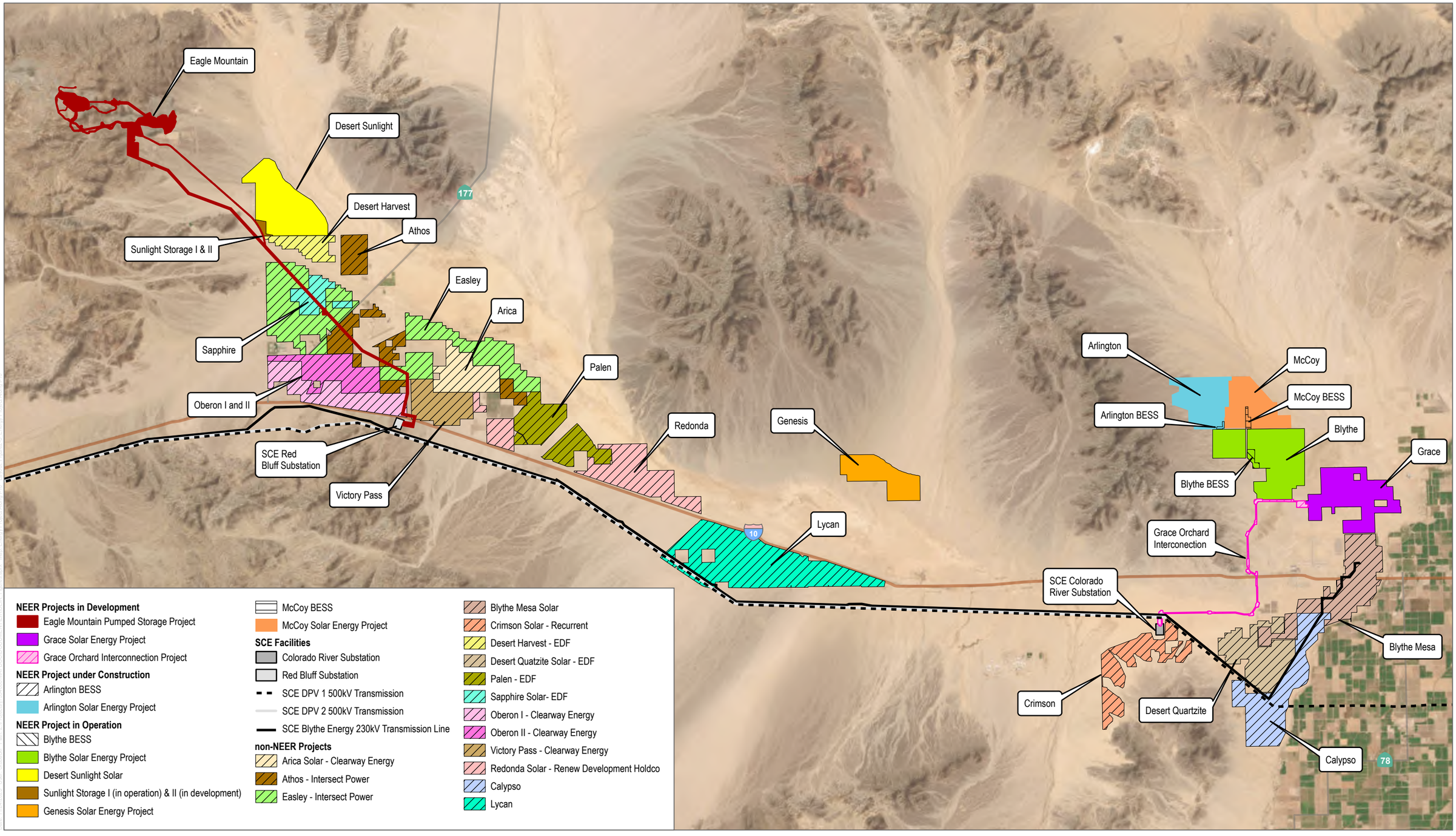

SOURCE: Maxar 2023; BLM 2021

DUDEK

0 2,000 4,000 Feet

**FIGURE 2-2**
Special Designations
Grace Solar Energy Center

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SOURCE: Maxar 2024

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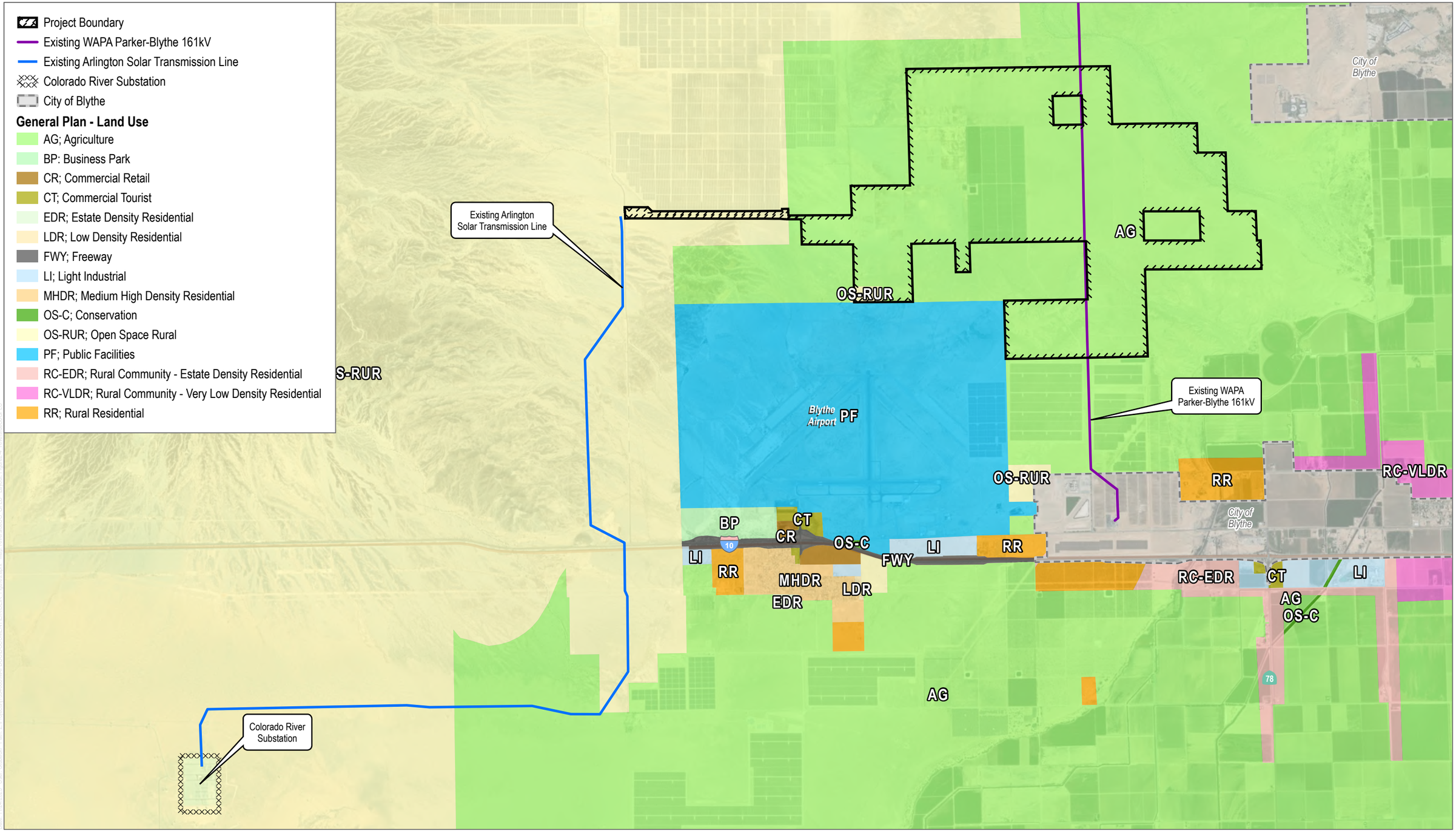
0 2 4 Miles

**FIGURE 2-3**

Energy Project Along I-10

Grace Solar Energy Center

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SOURCE: Esri World Imagery (accessed 2024); Riverside County 2015

DUDEK

0 2,300 4,600 Feet

**FIGURE 2-4**

Riverside County General Plan - Land Use

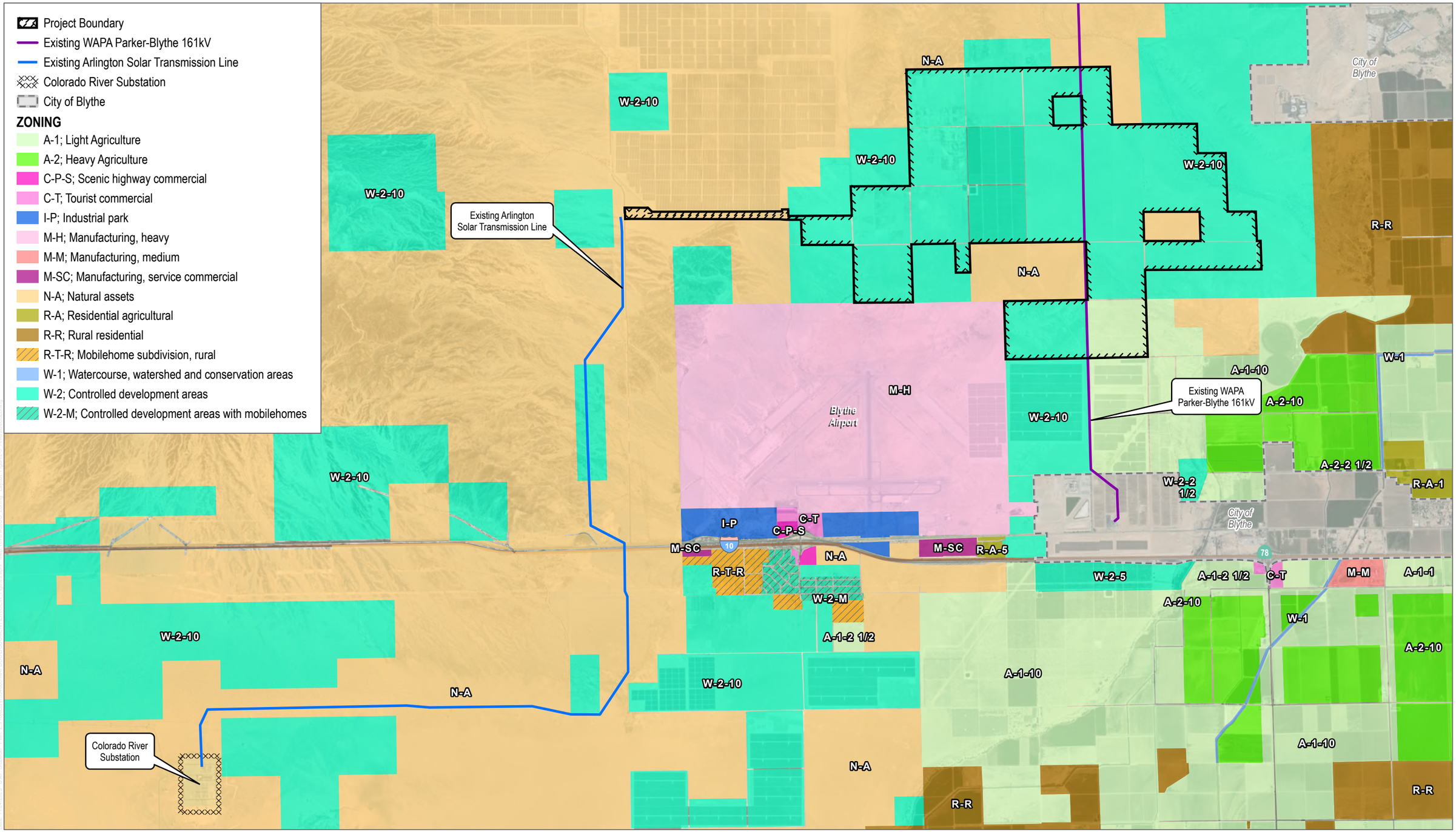
Grace Solar Energy Center

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Project Boundary
Existing WAPA Parker-Blythe 161kV
Existing Arlington Solar Transmission Line
Colorado River Substation
City of Blythe

**ZONING**

A-1; Light Agriculture
A-2; Heavy Agriculture
C-P-S; Scenic highway commercial
C-T; Tourist commercial
I-P; Industrial park
M-H; Manufacturing, heavy
M-M; Manufacturing, medium
M-SC; Manufacturing, service commercial
N-A; Natural assets
R-A; Residential agricultural
R-R; Rural residential
R-T-R; Mobilehome subdivision, rural
W-1; Watercourse, watershed and conservation areas
W-2; Controlled development areas
W-2-M; Controlled development areas with mobilehomes




SOURCE: Esri World Imagery (accessed 2024); Riverside County 2015

DUDEK

0 2,300 4,600 Feet

**FIGURE 2-5**
Riverside County Zoning
Grace Solar Energy Center

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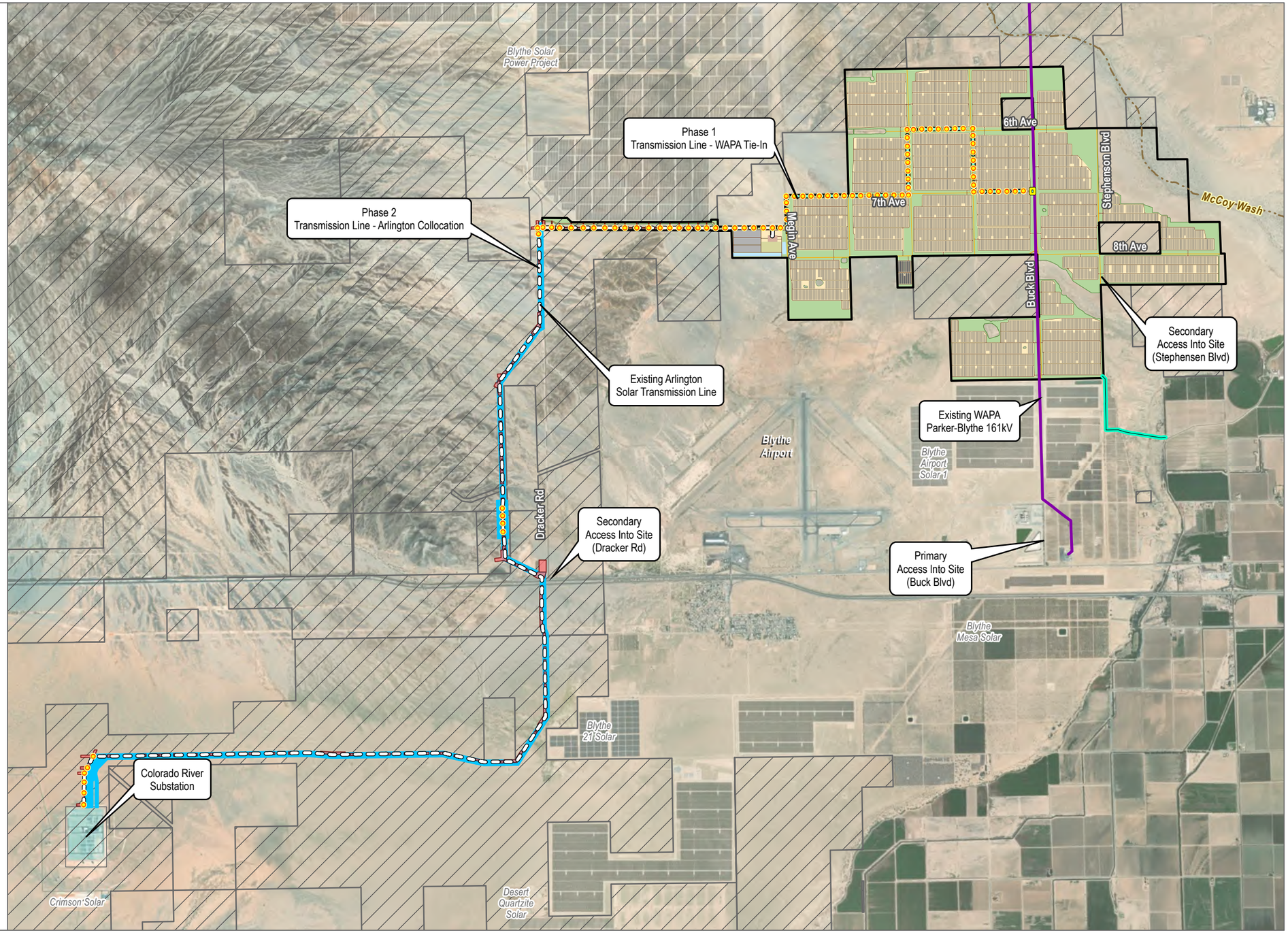
- Project Boundary
- BLM Lands

**Existing Infrastructure**

- Existing Water Pipeline
- Existing Access Routes
- Existing WAPA Parker-Blythe 161kV
- Existing Arlington Gen-Tie Corridor

**Site Plan**

- Access Road
- Basin
- BESS
- Fenced Area
- Laydown
- Public Road Improvement
- Solar Array
- Substation
- Limits of Disturbance
- Transmission Line Work Area
- Phase 1 Transmission Line - WAPA Tie-In
- Phase 2 Transmission Line - Arlington Collocation
- Proposed Transmission Line Pole
- Switchyard
- O&M Building




SOURCE: Maxar 2023

DUDEK

0 2,050 4,100 Feet

**FIGURE 2-6a**

Site Layout

Grace Solar Energy Center

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Project Boundary
BLM Lands

**Existing Infrastructure**

Existing Water Pipeline
Existing Access Routes
Existing WAPA Parker-Blythe 161kV
Existing Arlington Gen-Tie Corridor

**Site Plan**

Access Road
Basin
BESS
Fenced Area
Laydown
Public Road Improvement
Solar Array
Substation
Limits of Disturbance
Transmission Line Work Area
Phase 1 Transmission Line - WAPA Tie-In
Phase 2 Transmission Line - Arlington Collocation
Proposed Transmission Line Pole
Switchyard
O&M Building




SOURCE: Maxar 2023

DUDEK

N

0 470 940 Feet

**FIGURE 2-6b**
Site Layout
Grace Solar Energy Center

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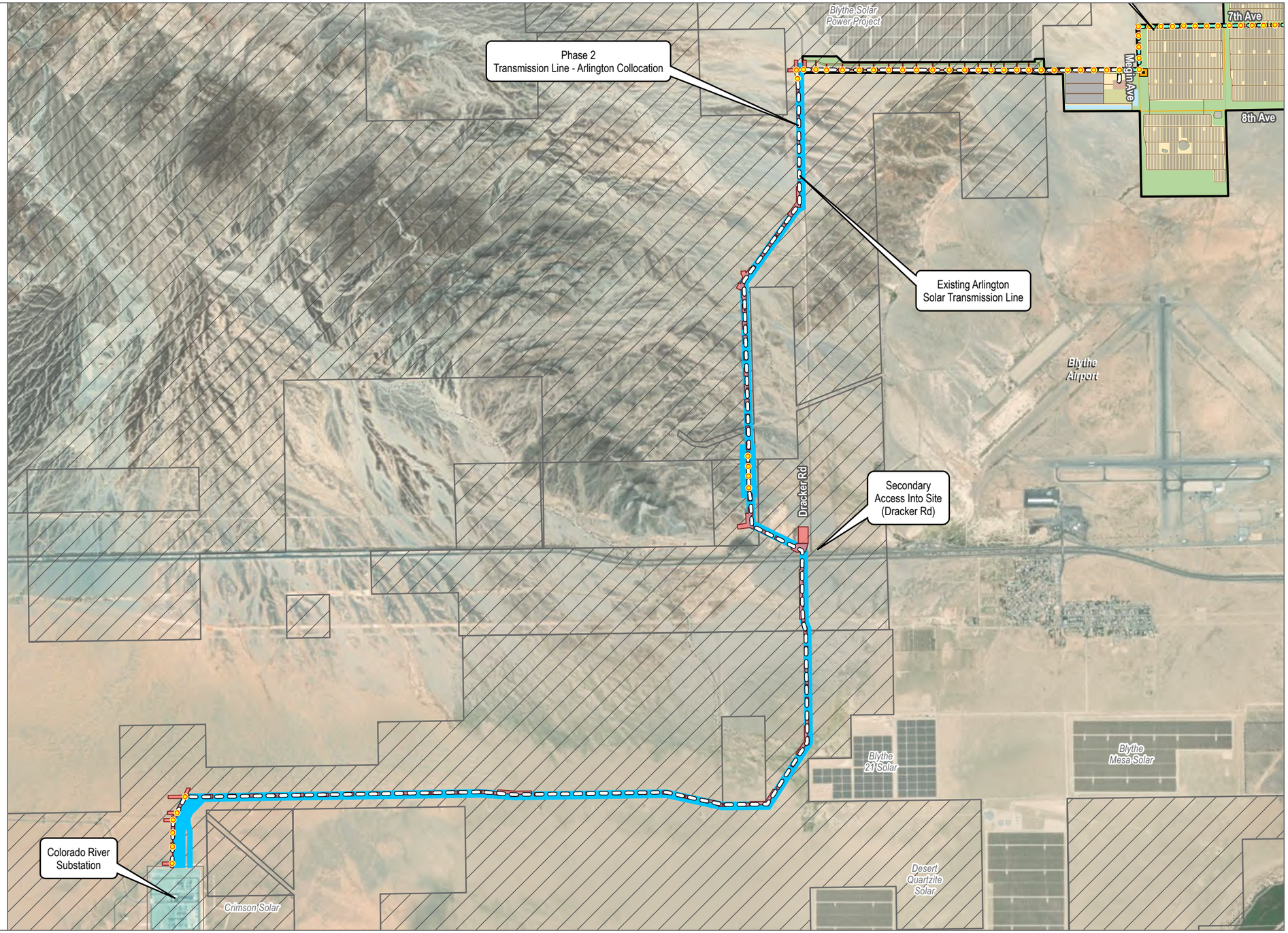
Project Boundary
BLM Lands

**Existing Infrastructure**

Existing Water Pipeline
Existing Access Routes
Existing WAPA Parker-Blythe 161kV
Existing Arlington Gen-Tie Corridor

**Site Plan**

Access Road
Basin
BESS
Fenced Area
Laydown
Public Road Improvement
Solar Array
Substation
Limits of Disturbance
Transmission Line Work Area
Phase 1 Transmission Line - WAPA Tie-In
Phase 2 Transmission Line - Arlington Collocation
Proposed Transmission Line Pole
Switchyard
O&M Building




SOURCE: Maxar 2023

DUDEK

N

0 1,500 3,000 Feet

**FIGURE 2-6c**

Site Layout

Grace Solar Energy Center

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# 3 Environmental Analysis

## 3.1 Introduction to Environmental Analysis

Chapter 3 evaluates the impacts that may result directly, indirectly, or cumulatively from the proposed Grace Solar Energy Center (Project), and addresses how the impact of the Proposed Project compares to the previously approved Palo Verde Mesa Project (Approved Project). This chapter also presents and applies criteria used for each environmental resource topic to determine whether an adverse impact is significant under the California Environmental Quality Act (CEQA), and describes potentially feasible mitigation measures, if any, that could substantially lessen or avoid significant impacts.

### 3.1.1 Introduction to Impact Analysis

This section provides an analysis of potential impacts on resource areas that could result in "significant impacts." Specifically, the environmental issue areas identified for further discussion include the following:

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

Sections 3.2 through 3.20 discuss the environmental impacts that may result from the construction, operation, decommissioning, and cumulative impacts of the Project, and, where impacts may be significant or potentially significant according to the criteria identified, potentially feasible mitigation measures are identified to avoid or substantially lessen those impacts to the extent feasible. The following topics are also included in Sections 3.2 through 3.20.

It was determined that the Project would have no impact relative to the following environmental issue areas. As such, these issue areas are not included as stand-alone sections in this ~~Draft~~ Final Supplemental Environmental Impact Report (SEIR), but are discussed further in Section 3.21, Effects Found Not to be Significant.

- Population and Housing
- Recreation

#### Supplemental Environmental Impact Report

As described in Section 1.1, Overview, of Chapter 1, Introduction, a SEIR is being prepared because the Project meets the justifications included in CEQA Guidelines Section 15162. The difference between the Proposed Project and the Approved Project are summarized in Section 2.2.1, Proposed Changes to the 2017 Palo Verde Mesa Solar Project, in Chapter 2, Project Description. Due to changes in the Project

Description, the Project may result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. Additionally, due to the passage of time, there may be changes in circumstances that could lead to new or more substantial environmental effects than were previously analyzed. As such, an SEIR is the appropriate document to wholly address the project changes and potential project effects. In addition, because the CEQA review process has in effect been re-opened, there have also been updates to the CEQA requirements and other regulations since the time of the original EIR and Addendum were processed that now apply to the proposed Project and are addressed in the SEIR.

Therefore, this SEIR includes an analysis of environmental impacts of the Proposed Project and addresses how the impacts of the Proposed Project compare to those of the Approved Project included in the approved EIR. For each environmental issue, a summary of previous impact analysis is provided prior to new analysis for the Proposed Project. Comparisons to the previous impact analysis are throughout the new analysis for the Proposed Project

## Regulatory Framework

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

## Environmental Setting

This section discusses the existing environmental conditions at the site and in the surrounding area as appropriate that are relevant to the issues under evaluation (the "baseline"), in accordance with Section 15125 of the State CEQA Guidelines. The baseline conditions reflect the conditions around the time of the issuance of the Notice of Preparation (January 10, 2025) and are used for comparison to establish the type and extent of the potential environmental impacts. For purposes of these discussions, the term "Project site" refers to both the proposed solar site, battery energy storage system (BESS), substation, and transmission lines. The Project would aggregate approximately 3,705 acres, including approximately 3,310 acres of private land and 395 acres of land administered by the U.S. Department of Interior, Bureau of Land Management (BLM), Palm Springs-South Coast Field Office.

The Project would include two phases, including Phase 1 – Solar and Western Power Administration (WAPA) Tie-In and Phase 2 – Battery Energy Storage System (BESS) and Arlington Collocation. Under Phase 1, the Project would construct the solar facility, ancillary facilities, and an approximately 3.5-mile transmission line to interconnect with the existing Parker – Blythe 161 kV transmission line owned by WAPA on private land. The Phase 1 transmission line would interconnect through a tie-in with the existing Parker – Blythe 161 kV transmission line owned by WAPA using a new 161 kV switchyard. The Phase 1 solar facility and ancillary facilities could also utilize the Phase 2 transmission line. Under Phase 2, the Project would construct a BESS and ancillary facilities on private land and an approximately 10.5-mile transmission line to interconnect with the Southern California Edison (SCE) 230-kV Colorado River Substation located on BLM-administered land. The majority of the Phase 2 transmission line (8.6 miles) would utilize the existing open-circuit of the double-circuit Arlington transmission line; and therefore, would be located within an existing right-of-way (ROW). The 395-acre area on BLM-administered lands would be limited to the transmission line in Phase 2.

In some instances, the analysis discusses the "solar facility site" separate from the Phase 2 transmission line, which is located on BLM-administered land. The Project site includes the solar site components listed in Section 2.3, Project Components.

The information and data used to prepare the environmental setting were obtained from several sources, including the technical reports prepared for the Project, which include specific surveys and studies conducted for the Project (see Appendices A through P); the California Desert Conservation Area Plan, as Amended; the Palo Verde Valley Area Plan; and the Riverside County General Plan. 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 in the area.

## Impact Analysis

This section presents an assessment of the identified direct and indirect impacts and discloses the level of significance for each impact. The categories of potential effects are provided below.

| | |
|---|---|
| **Direct Effects** | Effects caused by the Project that occur at the same time and place as the Project. |
| **Indirect Effects** | Effects caused by the 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 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 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 Section 15382). 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 Incorporated** | A substantial or potentially substantial adverse change from the environmental baseline that can be avoided or reduced to below applicable significance thresholds. Where the incorporation of mitigation measures has reduced an effect from potentially significant to less than significant, a less-than-significant impact means that the Project would not cause a potentially substantial adverse effect on the environment for that resource. |
| **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** | Where no impact is determined, issues are identified as not further evaluated. No impact indicates that the impact does not apply to the Project. A change associated with the Project that would not result in an impact to the physical environment relative to baseline conditions. |

The impact analysis covers impacts of the Project as a whole, including components on both private and BLM-administered land under Phase 2. Only when applicable, the impact analysis may separate impacts to private land and impacts to BLM-administered land. Impact analysis specific to BLM-administered land is only applicable under Phase 2.

### Methodology

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

### Criteria for Determining Significance

This section describes the criteria used to determine which impacts should be considered potentially significant. Significance thresholds are based on criteria identified in Appendix G of the State CEQA Guidelines (14 CCR 15000–15387) and the County's Environmental Assessment Checklist. Other federal, state, or local standards are considered when defining significance thresholds.

### Cumulative Impacts

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

### Applicant Proposed Measures, Conservation Management Actions, and/or Mitigation Measures

This section identifies the actions to avoid or substantially lessen potentially significant impacts of the Project to the extent feasible. Existing regulations and other public agency requirements, best management practices (BMPs), and procedures that apply to similar projects are considered in determining what additional Project-specific mitigation measures (MM) may be required to reduce or eliminate impacts. This section may also include applicant proposed measures (APMs) that are considered part of the Project design or applicable conservation management actions (CMAs) required by the BLM Management Plan for the California Desert Conservation Area. MMs would be implemented on private land while CMA would be implemented on BLM-administered lands only unless otherwise specified. Both CMAs and MMs supplement the APMs.

## 3.1.2 Cumulative Impact Scenario

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

## CEQA Requirements for Cumulative Impact Analysis

CEQA defines cumulative impacts as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts (14 CCR 15355; see also California Public Resources Code, Section 21083[b]). A cumulative impact consists of an impact that is caused as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts (14 CCR 15130[a][1]).

State CEQA Guidelines Section 15130 requires that an EIR discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with those of past projects, other current projects, and probable future projects (14 CCR 15065[a][3]).

According to Section 15130(b) of the CEQA Guidelines, the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a level of detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects that do not contribute to the cumulative impact.

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

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

## Methodology for Cumulative Impact Analysis

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

- List Method—A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency.
- Regional Growth Projections Method—A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

Consistent with the EIR for the Approved Project, this SEIR uses the list method for the Proposed Project.

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

cumulative effect, the second step evaluates whether the Project's incremental contribution to the combined significant cumulative impact would be cumulatively considerable as required by State CEQA Guidelines Section 15130(a).

State CEQA Guidelines Section 15064(h)(4) states that the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that a proposed project's incremental effects are cumulatively considerable. Therefore, it is not necessarily true that, even where cumulative impacts are significant, any level of incremental contribution must be deemed cumulatively considerable by the lead agency. If a proposed project's individual impact is less than significant, however, its contribution to a significant cumulative impact could be deemed cumulatively considerable depending on the nature of the impact and the existing environmental setting. If, for example, a proposed project is located in an air basin determined to be in extreme or severe nonattainment for a particular criteria pollutant, a project's relatively small contribution of the same pollutant could be found to be cumulatively considerable. Thus, depending on the circumstances, an impact that is less than significant when considered individually may still be cumulatively considerable.

## Cumulative Scenario

### *Geographic Scope*

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

- Aesthetics: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Agriculture and Forest Resources: Eastern Riverside County
- Air Quality: Mojave Desert Air Basin
- Biological Resources: Desert portion of Riverside County (Palm Springs to the Colorado River)
- Cultural Resources: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Energy: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Geology and Soils: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Greenhouse Gas Emissions: Global
- Hazards and Hazardous Materials: 1-mile-radius area around the Project site
- Hydrology and Water Quality: Southeast McCoy Mountains and Cinnabar Wash-Palo Verde Valley Watersheds
- Land Use and Planning: Eastern Riverside County

- Noise: 1-mile-radius area around the Project site
- Paleontological Resources: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Public Services: The service areas of each of the providers serving the Project
- Transportation: Segments of I-10 and SR-78 near Blythe
- Tribal Cultural Resources: All cumulative projects identified in Tables 3.1-1 and 3.1-2
- Utilities and Service Systems: The service areas of each of the providers serving the Project
- Wildfire: 2-mile-radius area around the Project site

***Temporal Scope***

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

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

***Cumulative Projects***

**Palo Verde Valley Area Plan.** As part of the Riverside County General Plan Update (County of Riverside 2021), the County updated the Palo Verde Valley Area Plan. The Palo Verde Valley Area Plan reflects the limited development potential in this region. The Palo Verde Valley Area Plan designates most of the area Open Space-Rural and Agriculture, with some rural development, primarily residential and desert, and some community development, primarily public facilities. The Palo Verde Valley Area Plan envisioned preservation of agricultural character to the east, community development within Mesa Verde, Ripley, and the City of Blythe, recreational resorts near the Colorado River, and land for light industrial development. The Palo Verde Valley Area Plan also envisioned maintaining the sparsely populated, natural character of the west. Some commercial development is envisioned to the west, near the intersection of Wiley Well's Road and I-10, and near Blythe Airport (County of Riverside 2021). This information was taken into consideration by the authors when drafting the cumulative analysis as it indicates limited future development on private land is projected.

Tables 3.1-1 and 3.1-2 include the list of cumulative projects in the region, along I-10. Projects that were analyzed in the EIR for the approved Project are identified with an asterisk in both tables. Table 3.1-1 includes approved and operational projects. Table 3.1-2 includes proposed and future projects. These projects are shown on Figure 2-3, Energy Projects Along I-10.

**Table 3.1-1. Permitted, Constructed, and Operational Projects or Programs in the Project Area**

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project or Program Description |
|---|---|---|---|---|---|---|
| 1 | Crimson Solar | South of I-10, 8 miles southwest of Blythe | Sonoran West Solar Holdings LLC (Recurrent Energy) | BLM Record of Decision published in May 2021. Approved by CDFW 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. |
| 2 | Victory Pass Solar Project | 4.5 miles east of Desert Center, adjacent to north side of I-10 | Clearway Energy Group, LLC | Approved by BLM in December 2021. Construction underway. | 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 transmission line with the Arica Solar Project would connect to Red Bluff Substation. |
| 3 | Arica Solar Project | Adjacent to north side of Victory Pass project, 5 miles northeast of Desert Center | Clearway Energy Group, LLC | Approved by BLM in December 2021. Construction underway. | 2,000 | The project located 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 transmission line would connect to Red Bluff Substation. |
| 4 | Desert Quartzite Solar* | South of I-10, 8 miles southwest of Blythe | Desert Quartzite LLC (EDFR) | Operational | 3,770 | A 450 MW solar PV facility with a project substation, access road, and transmission line, located primarily on BLM land. |
| 5 | Oberon Solar | North of I-10, near Desert Center | IP Oberon, LLC (subsidiary of Intersect Power) | Operational | 2,600 | An up to 500 MW solar PV project located on BLM land. The project interconnects to the SCE Red Bluff Substation. |
| 6 | Ten West Link Transmission Line | From the Colorado River Substation in Blythe, California, to Tonopah, Arizona | Atlantica Yield PLC and Starwood Energy Group Global Inc. | Approved by BLM in November 2019. Approved by the CPUC in November 2021. Construction underway. | N/A | A 500 kV transmission line from Tonopah, Arizona, to Blythe, California. It would span 125 miles, with all but 21.5 miles of the line in the Arizona counties of Maricopa and La Paz and the remainder in Riverside County, California. |
| 7 | Blythe PV Project (Blythe 21 Solar) | Blythe | Clearway Energy Group, LLC | Operational | 200 | 21 MW solar PV project located on 200 acres outside of Blythe. |
| 8 | McCoy/Arlington 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 transmission line. |

**Table 3.1-1. Permitted, Constructed, and Operational Projects or Programs in the Project Area**

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project or Program Description |
|---|---|---|---|---|---|---|
| 9 | 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 6-mile natural gas pipeline and a 5.5-mile transmission line to the Blythe Energy Center to Julian Hinds Transmission Line, then east on shared transmission poles to the Colorado River Substation. |
| 10 | 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 transmission line connects the solar energy generating facility to the SCE Colorado River Substation. |
| 11 | 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 |
| 12 | SCE Red Bluff Substation* | Southeast of Desert Center | SCE | Operational | 75 | 220/500 kV substation to interconnect renewable projects near Desert Center to the DPV transmission line. |
| 13 | Devers–Palo Verde (DPV) 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. DPV 1 loops into the SCE Colorado River Substation, which is located 10 miles southwest of Blythe. |
| 14 | 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. Right-of-way requires 130 feet on federal, state, and private land. |
| 15 | Blythe Energy Project Transmission Line | From Blythe to Julian Hinds Substation | Blythe Energy LLC | Operational | N/A | Existing 230 kV transmission line. |
| 16 | SCE Colorado River Substation* | Blythe | SCE | Operational | 90 | A 500/230 kV substation located southwest of Blythe. Includes 108-foot-high dead-end structures. Outdoor night lighting is designed to illuminate the switchrack when manually switched on. |

**Table 3.1-1. Permitted, Constructed, and Operational Projects or Programs in the Project Area**

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project or Program Description |
|---|---|---|---|---|---|---|
| 17 | NRG Blythe II (Blythe Airport Solar)* | Blythe | Clearway Energy Group, LLC | Operational | 150 | 20 MW solar PV facility next to Clearway's 21 MW Blythe Project that came online in spring 2017. |
| 18 | Desert Harvest Solar Project | North of Desert Center | Desert Harvest I, LLC; Desert Harvest II, LLC. (EDFR) | Operational | 1,208 | A 150 MW solar PV project located immediately south of the Desert Sunlight project. The transmission route parallels the existing Desert Sunlight line to interconnect with the existing SCE Red Bluff Substation. |
| 19 | Palen Solar Project | East of Desert Center | Maverick 1-8 Solar, LLC. (EDFR) | Operational | 3,140 | A 450 MW PV project located 11 miles east of Desert Center on BLM land. Includes a 6-mile transmission line into the Red Bluff Substation. |
| 20 | Blythe Mesa Solar Project* | East of Blythe | Blythe Mesa Solar II, LLC | Operational | 3,600 | Approved by Riverside County in May 2015. Transmission line approved by BLM in August 2015, updated right-of-way approved in August 2020 (CACA 053213). |
| 21 | Athos Renewable Energy Project | In Desert Center | SoftBank Energy | Operational; Approved by Riverside County and BLM in 2019 (CACA No. 57730). | 3,400 | A solar PV project located on private land in unincorporated Riverside County adjacent to the northern boundary of the Oberon site. Portions of the transmission line cross public land to reach the SCE Red Bluff Substation. |

**Notes**: I = Interstate; BLM = Bureau of Land Management; CDFW = California Department of Fish and Wildlife; MW = megawatts; PV = photovoltaic; SCE = Southern California Edison; kV = kilovolt; NOD = Notice of Determination; CPUC = California Public Utilities Commission; DPV = Devers–Palo Verde; EDFR = EDF Renewables.

* Project was included in the cumulative project list in the environmental impact report for the approved Palo Verde Mesa Project.

**Table 3.1-2. Contingent Future Projects or Programs in the Project Area**

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project or Program 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 | Sapphire Solar Project | North of Desert Center | Sapphire Solar, LLC (EDFR) | Entering review by BLM for Linear Facility Routes. Notice of Preparation files with Riverside County. | 1,123 | A 117 MW PV solar plant and 117 MW BESS. The solar site is completely on private land and the Linear Facility Routes are located on BLM. Interconnection at the SCE Red Bluff Substation via line tap on the existing Desert Harvest transmission line. |
| 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.<br><br>On April 12, 2022, FERC issued an order granting an extension of project construction deadlines to commence project construction by June 19, 2024, and the extended deadline to complete project construction is June 19, 2027. | 90 | 1,300 MW pumped storage project designed to store off-peak energy to use during peak hours. The off-peak energy would be used to pump water to an upper reservoir. The water is released to a lower reservoir through an underground electrical generating facility. |
| D | Easley Renewable Energy Project | Northeast of Desert Center | IP Land Holdings, LLC | Entering review by BLM. SF-299 filed (CACA No. 57822). Notice of Preparation filed with Riverside County. | 3,735 | The project on BLM land adjacent and north-northeast of the Oberon site would generate and store up to 650 MW of solar PV energy. |

**Table 3.1-2. Contingent Future Projects or Programs in the Project Area**

| ID | Project Name; Agency ID | Location | Ownership | Status | Acres | Project or Program Description |
|---|---|---|---|---|---|---|
| E | Lycan Solar | West of the City of Blythe, south of I-10 | EDFR | Entering review by BLM. Plan of Development filed with the BLM (CACA No. 105849522). | 6,912 | An up to 600-megawatt PV solar plant and energy storage system with an approximately 12-mile-long transmission line to interconnect with the existing Southern California Edison Red Bluff Substation. |
| F | Calypso I Solar Project | South of I-10, west of Blythe | EDFR | Under review by BLM (CACA 059319) | 3,271 | 300 MW solar PV project on BLM-administered land that would connect into the Colorado River Substation. |
| G | Calypso II Solar Project | South of I-10, southwest of Blythe | EDFR | Under review by BLM (CACA 059320) | 2,133 | 300 MW solar PV project on BLM-administered land that would connect into the Colorado River substation. |
| H | Redonda | N/A | Clearway Energy Group, LLC | Under review by BLM (CACA 059387). | 3,483 | 250 MW solar PV project that would connect into the Arica and Victory Pass Substation. |
| I | Skybridge Energy | North of I-10 | N/A | CUP Application filed with Riverside County in 2022. | 133 | 50 MW solar PV facility to support 50 MW hydrogen electrolyzer generation. |

**Notes**: kV = kilovolt; EIR = Environmental Impact Report; EIS = Environmental Impact Statement; BLM = Bureau of Land Management; N/A = not applicable; MW = megawatts; PV = photovoltaic; FERC = Federal Energy Regulatory Commission; I = Interstate; EDFR = EDF Renewables.

* Project was included in the cumulative project list in the environmental impact report for the approved Palo Verde Mesa Project.

## 3.1.3 References

County of Riverside. 2021. *Palo Verde Valley Area Plan*. Revised September 28, 2021. Accessed November 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-PVVAP-4-2022-rev-6-2022.pdf.

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# 3.2 Aesthetics

This section includes an analysis of impacts to aesthetics that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing aesthetics in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts to aesthetics, and lists Mitigation Measures (MMs) that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

**Appendix D** Visual Resources Report for the Grace Solar Energy Center Project, Riverside County, California, prepared by Dudek.

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Specifically, such considerations include the elements of the landscape that contribute to the aesthetic and/or scenic character and quality of the environment. These elements can be either natural or 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.

## 3.2.1 Regulatory Framework

While most of the Project (3,310 acres) is located on private lands under the jurisdiction of Riverside County (County), approximately 395 acres encompass public lands administered by the Bureau of Land Management (BLM). Accordingly, this section considers applicable federal regulations relevant to aesthetics/visual resources. For more information on federal and state laws, regulations and policies, please see the Visual Resource Report included in Appendix D.

### Federal Laws, Regulations, and Policies

#### *Federal Land Policy and Management Act*

The Federal Land Policy and Management Act of 1976 mandates the management of public lands including the identification and protection of their scenic quality and values, while allowing for multi-use (BLM 1976). Section 102(a) of the Federal Land Policy and Management Act of 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 [right-of-way] shall contain terms and conditions which will . . . minimize damage to the scenic and aesthetic values." BLM consideration of visual resource issues associated with ROW grants is generally based on the visual resource provisions of standard BLM policies and procedures developed for land use planning and National Environmental Policy Act (NEPA) compliance.

### *Bureau of Land Management Visual Resource Management System*

BLM uses the Visual Resource Management (VRM) System to inventory and manage scenic values on lands under its jurisdiction. Guidelines for applying the system are described in the BLM Manual Section 8400 et seq. (BLM 1984). VRM classes are assigned through resource management plans. The assignment of VRM classes is based on the management decisions made in the BLM's Resource Management Plans. Lands outside of the BLM's jurisdiction are not assigned a VRM class. Components of the Project on BLM-managed public lands are entirely within VRM Class IV lands (BLM 2016). The VRM Class IV management objective is the least restrictive classification and provides for management activities (projects) that require major modifications of the existing character of the landscape. The level of change allowed may be high and may dominate the view and be the major focus of viewer attention.

### *Western Solar Plan*

On December 19, 2024, BLM signed the 2024 Solar PEIS ROD (also known as the Western Solar Plan) (BLM 2024a), which amended resource management plans across 11 western states in service of modifying its current solar energy program under the Approved Resource Management Plan Amendments/ROD for Solar Energy Development in Six Southwestern States (BLM 2012; the 2012 Western Solar Plan). The 2024 Solar PEIS ROD and associated resource management plan amendments were preceded by a robust environmental evaluation through the preparation of the Final Programmatic Environmental Impact Statement and Proposed Resource Management Plan Amendments for Utility-Scale Solar Energy Development (Solar Programmatic EIS) (BLM 2024b). The Solar Programmatic EIS analyzed a range of alternatives representing different options for addressing land use allocations for utility-scale solar PV projects, permitting processes, and Programmatic Design Features (PDFs). The Solar Programmatic EIS evaluated the environmental, social, and economic impacts of those alternatives and BLM's proposed action in accordance with federal laws and regulations listed in the 2024 Solar PEIS ROD. In addition to approving the resource management plan amendments to existing BLM land use plans, the 2024 Solar PEIS ROD adopted new land use allocations and incorporated updated PDFs for utility-scale solar development as described under the Approved Plan in Section 3.1 of the 2024 Solar PEIS ROD.

The BLM adopted programmatic design features for visual resources as part of the ROD, including VRM best management practices, procedures for coordinating with BLM staff during the project application process, evaluating visual resources, analyzing potential visual effects, and avoiding or minimizing potentially significant effects. The specific programmatic design features from the Final Solar PEIS ROD for the Western Solar Plan applicable to visual resources and the Project would be discussed in the environmental review document as required under NEPA for the components on BLM-administered land.

### *California Desert Renewable Energy Conservation Plan*

The DRECP was developed to address transmission, renewable energy, and species conservation concerns over approximately 22.5 million acres of federal and non-federal lands in the Mojave and Colorado Desert regions of California. The purpose of the DRECP is to conserve and manage plant and wildlife communities in the desert regions of California while streamlining the permitting of compatible transmission and renewable energy projects. The DRECP was approved by the BLM in September 2016.

In completion of the first DRECP phase, BLM published its ROD and final Land Use Plan Amendment (LUPA) to the California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. Out of the approximately 10 million acres of BLM-managed public lands in the Mojave and Colorado Desert regions of California, the DRECP LUPA designates approximately 388,000

acres as Development Focus Areas (DFAs) for transmission, solar, wind, and geothermal projects, like the Solar Energy Zones under the Western Solar Plan.

The Recreation Element of the California Desert Conservation Area 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). It should be noted that the contrast ratings merely assess consistency with the applicable VRM management objective and do not determine impact significance, as is required under CEQA.

Select components of the Project are located on federal lands administered by the BLM California Desert District, Palm Springs-South Coast Office, under the California Desert Conservation Area Plan, as amended by the DRECP LUPA. The Phase 2 transmission line is located on BLM managed land within a DFA. Most of the transmission line would use the existing open-circuit of the double-circuit Arlington transmission line and therefore would be within an existing right-of-way (ROW). The Project site is also located within the Riverside East Solar Energy Zone, which is a DFA under the DRECP.

## State Laws, Regulations, and Policies

### *California Scenic Highway System*

The California Department of Transportation administers the state Scenic Highway Program created in 1963 to preserve and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State Scenic Highway Program includes officially designated state scenic highways, eligible state scenic highways, and historic parkways (Caltrans 2024).

If a highway is listed as eligible for official designation, it is part of the Scenic Highway Program. While care must be taken to preserve the eligibility status of highways, there are no state land use regulations imposed on lands adjacent to or within the viewshed of an eligible highway.

There are no officially designated state scenic highways within the vicinity of the proposed Project. The nearest highway included in the State Scenic Highway System Map, State Route (SR) 62 (an eligible state scenic highway), is located approximately 29 miles north of the Project site (Caltrans 2024). Therefore, the Project is not located within the viewshed of either an Officially Designated or Eligible state Scenic Highway.

### *California Building Code Title 24 Outdoor Lighting Standards*

The requirements of the state's Title 24 outdoor lighting standards vary according to which "Lighting Zone" the equipment is in. These standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone a project is located in. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, for each outdoor lighting application that is regulated by the standards, alterations that increase the connected load or replace more than 50% of the existing luminaires must meet the lighting power allowances for newly installed equipment. The standards base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4.

By default, government-designated parks, recreation areas, and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government.

## Local Laws, Regulations, and Policies

The Project is located mostly on private lands subject to the land use jurisdiction and regulations of the County. As such, relevant County land use plans and ordinances are identified below.

### *Riverside County General Plan Land Use Element*

According to the Riverside County (County) General Plan Land Use Element, the abundant natural visual resources of Riverside County include low-lying valleys, mountain ranges, rock formations, rivers, and lakes (County of Riverside 2021). The following policies of the County's General Plan Land Use Element are applicable to aesthetics/visual resources and the Project (County of Riverside 2021):

- **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) Require that an appropriate landscape plan be submitted and implemented for development projects subject to discretionary review.
  - f) Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.
  - k) Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.
  - l) Mitigate noise, odor, lighting, and other impacts on surrounding properties.
  - o) Preserve natural features, such as unique natural terrain, arroyos, canyons, and other drainage ways, and native vegetation, wherever possible, particularly where they provide continuity with more extensive regional systems.
- **Policy LU 7.4.** Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.
- **Policy LU 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 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 14.5.** Requires 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 14.8.** Avoid the blocking of public views by solid walls.

- **Policy LU 30.8.** Require that industrial development be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area.

***Riverside County General Plan Circulation Element***

The following policy of the County's General Plan Circulation Element is applicable to aesthetics/visual resources and the Project (County of Riverside 2020):

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

In addition to the policy listed above, I-10 is identified on Figure C-8, Scenic Highways, of the Circulation Element as a County Eligible Scenic Highway.

***Riverside County General Plan Multipurpose Open Space Element***

The following policies of the County's General Plan Multipurpose Open Space Element are applicable to the Project (County of Riverside 2015):

- **Policy OS 20.2.** Prevent unnecessary extension of public facilities, services, and utilities, for urban uses, into Open Space-Conservation designated areas.
- **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.
- **Policy OS 22.5.** Utilize contour grading and slope rounding to gradually transition graded slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors.

***Riverside County General Plan Palo Verde Valley Area Plan***

Private lands within the boundary of the Project site are within the County's Palo Verde Valley Area Plan (County of Riverside 2021). The Palo Verde Valley Area Plan contains policies regarding scenic highways. The following policy is applicable to the Project.

- **Policy PVVAP 10.1**. Maintain Protect the scenic highways in the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

***County of Riverside Ordinance No. 655 ("Light Pollution Ordinance")***

The intent of the County's Light Pollution Ordinance is to restrict the permitted use of certain light fixtures from emitting undesirable light rays into the night sky, which has a detrimental effect on astronomical observation and research. The Light Pollution Ordinance establishes Zone A and Zone B for purposes of lighting regulation enforcement. Development within Zone A is subject to more stringent lighting regulations as this area encompasses lands within a 15-mile radius centered on Palomar Observatory. Development within Zone B is subject to less-stringent measures as Zone B includes lands greater than 15 miles away from Palomar Observatory. Within both Zones A and B, low-pressure sodium lamps are preferred, and all nonexempt outdoor light fixtures must be shielded (County of Riverside 1988). Regarding Class II (i.e., parking lot, walkway, security) lighting, lighting above 4,050 lumens is prohibited in both zones. The Project site is located in Zone B.

## 3.2.2 Environmental Setting

### Project Site

The Project site is located along the western edge of the Colorado Desert, within the Colorado River Valley, west of the City of Blythe and east of the community of Desert Center. The Colorado River Valley extends from the Rocky Mountains in Colorado to the Colorado River Delta in the northern Gulf of California. The elevation of the Colorado River Valley ranges from less than 250 feet above mean sea level (amsl) at the southwest extent of the Colorado River to approximately 8,000 feet amsl at the northeast extent of the Colorado River. The surrounding mountains rise to more than 14,000 feet amsl at the northeast extent and 2,000 amsl at the southwest extent.

The topography of the Project site generally slopes to the southeast toward the McCoy Wash. Ground surface elevations at the Project site range from approximately 330 feet amsl to 480 feet amsl. The Project site is currently fallow agricultural fields on private land and undeveloped on BLM-administered land with some areas of undesignated recreational off-highway-vehicle (OHV) use; historically, the private land on the Project site was used for agricultural cultivation. There are no buildings or other structures present on the site, but there is an existing underground dedicated water conveyance system in the southeast corner of the Project site which connects to an offsite local canal. There is mesquite habitat bordered by large trees planted along the edge of private parcels southeast of the Project site.

The Project site is located near existing solar development and transmission infrastructure. Land uses near the Project site include transportation (Blythe Airport ((located approximately 1.5 miles to the northeast of the proposed Phase 2 transmission line crossing of I-10) and I-10), agricultural, renewable energy, electrical transmission lines, and unprogrammed recreational and wilderness areas. As measured from Orchard Lane, the community of Mesa Verde is located approximately 1.2 miles east of the proposed Phase 2 transmission line to the south of I-10 In addition to residential uses in the community of Mesa Verde and along 5$^{th}$ Avenue and an RV resort (Rancho Ventana RV Resort) approximately 1.4 miles east of the Project boundary and along Arrowhead Boulevard. Other nearby community resources include a gas station north of the community of Mesa Verde and I-10 off Mesa Drive, Palo Verde College approximately 0.5 mile east of the Project boundary and along 6$^{th}$ Avenue, and the Blythe Municipal Golf Course that is adjacent to the Rancho Ventana RV Resort (see Figure 2-1). Further, there is non-irrigated, fallow agricultural land and an inactive lemon orchard within the Project boundary (non-irrigated fallow agricultural land is also adjacent to the area). Additionally, vacant, undeveloped land is scattered around the Project area, including the McCoy Wash which is a seasonal streambed. Undeveloped lands in this area generally include native creosote scrub. Lastly, at the proposed Phase 2 transmission line crossing of I-10, the westerly Blythe city limits are approximately 3.5 miles to the east.

### Surrounding Area

The Project is located near existing solar development and transmission infrastructure. Blythe, McCoy, and Arlington Solar Projects are all owned by NextEra and are located north of the Project. The Project transmission line (Phase 2) would use 8.6 miles of the open circuit on the existing double circuit Arlington transmission line to interconnect with the existing Colorado River Substation. NRG Blythe II, also known as Blythe Airport Solar, and Blythe PV Project, also known as Blythe 21 Solar, are owned by Clearway Energy Group LLC and located south of the Project. Blythe Mesa Solar Project is owned by Blythe Mesa Solar II LLC and is also located south of the Project. Desert Quartzite, owned by Desert Quartzite LLC (EDF Renewables), and Crimson Solar, owned by Sonoran West Solar Holdings LLC (Recurrent Energy), are recently approved

projects that would be located southwest of the Project. Figure 2-3, Energy Projects Along I-10, shows the Project in relation to other existing, approved, and proposed solar development projects.

## Scenic Vistas

There are no designated scenic vistas in the County General Plan or the Palo Verde Valley Area Plan nor are there any designated scenic vistas on nearby public lands managed by BLM (or other agencies). While not designated as scenic vistas, the surrounding terrain, including views of nearby mountain ranges with steep slopes, is valued for providing a scenic backdrop for the region (County of Riverside 2021). In addition, and as described previously, the western extent of the Palo Verde Mesa is surrounded by mountainous terrain and, as such, elevated slopes and ridgelines support potential scenic vistas offering unobstructed and panoramic views of the surrounding area.

## Scenic Highways

In the region and from SR-62 to the Colorado River, I-10 is a County Eligible Scenic Highway but is neither an eligible nor designated state Scenic Highway (County of Riverside 2020). At its closest point, the Project site is located 3.5 miles north of I-10 and northerly views from the interstate as motorists approach and pass the Desert Center area include low tan and muted green covered terrain intermixed with areas of exposed, tan soils; tall rust-colored poles supporting electrical transmission lines; desert washes (occasionally); irrigated (i.e., green) landscaping near the Lake Tamarisk area; distant and dark, rectangular forms (solar arrays); the remaining undeveloped valley floor; and dark and visually prominent mountains in the background. The nearest facility of the California Scenic Highway System, SR-62 (an officially designated state Scenic Highway), is located approximately 20 miles to the north of the Project site.

## Visual Character and Quality

The existing visual character and quality of the 3,705-acre Project site and immediate surrounding area is generally composed of a relatively flat and undeveloped desert landscape that supports a sparse to irregular distribution of low shrubs of subdued tans, browns, and drab/muted greens. The topography of the Project site generally slopes southeast toward the McCoy Wash, from approximately 330 feet amsl to 480 feet amsl, and there is an inactive lemon orchard centrally located within the Project boundary. The Project site's valley landscape is generally indistinct from other locations in the area and is visually submissive to prominent mountain terrain that provides a scenic backdrop of visual interest.

Furthermore, land uses near the Project site include transportation (I-10 and Blythe Airport), agricultural, renewable energy, electrical transmission lines, and unprogrammed recreational and wilderness areas. Vacant and undeveloped land is scattered around the Project area, and there is non-irrigated, fallow agricultural land within the Project boundary and adjacent to the area.

### *Key Observation Points*

To further explore and contextualize existing visual character and view quality, KOPs were established in the surrounding area. These KOPs emphasize commonly traveled routes or other likely public observation points around projects. The KOPs were selected through review of the Project layout and surrounding area and were established to capture locations with potential views to various areas of the Project site and various Project components. For further details, refer to Table 3.2-1, which outlines viewer categories and their characteristics, along with locations and proximity to the Project site. The location of the five KOPs selected for analysis and their spatial relationship to the Project site is illustrated in Figure 3.2-1, Key Observation Points. Photographs from the selected KOPs are presented on Figures 3.2-2 through 3.2-4.

**Table 3.2-1. Key Observation Points**

| KOP | KOP Location | Distance from Project Site (Approximate) | Represented Viewer Categories |
|---|---|---|---|
| KOP 1 | I- 10 (Eastbound) | 420 feet from interstate span of existing Arlington transmission line | Regional travel route |
| KOP 2 | Dracker Road | 130 feet from Arlington transmission line and Phase 2 transmission line alignment (0.50 miles from Project's Phase 1 transmission line alignment east of Dracker Road) | Local travel route<br>Recreational travel route |
| KOP 3 | 5th Avenue | 205 feet from Project boundary/site | Local travel route |
| KOP 4 | 6th Avenue | 1 mile from Project boundary/site | Local travel route<br>Recreational travel route |
| KOP 5 | Buck Boulevard | 175 feet from Project boundary/site | Local travel route<br>Recreational travel route |

***KOP 1: Interstate 10 (Eastbound)***

KOP 1 is located on the paved shoulder of eastbound I-10, approximately 1.6 miles west of exit 232 (Airport/Mesa Drive) and approximately 420 feet west of the Arlington Solar Energy and Blythe Solar Energy transmission line spans of I-10. The view at KOP 1 is oriented to the east along the interstate corridor and towards the transmission line spans of the interstate (four tall and dark tubular steel poles supporting the transmission lines are visible in the KOP 1 view) (see Figure 3.2-2, Key Observations Points 1 and 2: Existing View). The existing landscape is mostly flat in the foreground, but the dark and distant silhouettes of serval mountain ranges are visible to the northeast and east. Due to the proximity of the transmission line poles to KOP 1 and the flat form and line of the interstate corridor and adjacent terrain, as well as the mostly low form and subtle line of visible vegetation, the poles are visually prominent in the view and attract the attention of passing motorists. Beyond the dark grey and broken and continuous white lines of the interstate travel lanes, tans, greys, and dull greens are the characteristic colors present in the landscape.

***KOP 2: Dracker Road***

Located on the paved segment of Dracker Road approximately 0.45 miles south of the nearest solar arrays of the Blythe Solar Energy Project, KOP 2 is oriented to the north and extends to the distant mounded occasionally flat to rugged mountains that are approximately 15 miles away (see Figure 3.2-2). As at other KOPs, the visible foreground terrain is flat and composed of slightly granular to smooth tan/grey soils and scattered shrubs of varying coverage (foliage is typically dulled green but also dried tan). Two existing transmission lines are visible, one supported by greyish tubular steel poles and the other by darkish tubular steel poles, and parallel Dracker Road on the west.

***KOP 3: 5th Avenue***

The south oriented view from KOP 3 extends across mostly flat but softly undulating desert valley landscape featuring numerous tufts of low golden grasses and scattered tan to grayish shrubs (see Figure 3.2-3, Key Observation Points 3 and 4: Existing View). Rows of indistinct and tall trees (or shrubs) are visible and create a low horizontal line and rectangular form in the foreground-middle ground (the features are located approximately 0.50 miles away). A narrow, mostly horizonal dirt road is visible in the

right extent of the photo and the silhouette of a dark rugged mountain range forms the backdrop to the view. Faint to distinct vertical lines associated with wood poles and wood H-frame structures supporting transmission lines are presented in the foreground-middle ground.

***KOP 4: 6th Avenue***

Located at the end of the paved extents of westbound 6th Avenue, KOP 4 looks across a broad, mostly undeveloped and flat desert landscape composed of loose tan soils and low scattered shrubs of varying density to a broad, rugged, low to high collection of mountains (see Figure 3.2-3). With the exception of the partially visible electrical distribution line and miscellaneous refuse in the immediate foreground, the viewshed is generally free of visible development.

***KOP 5: Buck Boulevard***

KOP 5 is located on the unpaved portion of Buck Boulevard, just north of the solar field of the Blythe Mesa Solar Project and approximately 1 mile north of West Chanslor Way. At KOP 5, the wide and granular surface of unpaved Buck Road occupies the immediate foreground and transitions to seemingly soft and flat tan desert soils at and beyond road edges (see Figure 3.3-4, Key Observation Point 5: Existing View). The flat terrain extends north to the bases of a series of light to dark grayish rugged mountains. Visible vegetation is variable in height but mostly low and presents dull to darker green tones and a generally scattered distribution. A white, rectangular marker/sign is visible to the north and an existing transmission line supported by wooden H-frame support structures parallels Buck Boulevard. Lasty, a collection of nearly indistinct, low, and boxy structures is visible to the northeast.

### Light and Glare

As the Project site is currently vacant, there is no existing lighting on site. While the surrounding area is mostly undeveloped, there is an existing residence on 5th Avenue north of the Project site and there are a group of residences southeast of the Project site off West Chanslor Way. In addition, the Blythe Solar Energy Project and the Blythe Mesa Solar Project are west and south of the Project site respectively, the Blythe Energy facility is approximately 1 mile south of the Project site, and the Blythe Airport is approximately 1.15 miles southwest of the Project site. Each of these facilities is expected to include exterior lighting sources for general illumination and/or safety and security. Overall, these outdoor lights are assumed to be generally muted and not a substantial source of night lighting. At night, vehicle headlights on surrounding roadways are also sources of light, although, due to the site's remote location, vehicles would generally not be within view of the Project site.

## 3.2.3 Impact Analysis

### Methodology

***Scenic Vistas***

For purposes of this analysis, scenic vistas are considered formally designated public vantage points offering views of primarily natural settings containing recognized scenic features or landscapes of special importance. As stated above in Section 3.2.2, Environmental Setting, Scenic Vistas, there are no designated scenic vistas in the County.

### *Scenic Highways*

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

As noted previously, I-10 is not a designated state scenic highway. No views of the Project site are available from SR-62, the nearest roadway included in the state scenic highway system.

### *Visual Character and Quality*

Impacts to existing visual character and quality are determined through a comparison of pre- and post-development conditions on the Project site. Specifically, the Project type, scale, mass, bulk, and color (and other attributes/characteristics) are examined for potential contrast with existing on-site features and features in the surrounding area. Visual change is an overall measure of the alteration or change in basic visual attributes such as form, line, color, and texture as a result of the Project. Thus, a substantial adverse effect can occur when a project results in high levels of visual change or quality of public views from publicly accessible areas. If agency policy does not protect private views, a project's impacts to private views are not required to be evaluated under CEQA.

### *Lighting and Glare*

The potential for lighting and glare impacts are evaluated based on a comparative review of pre- and post-development lighting and glare sources operating in the Project area. If a project is located in a low-lighting rural environment with excessive or unusually bright lighting is implemented, then the likelihood for potentially significant lighting and glare impacts would be high. Glare can result from sunlight or from artificial light reflecting off building exteriors, such as glass windows, metal roofs or other highly reflective surface materials. Squinting or turning away from a light source is an indication of glare.

A Project-specific glare analysis have been prepared and the results of the analysis are summarized below. In addition, the Project-specific Glare Analysis Report is presented as Appendix C within the Visual Resources Report (Appendix D).

Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Section I of Appendix G to the State CEQA Guidelines addresses typical adverse effects to aesthetics and includes the following questions to evaluate a project's impact on visual resources. Would the project:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from

publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

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

Regarding impacts to visual character or quality, the Project site is located in unincorporated Riverside County near the City of Blythe, which, as of the 2022 Census, includes a population of approximately 17,949 persons (U.S. Census Bureau 2022). The Project is bounded on the north and west sides by BLM lands and existing solar facilities, to the south by Blythe Airport, and to the east by McCoy Wash and the City of Blythe. Surrounding areas also include undeveloped desert land that is largely federally owned. Therefore, consistent with California Public Resources Code Section 21071, the Project site is within a nonurbanized setting and, thus, the applicable significance threshold is whether the Project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

The County's Environmental Assessment Form includes additional significance criteria that were also used in the analysis. According to the County's Environmental Assessment Form, a project could have potentially significant impact if it would:

a) Have a substantial effect upon a scenic highway corridor within which it is located?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?

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

d) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?

e) Expose residential property to unacceptable light levels?

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Designated Scenic Vistas*

There are no designated scenic vistas in the County General Plan or Palo Verde Valley Area Plan nor are there any designated scenic vistas on nearby public lands managed by BLM (or other agencies). While the surrounding landscape is characterized by desert and mountainous terrain that provides opportunities for scenic views, offering unobstructed and panoramic views of the area, these are not designated scenic vistas. Moreover, the impact analysis considers the larger scenic vista aspect, as shown below, through discussion of public vantage points included in the KOPs. There would be no impact to scenic vistas and this issue is not discussed further in the document.

### *State Scenic Highways*

The Project does not include a State Scenic Highway. The Project's Phase 2 transmission line would span I-10, which is considered a County eligible scenic highway, not a state scenic highway. The nearest facility of the California Scenic Highway System, SR-62 (an eligible state scenic highway), is located approximately 29 miles north of the Project site. Project components would not be visible from SR-62 and there would be no impact to state scenic highways, therefore this issue is not discussed further in the document.

### *Mt. Palomar Observatory*

The Project site is located approximately 120 miles from the Mt. Palomar Observatory. Due to the distance and the presence of intervening natural topography, the Project site is not within the viewshed of the observatory. Therefore, there would be no impacts to astronomical observation and research at Mt. Palomar Observatory and this issue is not discussed further in this document.

### *Scenic Resources*

The Project site does not contain sensitive tree species, notable rock outcroppings, or unique or landmark features. Additionally, because the surrounding landscape includes existing solar facilities and transmission lines, operation of the Project would not result in an aesthetically offensive site. Therefore, there would be no impact to existing scenic resources and this issue is not further discussed in this document.

## Environmental Impacts

This section includes an examination of the Project's aesthetic impacts per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Previous Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** It was determined that visual disturbances by Palo Verde Mesa Solar Project would not create a substantial adverse effect to scenic resources or create a new source of substantial light or glare during construction, operation, maintenance, and decommissioning of the project. Compliance with existing regulations and implementation of best management practices resulted in a less than significant impact determination to aesthetic resources.

### *Threshold a: Would the project have a substantial effect upon a scenic highway corridor within which it is located?*

*LESS THAN SIGNIFICANT (CONSTRUCTION AND DECOMMISSIONING, AND OPERATION)*.

#### Construction and Decommissioning

While I-10 is not included in the State Scenic Highway System, I-10 is a County eligible Scenic Highway. Due to its County Eligible Scenic Highway designation, I-10 is considered a Scenic Highway corridor for purposes of this analysis. As discussed above, there would be no impacts to SR-62, the nearest state scenic highway.

Project-related impacts on the views of I-10 motorists would generally be minimal. The equipment, vehicles, and workforce involved with construction activities for the solar facility (and components associated with the various phases of construction) would have limited visibility from I-10. Throughout the duration of construction, occurrences of blockage or interruption of scenic features in views would be temporary, as taller pieces of equipment move around the site and specific phases of construction are completed.

As viewed from I-10 (i.e. KOP 1), the Project's Phase 2 transmission line would be strung on existing poles supporting the Arlington Solar Energy Center transmission line. The equipment and workforce involved in wire stringing would be seen from I-10, but impacts would be temporary during construction.

Potential impacts resulting from decommissioning and reclamation activities would generally be similar to impacts anticipated during the Project's construction phase. Due to the temporary nature of

construction and decommissioning activities for both the solar facility and transmission line, and the distance of the solar facility from I-10, the construction impacts to a scenic highway corridor would be less than significant. Similarly, the Palo Verde Mesa Solar Project concluded that from the interstate, Project visual contrasts during construction and decommissioning would be temporary, would not be considered out of character for visual conditions along I-10, and would result in less than significant impacts. A conclusion of **less than significant** without mitigation is still appropriate for the Proposed Project.

**Operations**

Similar to construction of the solar facility, operation of the solar facility would be approximately 2 miles north of the I-10 and would have limited visibility from I-10. As viewed from I-10 (i.e. KOP 1), the addition of the Project Phase 2 transmission line to the existing transmission line corridor that crosses the interstate would result in altogether weak contrast and overall change, as the form and line of new conductor lines would mimic the form and line of existing conductor lines (see Figure 3.2-5). As the solar facility has limited visibility from I-10 and the Project's Phase 2 transmission line would create minimal visual change from I-10, the Project operation would result in **less-than-significant** impacts to a scenic highway corridor. The Palo Verde Mesa Solar Project similarly concluded that the impacts of the transmission line to viewers from I-10 would be less than significant.

***Threshold b: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?***

*LESS THAN SIGNIFICANT (CONSTRUCTION AND DECOMMISSIONING); SIGNIFICANT AND UNAVOIDABLE (OPERATIONS).*

The Project consists of previously disturbed former agricultural land. The construction, operation, and decommissioning of the Project would have varying degrees of visibility to motorists on local and regional roads, residents, and recreationists in the surrounding area. Construction, operations, and decommissioning-related effects on visual character or quality of public views are analyzed below.

***Construction and Decommissioning***

During construction, construction personnel are anticipated to be on site. Construction of the Project is anticipated to occur over a 28-month time frame. Generally, construction work schedules are expected to be up to 12 hours per day 7 days a week. Typically, the workday would consist of shifts beginning as early as 6:00 a.m. and end as late as 6:00 p.m. The work schedule may be modified throughout the year to account for the changing weather conditions. For instance, during hot weather, it may be necessary to start work earlier to protect the health and safety of workers and/or avoid pouring concrete during high ambient temperatures. Additional hours and/or nighttime work and weekend work may be necessary to make up schedule deficiencies, or to complete critical construction activities (e.g., PV block construction, foundation pouring, or working around time-critical shutdowns and constraints). Any work outside typical hours would comply with County noise standards, and restricted nighttime lighting would be used to ensure safety while minimizing light exposure outside the construction area. Construction activities would be temporary and limited to the duration of the construction schedule. Decommissioning activities are anticipated to be similar to construction activities.

During construction, an average of 50–100 workers would commute to the Project site daily, peaking at 600 workers, resulting in up to 635 one-way trips per day. All construction materials would be delivered by truck, primarily using designated routes, with an average of 8 to 85 one-way truck trips per day. Construction equipment would remain on site throughout the Project, minimizing public road use.

Deliveries would include local materials and long-distance shipments from ports and the U.S./Mexico border, with all construction-related traffic being temporary and removed upon Project completion.

Construction of the Project would require the use of cranes and heavy equipment including tractors, rubber-tired dozers, graders, and scrapers. Construction would require temporary storage and operations facilities and temporary laydown and staging areas. The equipment, vehicles, and workforce involved with construction activities (and components associated with the various phases of construction) would have limited visibility from I-10, which is approximately 2 miles from the solar facility. The Project site is generally partially obscured from public view due to the distance from public vantage points (e.g., roadways) and partial screening associated with intervening desert vegetation. Most views to activities within the boundary of the solar facility would generally be restricted to local roads around the site perimeter, as shown on KOPs 3 and 5. Construction activities, equipment, and vehicles would be visible from these KOPs at varying levels of clarity.

Throughout the duration of construction, occurrences of blockage or interruption of public views would be temporary, as taller pieces of equipment move around the site and specific phases of construction are completed. Ground surface disturbance and vegetation removal and general grading and trenching activities could generate short-term dust clouds that have potential to temporarily affect general view quality, including degradation of existing view quality. Potential for short-term dust clouds would be substantially limited by compliance with Mojave Desert Air Quality Management District Rule 403, which requires watering active areas of construction two times daily (or the use of non-toxic soil stabilizers/soil weighting agents), restrictions on construction vehicle speeds on unpaved areas within the construction site, and use of gravel at unpaved exits from the Project site to prevent track-out onto public roadways. As detailed in Section 3.4 Air Quality, a comprehensive Fugitive Dust Control Plan consistent with Mojave Desert Air Quality Management District Rule 403 would be required. With implementation of the Fugitive Dust Control Plan during construction, temporary visual effects related to reduced visual quality would be reduced. Fugitive dust control measures are included in the Project's Fugitive Dust Control Plan as described in **APM-AIR-1** (see Section 3.4, Air Quality).

As shown on KOP 1 and KOP 2, the movement of vehicles and operation of equipment along nearby segments of the transmission line (Phase 2) would also be visible. Specifically, the stringing and pulling of new conductor on existing transmission line structures/poles via bucket trucks would be briefly visible as motorists approach the transmission line span from the east and west (I-10) or travel north and south along Dracker Boulevard near the Project site. Construction activities on the solar facility site may also be visible from northbound Dracker Boulevard and westbound 6$^{th}$ Avenue (i.e. KOP 2 and KOP 4); however, the nearest Project components would be located over 1.6 miles from Dracker Road and 1 mile or more away from 6$^{th}$ Avenue. In addition to mobile views from Dracker Boulevard and 6$^{th}$ Avenue being fleeting, construction activities would be partially obscured by distance and terrain, and construction vehicles and Project components/equipment would lack scale and/or spatial dominance in the broad desert landscape.

KOP 3 and KOP 5 show clear views to construction activities on the solar facility site would be available. Construction vehicles and equipment would be in the immediate foreground/middle ground of the landscape elements. Vegetation removal and site preparation, the installation of fencing, grading and earthwork, and PV panel installation would substantially modify the existing landscape visible from 5$^{th}$ Avenue and Buck Boulevard (i.e. KOP 3 and KOP 5). Phase 1 transmission line (WAPA Tie-In) pole installation would also be visible from KOP 3 and 4 but due to distance, temporary construction impacts would be muted. Viewer groups affected by these temporary impacts to public views include limited recreation users on undesignated OHV routes and open routes as designated by the BLM, and motorists traveling along 5$^{th}$ Avenue and Buck Boulevard. Over the course of construction, the visual character of

the site and gradual transformation from previous fallow agricultural fields and undeveloped areas to a developed environment that includes a solar facility would cause a change in the visual character and quality of public views. However, as construction and decommissioning activities would be temporary in nature, they would not result in substantial long-term effects to visual character and views. Therefore, construction and decommissioning impacts would be **less-than-significant** consistent with the Palo Verde Mesa Solar Project.

***Operations***

Components of the Project (primarily solar array panels but also the BESS, project substation and switchyard, O&M building, transmission lines, and collection system poles) would have varying degrees of visibility from public vantage points in the surrounding area. In addition, solar panels and the transmission lines (Phase 1 and 2) would have varying visibility from the five KOPs identified for analysis based on elevation of the vantage point, proximity to the Project site, and the presence (or lack thereof) of intervening screening elements such as vegetation, terrain, and/or structures. A brief KOP discussion is presented below to inform the overall evaluation of impacts to existing visual character and quality of the landscape.

KOP 1: Interstate 10 (Eastbound)

Figure 3.2-5 is a depiction of the existing and future views of the Project from motorists traveling eastbound on I-10. As shown in Figure 3.2-5, the existing transmission infrastructure is visible from I-10, and more specifically, four tall and dark poles with horizontal conductor lines stretch across the view. From KOP 1, the solar facility would not be distinctly visible, but the Project's Phase 2 transmission line would be visible.

The solar facility is approximately 2 miles north of I-10 and visibility would be limited at this distance. As seen in Figure 3.2-5, the solar facility is not visible in future views. Even from other locations along I-10, the solar facility is not anticipated to be distinctly visible during operation of the Project.

As proposed and as viewed near KOP 1, the Project's proposed Phase 2 transmission line would be strung on existing poles supporting the Arlington Solar Energy Center transmission line. The addition of the Project's Phase 2 transmission line to the existing transmission line corridor that crosses the interstate would not change existing views of the existing transmission line and would result in a minor change, as the form and line of new conductor lines would mimic the form and line of existing conductor lines.

KOP 2: Dracker Road

Figure 3.2-6 includes existing and future views of the Project from motorists travelling northbound on Dracker Road. From KOP 2, the substation and BESS, which are the closest components of the solar facility to Dracker Road, would be approximately 1.5 miles east of Dracker Road. As seen in Figure 3.2-6, the solar facility is not visible in future views. The Project's Phase 1 and Phase 2 transmission lines would be visible from KOP 2.

From Dracker Road (KOP 2), the Project's Phase 2 transmission line alignment running west from the Project substation towards Dracker Road. The nearest poles along the east-west alignment segment would be located approximately 0.45 miles to the northeast of KOP 2. The transmission line would be visible to motorists along Dracker Road, which is not a County road, but is identified by the BLM as an open route for OHV use. Following the span of Dracker Road, the transmission line would be strung on two new poles to be located west of Dracker Boulevard and then onto existing tubular steel poles paralleling the road. New poles supporting the Project transmission line located to the east of Dracker

Road would be tall but thin and, combined with stacked/parallel segments of conductor line, would create visible form and line contrasts that would be somewhat moderated by distance and partial screening by large creosote shrubs in the immediate foreground-middle ground. New poles and transmission lines located to the west of Dracker Boulevard would occur in an area of the landscape that features multiple tubular steel poles and conductor line, and as such, new poles and lines added to the west of Dracker Boulevard would create a minor contrast with the existing infrastructure (see Figure 3.2-6).

KOP 3: 5th Avenue

Figure 3.2-7 is a depiction of the existing and future views of the Project from motorists looking south from 5th Avenue. From KOP 3, the transmission line (Phase 1) is approximately 0.5 mile to the southwest of KOP 3 and visibility would be limited at this distance. The solar facility would, however, be clearly visible (see Figure 3.2-7).

Following the completion of Project construction, perimeter fencing, and solar panels installed across graded and leveled sites would be present in the immediate foreground-middle ground of the view. Specifically, perimeter fencing would be located within 200 feet of viewers travelling along 5th Avenue and solar panels would be within 230 feet. Due to proximity and height of the solar panels (up to 14 feet) comparative to the elevation of 5th Avenue at KOP 3, solar panels would block most features in the landscape except for views of the mountains that would remain visible to the southwest. Also, the aforementioned grove of trees to the south would be removed to accommodate solar array installation and thin, vertical poles supporting the Phase 1 transmission line would be partially visible over foreground solar panels. With implementation of the Project, the open and undeveloped character of the existing desert valley terrain would be substantially altered for motorists traveling along 5th Avenue (see Figure 3.2-7).

KOP 4: 6th Avenue

Figure 3.2-8 shows the existing and future views of the Project from motorists looking west from 6th Avenue, which is adjacent to Palo Verde College. From KOP 4, the transmission line (Phase 1) as measured at the proposed Phase 1 switchyard is approximately 1.5 miles to the southwest of KOP 4 and visibility would be limited at this distance. At this location, the solar facility would be visible but obscured by distance.

Following Project construction, the upper edge of solar panels located approximately a mile from the site would be visible from 6th Avenue but would mostly be blocked by an intervening and low desert ridge. Panel edges would appear as a low and broken dark horizontal line that may be overlooked by casual observers. Other panels in the landscape would be located over 1 mile away and, while visible from 6th Avenue, their low rectangular form and line would create minor contrast and change in the landscape that would tend to blend in with the dark form and line of agricultural crops (see Figure 3.2-8). Similarly, distant monopoles support the Phase 1 transmission line would be visible but somewhat faint and are anticipated to create weak line and color contrast

KOP 5: Buck Boulevard

Figure 3.2-9 shows the existing and future views of the Project from motorists looking north from Buck Boulevard. From KOP 5, the proposed Phase 1 transmission line would be as close as approximately 1.7 miles north of KOP 5 and visibility would be obscured at this distance. The solar facility would be visible at this location. As seen in Figure 3.2-9, the transmission line (Phase 1) would be partially visible in future views. The Phase 2 transmission line would not be visible from this specific location.

At this vantage point that is experienced by a limited number of motorists, fencing along the site perimeter and solar panels across a graded site would be present in the immediate foreground-middle ground to the east and west of Buck Boulevard. Due to the proximity of Buck Boulevard to the Project site, individual grids on the surface of solar panels would be visible to motorists traveling along Bucks Boulevard, as would numerous short metal piers supporting individual rows of panels. As shown in KOP 5, solar panels would nearly cover the visible desert valley terrain in the foreground-middle ground and substantially alter the existing visual character and quality. Solar panels would result in a strong visual contrast on account of their prominent horizontal form, horizontal to vertical line, and dark color (see Figure 3.2-9).

Summary

While the Project would be visible from higher volume public vantage points specifically along I-10 (i.e., KOP 1), the design and basic characteristics of the visible components (mostly, the proposed transmission lines) would be consistent with the visual elements of form, line, color, and texture that are present in the existing landscape. As the transmission line (Phase 2) would be co-located on existing poles the resulting visual contrast and impacts would be weak and generally less than significant. The proposed Phase 1 transmission line (both co-located and segments requiring new, Project specific support poles) would also be visible from a lower volume, two-lane road, specifically Dracker Road (i.e., KOP 2). From this vantage point, the co-located and new transmission line segments would produce mostly a weak contrast and minor visual change. While new poles would be installed to support the Phase 1 transmission line, the poles and conductor lines would have generally limited visible and features of similar scale (i.e., the existing WAPA Parker Blythe 161 kV transmission line) occur in the general vicinity of the Phase 1 alignment. Views of the solar facility from 5th Avenue and Buck Boulevard would provide foreground views of solar panels and fencing (i.e., KOP 3 and KOP 5) and the broad flat form and dark color of the solar panels, along with the developed and orderly look of the solar facility, would strongly contrast with the desert landscape surrounding the Project and would tend to dominate (or at KOP 5, co-dominate) views. Through the existing visual character of the Project area is already influenced by existing transmission lines and other nearby energy projects, Project operations, and specifically, proposed grading and installation of the solar facility in the valley landscape, would result in substantial degradation of the existing visual character and visual quality of the Project site when viewed from 5th Avenue and Buck Boulevard (i.e., KOP 3 and KOP 5). The Project's **APM-VR-1** Lighting Control and **APM-VR-2** Surface Treatment of Project Structures/Buildings, and **MM-VIS-1** would help reduce the visual contrast of the Project as experienced from KOPs 3 and 5 during operation, and decommissioning; however, these measures would not fully mitigate the significant visual impact of the Project. As such, impacts to existing visual character and quality would remain **significant and unavoidable**. Whereas the Palo Verde Mesa Solar Project concluded that development of the site would not substantially degrade its scenic value (and impacts to visual character would be less than significant), a conclusion of significant and unavoidable impacts is appropriate given the horizontal footprint of the project, characteristics of visible project components, and degree of change to the existing landscape.

***Threshold c: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?***

*LESS THAN SIGNIFICANT (CONSTRUCTION AND OPERATION).*

### *Lighting*

Construction and Decommissioning

The Project would use restricted nighttime lighting during construction. Lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the construction area consistent with County Ordinance 655.

Because construction and decommissioning activities would generally end in the early evening and due to the anticipated infrequent need for early morning or late-night construction to accommodate certain phases, use of nighttime lighting during construction and decommissioning activities is anticipated to be limited. Further, because limited lighting that is focused downward and shielded and would only be used when needed given the temporary nature of construction and decommissioning activities, lighting use during construction and decommissioning activities would result in a **less than significant** impact consistent with Palo Verde Mesa Solar Project.

Operations

Nighttime lighting would be limited to areas required for operation, safety, or security. Low elevation (less than 14 feet high) controlled security lighting would be installed at primary access gates, the substation, and the O&M building and the entrance to the battery energy storage structures. Lighting would only be switched on when personnel enter the area (either motion sensor or manual activation). All safety and emergency service signs would be lit when the lights are on. All lighting would be directed downward and would include shielding to minimize illumination of the night sky or potential impacts to surrounding viewers, as required under County Ordinance 655.

Portable lighting may be used occasionally and temporarily for maintenance activities during operations. There may be instances where portable lighting would be required for any emergency work that must occur on the solar panels at night. The level and intensity of lighting would be the minimum needed.

The substation, energy storage structures, and O&M building are not located near permanent viewers. While the nearest residence is near the northern boundary of the solar site, it is approximately 2 miles northeast of the substation, energy storage structures, and O&M building. Lighting would only be turned on when Project personnel is present and would comply with County Ordinance 655 and would not result in a substantial source of light that would adversely affect nighttime views in the area. For these reasons and due to the limited number of viewers anticipated to be exposed to lighting, impacts associated with Project operation would be less than significant. Similarly, the Palo Verde Mesa Solar Project concluded that impacts related to lighting would be **less than significant** through implementation of a lighting plan.

### *Glare*

**Construction**

Shielded and downward directed light would also minimize the potential for visible glare at off-site public viewing locations. Further, both the anticipated infrequent nature of nighttime (or early morning) construction activities and the focused use of lighting on active construction areas would also limit the potential for substantial glare to be received at off-site public viewing locations. During daytime hours, the presence of construction equipment/vehicles on the Project site and local area roads may temporarily generate glare due to the reflection of sunlight off equipment/vehicle exteriors. However, any generated glare would be temporary and fleeting from any single public viewing location. In addition, most receptors

in the surrounding area would have partially screened views to Project site. Lastly, terrain, as well as distance, would obscure project construction equipment/vehicles. Therefore, temporary glare impacts during construction would be **less than significant**, consistent with Palo Verde Mesa Solar Project.

**Operations**

While solar panels would be uniformly dark in color, they would also be non-reflective and designed to be highly absorptive of all light that strikes their glass surfaces. Other Project components, including the on-site substation, the Phase 1 switchyard, inverters, BESS enclosures, O&M building, and the transmission lines would be constructed of steel and/or other metallic materials. According to the Glare Analysis Report prepared for the Project (see Appendix C to Appendix D), Project-generated glare could be perceptible during brief portions of the day during certain times of year at a single nearby residence (i.e., the residence near KOP 3 along 5th Avenue). Specifically, less problematic "green" glare was predicted to be received at the residence in the early morning and late afternoon from late September to early March for an average of less than 5 minutes per day with the longest daily duration during this time period being 10 minutes. From late October to early February, yellow glare (glare with potential for after image) was predicted to be received at the residence in the early morning and late afternoon from late October to early January for an average of approximately 2 minutes per day with the longest daily duration during this time period being 4 minutes. The Glare Analysis Report did not assess the potential for glare to be received on local roads near the Project site.

Due to the calculated limited exposure of viewers to Project-generated glare (including the local rural residence located north of the Project site and near the intersection of 5$^{th}$ Avenue/7$^{th}$ Avenue) and because the glare resulting from the proposed single-axis tracking array occurs during early-morning and late-afternoon backtracking when sun altitude angles are no greater than one degree above the horizon (mimicking natural glare from the sun at sunrise and sunset), Project-generated glare from proposed solar panels would result in less than significant impacts that would not adversely affect daytime views in the area. In addition, and due to the assumed low public use of roadways along the perimeter of the proposed solar facility (and related low exposure of mobile viewers to project-generated glare while travelling parallel to the solar facility, Project-generated glare from proposed solar panels would result in less-than-significant impacts to local road users. While impacts were determined to be less than significant, consistent with the recommendations from the Glare Analysis Report (see Appendix C of Appendix D), it is recommended that the Applicant/Project operator modify the panel backtracking strategy to avoid shallow backtracking angles in the early morning or late afternoon during Project operations. The final backtracking strategy shall be reviewed and approved by the Riverside County Airport Land Use Commission. The Glare Analysis Report should be supplemented with analysis of final backtracking strategy to ensure that a reduction in predicted glare to be received by the identified residence would be achieved. The final backtracking strategy shall be noted on Project plans and/or in a post-construction compliance report to be provided to the local Airport Land Use Commission. The Palo Verde Mesa Solar Project similarly concluded that impacts related to glare would be **less than significant**, but specified the implementation of a BMPs including use of non-specular conductors with non-reflective finishes.

***Threshold e: Would the project expose residential property to unacceptable light levels?***

*LESS THAN SIGNIFICANT (CONSTRUCTION AND OPERATION).*

The closest off-site sensitive receptor to the Project site is a residence approximately 175 feet north of the Project Boundary, located along 5th Avenue. As previously assessed under Threshold "d," construction lighting would include only what is needed to provide a safe workplace, and lights would be focused downward, shielded, and directed toward the interior of the site to minimize light exposure outside the

construction area, consistent with County Ordinance 655. During operations, a limited number of lighting fixtures would be installed at key locations (i.e., at access gates, on-site substation, and O&M building and entrance to the BESS) and would be controlled via switch or motion. For these lighting sources, lights would be shielded and directed downward. Further, the on-site substation, energy storage structures, and O&M building are not located near permanent viewers. While the nearest residence to the Project is located north of the Project boundary, it is located approximately 2 miles away from the substation, energy storage structures, and O&M building. Therefore, because of the distance between the nearest residence and lighting locations during operations, and the use of shielded lighting for both construction and operation, the Project would not expose residential property to unacceptable light levels. Therefore, impacts would be less than significant. Similarly, the Palo Verde Mesa Solar Project concluded that impacts related to lighting would be **less than significant** through implementation of a lighting plan.

## Cumulative Impacts

**Geographic Scope**. The geographic scope of the cumulative analysis for aesthetics-related impacts would be all cumulative projects identified in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario. This geographic area was selected because identified projects are within the viewshed of the Project (and/or have contributed the altered desert landscape) and receptors in the area could be exposed to views of all identified projects.

**Cumulative Impacts**. Although numerous existing cultural modifications are visible along the I-10 corridor and in the Blythe area of unincorporated Riverside County (transmission lines; substations; solar projects; 4-wheel drive tracks; widely scattered commercial buildings, dilapidated structures, and roadside signs; and a few agricultural operations), the large scale of the open desert panoramas impart an overall general impression of a relatively unimpaired, isolated desert landscapes. The cumulative scenario includes many large-scale solar plants 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 once relatively undeveloped desert landscape into a more industrialized appearance. In some viewing cases, the visibility and apparent scale of the projects would be diminished somewhat by favorable topographic relationships and vegetative screening. For other viewing opportunities, some projects would appear reduced in visual prominence due to their viewing distances and low angle of view. In still other cases, projects 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.

As a result, the Project in combination with the several surrounding energy projects would result in significant cumulative visual impacts when viewed by sensitive viewing populations along I-10, from nearby residences, and in the surrounding mountains and wilderness. Impacts would result from the introduction of moderate visual contrast associated with discordant geometric patterns in the landscape; large-scale, built facilities with industrial character; unnatural lines of demarcation in the landscape; inconsistent color contrasts; and visible night lighting within the broader area. For many travelers along I-10, the scenic experience would be degraded due to visible solar development in the landscape. Overall, the Project combined with the cumulative projects would result in a significant cumulative impact on visual resources. Although the Project would implement **APM-VR-1** and **APM-VR-2** and **MM- VIS-1**, which would reduce the severity of the Project's impacts to visual resources, the Project's contribution to the significant cumulative impact would remain cumulatively considerable. This is different from the Palo Verde Mesa Solar Project, which determined there would be no adverse cumulative impacts and no mitigation would be required. Whereas the Palo Verde Mesa Solar Project concluded that the incremental effects of the project in combination with impacts of other cumulative projects would not have an adverse

impact on visual resources due to the topography, public views, and visibility, the updated analysis for the Proposed Project determined that impacts would be cumulatively considerable given the of visible project components and degree of change to the existing landscape.

## 3.2.4 Applicant Proposed Measures

The following Applicant Proposed Measures (APMs) are considered as part of the project description, see Chapter 2 and would be incorporated into the design of the Project.

**APM-VR-1: Lighting Control.** Consistent with safety and security considerations, the Applicant will design and install all permanent exterior lighting such that (a) lamps and reflectors are not visible from beyond the Project site, including any off-site security buffer areas; (b) lighting shall not cause excessive reflected glare; (c) direct lighting shall not illuminate the nighttime sky, except for required Federal Aviation Administration aircraft safety lighting (which shall be an on-demand, audio-visual warning system that is triggered by radar technology); (d) illumination of the Project and its immediate vicinity shall be minimized; (e) skyglow caused by Project lighting will be avoided; and (f) the lighting shall comply with local policies and ordinances. All permanent light sources shall be below 2,500 Kelvin color temperature (warm white) and shall have cutoff angles not to exceed 45 degrees of nadir.

**APM-VR-2: Surface Treatment of Project Structures/Buildings.** The Applicant will treat the surfaces of all non-temporary, large Project structures and buildings (O&M building, inverters, electrical enclosures, transmission line poles and conductors) visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors; (b) their colors and finishes do not create excessive glare; and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

**APM-AIR-1** *See full text in Chapter 2, Project Description.*

### Mitigation Measures

The following mitigation measure was developed to substantially lessen the significant effects to aesthetics expected to result from the construction, operation, maintenance, and decommissioning of the Project.

**MM-VIS-1:** **Project Design.** To the extent possible, the Applicant or Project owner /operator shall implement proper design fundamentals to reduce the visual contrast to the landscape. These primarily focus on the reduction of unnecessary disturbance. Design strategies to address these fundamentals may include the following:

- The boundaries of all areas to be disturbed shall be delineated with stakes and flagging before construction, in consultation with the Designated Biologist and County Visual specialist.
- Spoils and topsoil where feasible shall be stockpiled in disturbed areas approved by the Designated Biologist.
- Project vehicles and equipment shall be confined to the flagged areas.
- Where removal of all vegetation is unnecessary, vegetation along roadways and boundaries of other disturbed areas shall be scalloped (refers to incorporating irregular (non-straight) edges of vegetation to make edges/transitions between managed and non-managed areas appear more natural) and feathered (refers to

thinning edges of vegetation to make transitions from vegetated to non-vegetated area softer and less abrupt) to reduce the hard line visual impact.

- New and existing roads that are planned for construction, widening, or other improvements:
  - shall not extend beyond the minimum necessary and shall be flagged as described above.
  - All vehicles passing or turning around shall do so within the planned impact area or in previously disturbed areas.
  - Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged or staked) before the onset of construction.
- 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.

***Significance after Implementation***

Implementation of **APM-VR-1** and **APM-VR-2** would further reduce less-than-significant impacts to visual resources at 5$^{TH}$ Avenue and Buck Boulevard (i.e. KOP 3 and KOP 5). In addition to **APM-VR-1** and **APM-VR-2**, the Project would implement **MM-VIS-1**, which would reduce the severity of the Project's impacts to visual resources at 5$^{TH}$ Avenue and Buck Boulevard (i.e. KOP 3 and KOP 5). However, the Project would continue to have a significant and unavoidable impact to visual resources after implementation of mitigation.

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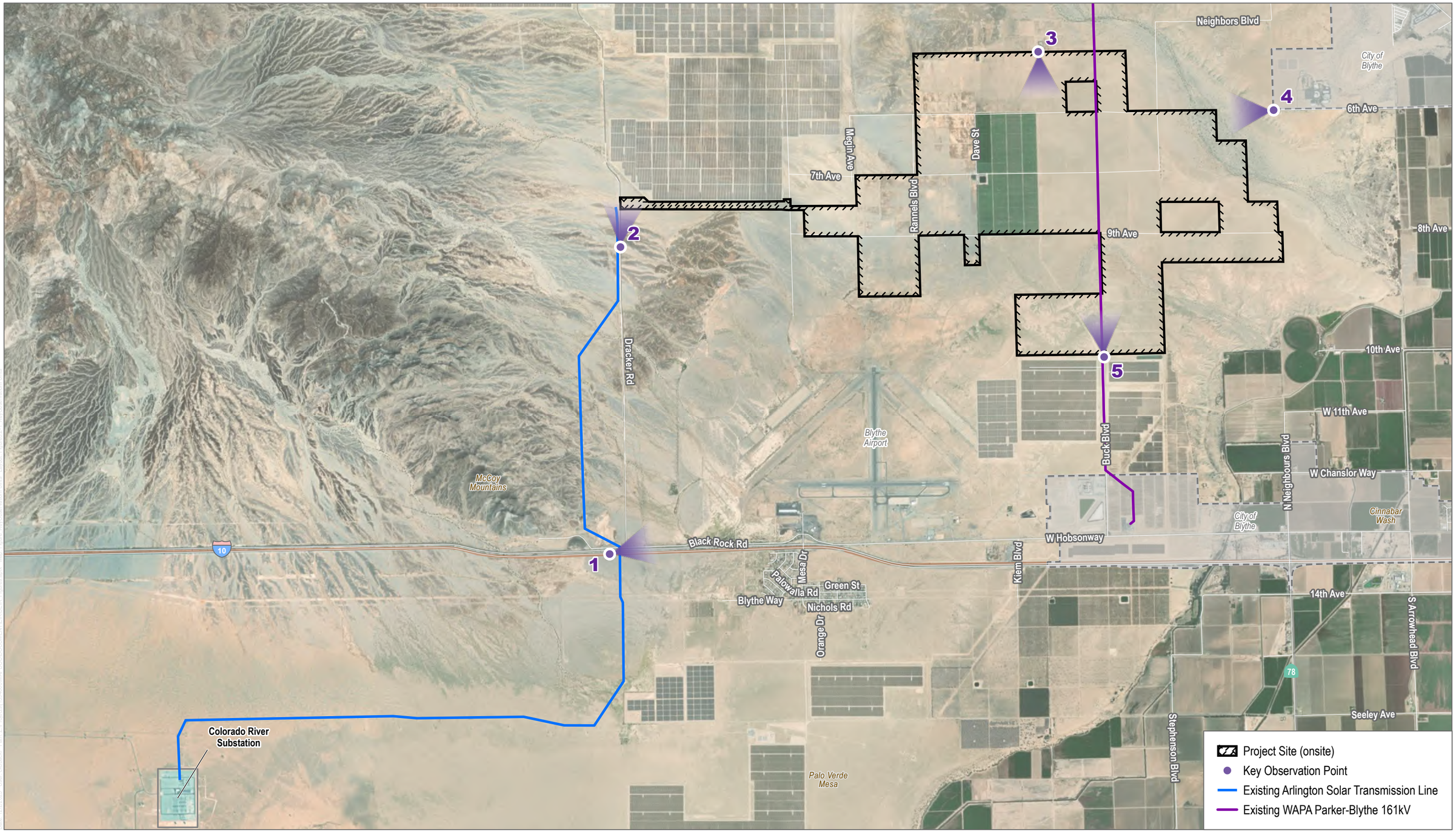
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SOURCE: Maxar 2023; Riverside County 2015; BLM 2022

DUDEK

N

0 2,200 4,400 Feet

**FIGURE 3.2-1**

Key Observation Points

Grace Solar Energy Center

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KOP 1: Interstate 10 (Eastbound)



KOP 2: Dracker Boulevard

**FIGURE 3.2-2**

Key Observation Points 1 and 2: Existing View

Grace Solar Energy Center

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KOP 3: 5th Avenue



KOP 4: 6th Avenue

**FIGURE 3.2-3**

Key Observation Points 3 and 4: Existing View

Grace Solar Energy Center

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KOP 5: Buck Boulevard

**FIGURE 3.2-4**

Key Observation Point 5: Existing View

Grace Solar Energy Center

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Existing Conditions




Proposed Conditions

**FIGURE 3.2-5**

Key Observation Point 1: Existing and Proposed Conditions

Grace Solar Energy Center

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Existing Conditions




Proposed Conditions

**FIGURE 3.2-6**

Key Observation Point 2: Existing and Proposed Conditions

Grace Solar Energy Center

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Existing Conditions




Proposed Conditions

**FIGURE 3.2-7**

Key Observation Point 3: Existing and Proposed Conditions

Grace Solar Energy Center

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Existing Conditions




Proposed Conditions

**FIGURE 3.2-8**

Key Observation Point 4: Existing and Proposed Conditions

Grace Solar Energy Center

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Existing Conditions




Proposed Conditions

**FIGURE 3.2-9**

Key Observation Point 5: Existing and Proposed Conditions

Grace Solar Energy Center

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# 3.3 Agriculture and Forest Resources

This section includes an analysis of the impacts to agriculture and forest resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning of the Grace Solar Center project (Project). The analysis in this section describes the applicable regulations, presents an overview of existing conditions that influence agriculture and forestry, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts to agriculture and forest resources.

Information contained in this section is based on publicly available data and reports from the County of Riverside (County) and the California Department of Conservation (DOC), as well as the following:

**Appendix E** Land Evaluation and Site Assessment for the Grace Solar Energy Center, prepared by Dudek (2025).

## 3.3.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

**Federal Farmland Protection Policy Act.** The Farmland Protection Policy Act (FPPA) (7 USC Section 4201 et seq.) aims to reduce federal programs' contribution to the unnecessary and irreversible conversion of farmland to non-agricultural uses. It additionally directs federal programs to be compatible with state and local policies for the protection of farmland. Under the FPPA, the term "farmland" includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland that is subject to FPPA requirements does not have to be currently used as cropland. It can be forestland, pastureland, or other land but not urban and built-up land or a water source. FPPA ensures that, to the extent possible, federal programs are administered to be compatible with state and local units of government, and private programs and policies to protect farmland.

### State Laws, Regulations, and Policies

**California Land Conservation Act of 1965 (Williamson Act).** The purpose of the Williamson Act is to preserve California's agricultural lands from urbanization. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under a land conservation contract (known as a Williamson Act contract). The Williamson Act program is administered by the California DOC, in conjunction with local governments that administer the individual contract arrangements with landowners. Under the Williamson Act, contracts restrict specific parcels of land to agricultural and open space uses for a minimum of 10 years. In return, the land is taxed at a rate based on the actual use (i.e., agricultural production) as opposed to its unrestricted market value. Each year the contract automatically renews unless a notice of nonrenewal or cancellation is filed (DOC 2024). Pursuant to the provisions of Government Code Section 51243(b), the contract is binding upon, and inures to the benefit of, all successors in interest of the owner. Additionally, the contract is binding until its expiration and/or nonrenewal, or until a property owner petitions the County Board of Supervisors to grant cancellation and the County Board of Supervisors grants cancellation pursuant to procedures enumerated in Government Code Section 51280 et seq.

California Government Code Section 51238 states that, unless otherwise decided by a local board or council at a noticed public hearing, the erection, construction, alteration, or maintenance of electric and communication facilities (among other types of uses not relevant here), are compatible uses within any Agricultural Preserve. There are no parcels under Williamson Act Contracts within the Project Boundary and therefore, no agricultural preserves.

**Farmland Mapping and Monitoring Program.** The California DOC established the Farmland Mapping and Monitoring Program (FMMP). The purpose of the FMMP is to identify important statewide maps of agricultural lands and provide a database to record and report changes of the agricultural lands. The FMMP produces Important Farmland Maps, which include resource quality (soils) and land use information updated every 2 years. The maps are updated with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland (DOC 2023). The following agricultural categories are mapped:

- **Prime Farmland.** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance.** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland.** Farmland or lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.
- **Farmland of Local Importance.** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory board committee.
- **Grazing Land.** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

The most recent agricultural land conversion data available for Riverside County (County) are from the 2-year period from 2016 to 2018, which is shown below in Table 3.3-1.

**Table 3.3-1. Riverside County Agricultural Land Conversion 2016 to 2018**

| Land Use Category | Total Acreage Inventoried | | 2016 to 2018 Acreage Changes | | | |
|---|---|---|---|---|---|---|
| | 2016 | 2018 | Acres Lost (-) | Acres Gained (+) | Total Acreage Changed | Net Acreage Changed |
| Prime Farmland | 117,486 | 116,926 | 2,204 | 1,644 | 3,848 | -560 |
| Farmland of Statewide Importance | 43,757 | 43,610 | 629 | 482 | 1,111 | -147 |
| Unique Farmland | 32,566 | 32,121 | 1,206 | 761 | 1,967 | -445 |

**Table 3.3-1. Riverside County Agricultural Land Conversion 2016 to 2018**

| Land Use Category | Total Acreage Inventoried | | 2016 to 2018 Acreage Changes | | | |
|---|---|---|---|---|---|---|
| | 2016 | 2018 | Acres Lost (-) | Acres Gained (+) | Total Acreage Changed | Net Acreage Changed |
| Farmland of Local Importance | 226,029 | 221,201 | 7,881 | 3,053 | 10,934 | -4,828 |
| Grazing Land | 110,202 | 109,857 | 456 | 111 | 567 | -345 |
| **Agricultural Land Subtotal** | **530,040** | **523,715** | **12,376** | **6,051** | **18,427** | **-6,325** |

**Source:** DOC 2018.

As described in the table above, for the 2-year period from 2016 to 2018, the County had a decrease of 6,325 acres in the total amount of active agricultural land mapped by the FMMP.

## Local Laws, Regulations, and Policies

**Riverside County General Plan.** The County's General Plan includes policies to protect agricultural resources in the Land Use Element and the Multipurpose Open Space Element. The purpose of the Agriculture Resources section in the Land Use Element is to identify and preserve areas where agricultural uses are the long-term desirable use and minimize potential conflicts between agricultural and non-agricultural areas. The following policies included in the Land Use Element generally apply to the Project with regards to agricultural resources (County of Riverside 2021a).

- **Policy LU 7.1.** Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts.
- **Policy LU 7.4.** Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.
- **Policy LU 20.1.** Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.
- **Policy LU 20.2.** Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses.
- **Policy LU 20.4.** Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.
- **Policy LU 20.7** Adhere to Riverside County's Right-to-Farm Ordinance.

The purpose of the Agriculture Resources section of the Multipurpose Open Space Element of the Riverside County General Plan is to protect and preserve agricultural lands. The following policy is applicable to the Project (County of Riverside 2015a).

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

**Palo Verde Valley Area Plan.** The purpose of the Land Use section in the Palo Verde Valley Area Plan is to strengthen and/or preserve the identity, character, and features unique to the Palo Verder Valley area. The following policy relates to the Project with regards to agricultural resources (County of Riverside 2021b).

- **Policy PVVAP 4.1.** Protect farmland and agricultural resources in Palo Verde Valley through adherence to the Agricultural sections of the General Plan Multipurpose Open Space and Land Use Elements.

**Riverside County Ordinance No. 509, Establishing Agricultural Preserves**. Agricultural preserves are lands identified for, and devoted to, agricultural and compatible uses and are established through resolutions adopted by the County Board of Supervisors. The purpose of this ordinance is to ensure that incompatible uses are not allowed within established agricultural preserves. It sets forth the powers of the County in establishing and administering agricultural preserves pursuant to the California Land Conservation Act of 1965 (Government Code Section 51200, et seq.). The ordinance also establishes "Uniform Rules" for the agricultural and compatible uses allowed in an agricultural preserve. Land uses not covered in the ordinance are prohibited within agricultural preserves. As mentioned, there are no parcels under Williamson Act Contract within the Project site and therefore no agricultural preserves.

**Riverside County Ordinance No. 625, the "Right to Farm" Ordinance.** The purpose of the Ordinance No. 625 is to reduce the loss of agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. It was enacted to conserve, protect, and encourage the development, improvement, and continued viability of agricultural land.

**Riverside County Ordinance No. 348.4705.** 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 (CUP) in the various zone classifications, including agricultural districts. Ordinance No. 348.4705 was enacted at the same time as and implements General Plan Policy LU-15.15, which states: "Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants in the County of Riverside." The private lands associated with the Project are located primarily within lands zoned as W-2-10 Controlled Development Areas, one parcel zoned as A-1-10 Light Agriculture, and a few parcels zoned as N-A Natural Assets (Figure 2-5, Riverside County Zoning). Solar is permitted in all three zones with a CUP.

**Resolution No. 84-526, Riverside County Rules and Regulations Governing Agricultural Preserves.** These rules and regulations were adopted pursuant to California Government Code Section 51231 to govern agricultural preserve procedures within the County and to aid in implementation of the Williamson Act. The rules and regulations address procedures for the initiation, establishment, enlargement, disestablishment, and diminishment of agricultural preserves. While Ordinance No. 509 specifies compatible uses within agricultural preserves, Resolution No. 84-526 specifies local rules for processing agricultural preserve applications.

The Project is not located on parcels under Williamson Act Contract, and therefore no agricultural preserves.

## 3.3.2 Environmental Setting

The economy of the County is strongly based on agriculture. According to the most recent annual Riverside County Agricultural Production Report (2023), the County produced an estimated total gross value of

$1,540,340,000 of agricultural products in 2023. The top 10 commodities for the County in 2023 are shown below in Table 3.3-2 (County of Riverside 2023).

**Table 3.3-2. Top 10 Commodities for Riverside County 2023**

| 2023 Ranking | Commodity | Total Value (USD) |
|---|---|---|
| 1 | Nursery Stock | $358,175,000 |
| 2 | Dates | $132,480,000 |
| 3 | Eggs | $106,600,000 |
| 4 | Alfalfa | $102,074,000 |
| 5 | Avocados | $82,833,000 |
| 6 | Lemons | $81,754,000 |
| 7 | Bell Peppers | $77,672,000 |
| 8 | Milk | $62,646,000 |
| 9 | Table Grapes | $45,010,000 |
| 10 | Turf Grass | $37,100,000 |

**Source:** County of Riverside 2023.

## Site Description and Vicinity

The Project is located within the Palo Verde Valley Area Plan Boundary of the County General Plan. Land uses near the Project site include transportation (I-10, and Blythe Airport), active and fallow agricultural lands, renewable energy (both existing and proposed), energy transmission lines, off-highway vehicle (OHV) routes, and wilderness areas. Rancho Ventana RV Resort and Mesa Verde Community are the closest communities located approximately 1.7 miles northeast from the Project and 1.2 miles east of the transmission line, respectively. Much of the land surrounding the Project is already developed for solar facilities (Figure 2-3, Energy Projects Along I-10). This area of the county is recognized as having solar resources suitable for renewable energy development.

The Project (specifically the solar site) would be constructed within private land designated as Open Space-Rural and Agriculture in the County's General Plan and zoned W-2-10 Controlled Development Areas, A1-1-10 Light Agriculture, and N-A Natural Assets (Figure 2-5, Riverside County Zoning). The transmission line is proposed on U.S. Department of Interior, Bureau of Land Management (BLM) administered lands located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects, as designated by the Desert Renewable Energy Conservation Plan (DRECP) (see Figure 2-2, DRECP Renewable Energy Focus Areas). The Project site is not designated as forest land or zoned as forest land, timberland, or lands zoned for timberland production. There is no land in the vicinity of the Project that is zoned as forest land, timberland, or lands zoned for timberland production.

The Project site does not currently support active agricultural activity. Private lands within the Project site are either undeveloped or fallow and designated by the DOC as Farmland of Local Importance. Based on available U.S. Department of Agriculture Natural Resources Conservation Service crop data agricultural operations have not occurred on most of the site, except for the inactive lemon orchard, since at least 2007, which is the last year crop data for the Project site are available (U.S. Department of Agriculture 2023). In its existing condition, the Project site consists of fallow and undeveloped land. Former agricultural

practices have modified areas of desert pavement [1]. There are no buildings or canals on the site. The fallow land onsite is evidenced by remnant agricultural disturbances, such as crop lines (Appendix C, Biological Resources Technical Report).

Although the immediate surrounding area is not currently used for agricultural purposes, nor have been used for agricultural purposes for several years, there is an inactive orchard comprised of dead trees in the middle of the Project, and active agricultural operations exist east of the Project site extending to the Colorado River.

The Project site does not currently support active agricultural activity and is not located on lands subject to active Williamson Act contracts.

## 3.3.3 Impact Analysis

### Methodology

Analysis of impacts to agricultural and forest resources are assessed by comparing existing conditions to changes that could occur associated with implementation of the Project and the preparation of a Land Evaluation and Site Assessment (LESA). The LESA methodology provides a framework for assessing both the physical characteristics of the land and its importance within the regional agricultural context The analysis evaluates if the Project would directly or indirectly result in conversion or loss of agricultural, timberland or forest resources. The County General Plan, Palo Verde Valley Area Plan, and aerial photographs were reviewed along with state farmland maps to evaluate known agricultural, timberland, and/or forest resources located within the Project area. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section II of Appendix G to the California Environmental Quality Act (CEQA) Guidelines addresses typical adverse effects to forestry and agricultural resources and includes the following questions to evaluate a project's impacts on forest and agricultural resources. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

[1] Desert pavement is a naturally formed desert surface covered with closely packed, interlocking angular or rounded rock fragments of pebble and cobble size. Desert Pavement can be extremely old, taking thousands of years to develop and typically has little to no vegetation cover. It is a common non-erodible surface material in its natural form.

Significance thresholds are set forth in the County's Environmental Assessment Checklist, are derived from Section II of Appendix G to the State CEQA Guidelines (listed above), and state that the proposed project would have a significant impact on forestry or agricultural resources if construction and/or operation of the project would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve.

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

d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

e) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).

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

g) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use.

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Williamson Act Contract*

The Project site does not include land currently enrolled under California Land Conservation Act contracts (Williamson Act contracts) between the current property owner and the County pursuant to the provisions of Government Code Sections 51240 et seq. Nor does the site contain land located within a Riverside County Agricultural Preserve. Therefore, the Project would not conflict with a Williamson Act contract or land within a Riverside County Agricultural Preserve and there would be no impact. Therefore, this issue is not discussed further in this document.

### *Forest Land and Timberland*

The Project site is not designated as forest land or zoned as forest land, timberland, or lands zoned for timberland production (per PRC Section 12220[g]; PRC Section 4526; and Government Code Section 51104[g]). There is no land in the vicinity of the Project site that is zoned as forest land, timberland, or lands zoned for timberland production. Therefore, implementation of the Project would not result in the loss or conversion of forest land and there would be no impact. This issue is not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts to agriculture and forest resources per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR analyzed a similar project boundary as the Proposed Project, which included the parcels that the inactive lemon orchard is located on. The Palo Verde Mesa Solar Project EIR included the lemon orchard parcels designated as Prime Farmland, Unique Farmland, and/or Farmland of Statewide Importance, and convert the land to non-agricultural use, however, implementation of **MM-AG-1** provided various options for the project to reduce the severity of the impact of the temporary loss of Important Farmland, and impacts would be less than significant. The Palo Verde Mesa Solar Project EIR determined that although the project would be located on land zoned for agricultural use, which requires a conditional use permit (CUP). As such, the project was conditionally approved with mitigation measure MM-AG-1 to reduce project impacts to less than significant. The Palo Verde Mesa Solar Project EIR determined that the project would not create use conflicts with agricultural use or otherwise interfere with use of agriculturally zoned property adjacent to the Project area and would not lead to a determination that existing uses would be deemed a nuisance. Therefore, impacts was less than significant with mitigation incorporated.

***Threshold a: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?***

*LESS THAN SIGNIFICANT.* There are typically no DOC FMMP designations on BLM lands. However, a majority of the Project site, including the solar site and a portion of the Phase 2 transmission line, is on private land and is mapped by the DOC FMMP (Figure 3.3-1, ~~Farmland Monitoring and Management Plan~~ FMMP Designations). Table 3.3-3 includes the FMMP designations for the Project Site.

**Table 3.3-3. FMMP Designations on the Project Site**

| Designation | Definition | Acreage |
|---|---|---|
| Farmland of Local Importance (L) | Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. | 2,853 |
| Other Land (X) | Land not included in any other mapping category. | 339 |
| Area Not Mapped (Z) | Area which falls outside of the NRCS soil survey. Not mapped by the FMMP. | 196 |
| Prime Farmland (P) | Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. | 145 |
| Farmland of Statewide Importance (S) | Farmland similar to Prime Farmland but with minor shortcomings. | 89 |
| Unique Farmland (U) | Farmland of lesser quality soils used for the production of the state's leading agricultural crops. | 83 |
| | **Total** | 3,705 |

**Notes:** FMMP = Farmland Monitoring and Management Plan; NRCS = Natural Resources Conservation Service

Accordingly, the Project would convert some land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (i.e., FMMP-designated Farmland) to a non-agricultural use. The conversion of land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is less than 9% of the entire project boundary. As stated above, in Section 3.3.1, Prime

Farmland and Farmland of Statewide Importance are, by definition, irrigated lands and Unique Farmland is, by definition, cropped. Specifically, land must have been used for irrigated agricultural production or cropped at some time during the 4 years prior to the mapping date (DOC 2023). While a portion of the project site is designated as Prime Farmland, Farmland of Local Importance, and Unique Farmland by the DOC FMMP, productive agricultural operations are no longer present on site. The site contains an inactive lemon orchard with wilted or dead trees. The lemon orchard has been inactive since 2023, with the last irrigation in October 2023 and the last harvest in December 2023. Water supply to the inactive lemon orchard was cancelled approximately one year ago by the previous landowner. Due to the high cost of water itself and cost to convey water to the site, the landowner determined it was no longer economically feasible to continue paying for onsite use. Due to the prohibitively high cost of water, it can be more economical for landowners to fallow land and lease or sell the land to other users. Additionally, the land surrounding the inactive orchard are fallow lands that are no longer actively irrigated or under active cultivation, designated as Farmland of Local Importance, Other Land, and Area not Mapped. The nearest active agricultural operations are approximately 0.5 mile from the project boundary.

A Land Evaluation and Site Assessment (LESA) was conducted for the Project (Appendix E) to evaluate the agricultural significance of the onsite resources. The LESA utilizes factors such as soil type, soil quality, water availability, project size, surrounding agricultural uses, and surrounding protected agricultural uses to determine if the Project site is considered a significant agricultural resource. As concluded in Appendix E, the final LESA score for the Project site is 31.25, which falls within the 0-39, "Not Considered Significant" category under the California LESA Model. This score reflects the site's low agricultural viability due to low soil quality, inactive irrigation, and surrounding non-agricultural uses. Further, the Project is not a permanent land use and the County's decommissioning requirements ensure the land will be restored to pre-project conditions at the end of the project's useful life. Thus, in addition to the Project not converting active agricultural land, the Project would not result in the permanent conversion of the land to a non-agricultural use. Therefore, unlike the Palo Verde Mesa Solar Project EIR, the Proposed Project does not require mitigation, as the impact would be **less than significant**.

***Threshold b: Would the project conflict with existing agricultural zoning or agricultural use?***

*LESS THAN SIGNIFICANT.* The majority of the Project site, approximately 3,310 acres, would be located on private lands under the County's jurisdiction. One private parcel associated with the Project, specifically the Assessor's Parcel Numbers (APNs) 821-090-018 is zoned as A-1-10 Light Agriculture. Although one parcel is within the County's Light Agricultural Zone, agricultural operations are not currently occurring on the site. As previously noted, based on available U.S. Department of Agriculture Natural Resources Conservation Service crop data, agricultural operations have not occurred on most of the site, except for the inactive lemon orchard, since at least 2007, which is the last year crop data for the Project site are available (U.S. Department of Agriculture 2023).

***Zoning***

Private lands associated with the Project are zoned W-2-10 Controlled Development Areas, A-1-10 Light Agriculture, and N-A Natural Assets (Figure 2-5). Based on the County zoning data, the solar site includes approximately 3,073 acres zoned W-2-10, 64 acres zoned N-A, and 155 acres zoned A-1-10 (excluding existing road rights of way) [2]. The proposed Phase 2 transmission would be located on approximately 302 acres zoned N-A and 31 acres zoned W-2-10. In accordance with County Ordinance No. 348, solar projects on lots 10 acres or larger are permitted through a Conditional Use Permit (CUP) within the A-1-10 Light

[2] The County zoning data includes gaps between some parcels. The gaps account for the difference between total zoning acreage and total Project acreage.

Agricultural, N-A Natural Assets, and W-2-10 Controlled Development Areas zones (County of Riverside 2021a). The Applicant is seeking a minimum 40-year amended CUP for the construction, operation, and decommissioning of the proposed solar facility and transmission lines, as well as an amended Public Use Permit (PUP) for portions of the transmission lines that would traverse County roads. Therefore, the Project would not conflict with the existing zoning designations and no zoning amendments are required. Impacts would be **less than significant**.

***Agricultural Use***

As discussed in above in Section 3.3.2, Environmental Setting, the agricultural fields on most of the site, except for the inactive lemon orchard, are primarily fallow and undeveloped and have not been actively cultivated since 2007. Therefore, the Project would not directly conflict with a current agricultural use. Indirect impacts on active agricultural uses can include competition for water resources, increase in dust, and soil erosion. Water use for construction is short-term and for operation would be minimal. The Project is not anticipated to cause a significant increase in demand for water resources that would adversely affect water availability for nearby agricultural operations. There is potential for soil erosion and increased dust to occur during construction, but best management practices, to be detailed in the Project's construction stormwater pollution prevention plan (SWPPP) (**APM-WAT-1**), are anticipated to help with dust suppression and minimize erosion during ground-disturbing activities. Construction activities for the Project would be subject to stringent dust control requirements (including Mojave Desert Air Quality Management District (MDAQMD) Rules 402 and 403). MDAQMD Rule 402 does not allow dust that creates a nuisance to nearby populations, while Rule 403 requires dust control measures, such as wetting construction areas, wetting or covering stockpiles, monitoring fugitive dusts, limiting vehicle track-out, and for larger construction projects, monitoring. The Project would also include a weed management plan to prevent the spread of invasive weeds. Additionally, construction or operation of the Project would not directly or indirectly interfere with operations of the neighboring orchard. Therefore, impacts would be **less than significant** consistent with Palo Verde Mesa Solar Project.

***Threshold c: Would the project cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?***

*LESS THAN SIGNIFICANT.* Refer to Threshold "b" above regarding impacts from the construction and operation of the Project. The Project would cause development of non-agricultural uses within 300 feet of agriculturally zoned property but would not create significant impacts as an authorized use with a CUP and as explained above, the Project would not create use conflicts or otherwise interfere with use of agriculturally zoned property adjacent to the Project site.

The County's Right-to-Farm Ordinance (Ordinance No. 625) is designed to "conserve, protect and encourage the development, improvement and continued viability of agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the county's residents." It seeks to "balance the rights of farmers to produce food and other agricultural products with the rights of non-farmers who own, occupy or use land within or adjacent to agricultural areas." Thus, the County's Right-to-Farm Ordinance includes regulations to reduce the loss of agricultural resources in the county by limiting the circumstances under which agricultural operations may be deemed a "nuisance." It states that an agricultural activity that has been operating for more than 3 years on a site (and assuming it was not a nuisance at the time it began) cannot be later classified as a public or private nuisance due to "any changed condition in or about the locality." The ordinance prevents, for example, existing dairies from being targeted by odor complaints from residents of housing units constructed in the surrounding area three or more years after the dairy use began. Further, it requires buyers of properties within 300 feet of land zoned primarily for agricultural purposes to be given notice of the pre-existing

agricultural use and its right to continue. The Project does not include residential uses and would be a compatible use with the active agricultural lands in the vicinity. Agricultural activities in the Project vicinity and their related impacts would have no effect on the construction or operation of the proposed Project.

Moreover, the Project would be allowed as a conditional use on County lands zoned for agriculture and therefore would comply with Ordinance No. 348.4705. Overall, the Project would not conflict with County Ordinance No. 625, "Right-to-Farm," nor any other County Ordinances discussed in Section 3.3.1. The impact would be **less than significant** consistent with the Palo Verde Mesa Solar Project.

***Threshold d: Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?***

*LESS THAN SIGNIFICANT*. There are active agriculture uses approximately 0.5 mile east of the Project site, that would not be impacted by the Proposed Project.

Vehicle emissions can impact the health and survival of crops; however, increased vehicle emissions from Project construction and decommissioning would be temporary in duration and occur only during these activities (refer to Section 3.4, Air Quality, for a detailed discussion regarding vehicle emissions). They would not be of significant duration to have a significant impact on the life cycle of plants in the area.

Water for construction-related dust control and operations could impact water availability for agricultural uses; however, water use for the Project would not significantly adversely affect the adjacent farmers' share of the water supply. The Project is anticipated to use up to 600 acre-feet (AF) total during the approximately 28-month construction period. The annual operational water usage for PV panel rinsing and for sanitary needs at the O&M facility is expected to be up to approximately 2 AF per year (Appendix F, Water Supply Assessment). It is anticipated that water for construction and operation for the life of the Project (approximately 40 years) would be significantly less than water needed for potential agricultural uses. As the Project's water use for construction and operation is anticipated to be less than the water usage of potential agricultural production, the Project could result in an increase in water supply for surrounding agriculture. During construction of the Project, water would primarily be used for grading. During Project operations, water would be used for washing of solar panels, which is expected to occur up to once annually. Water for on-site maintenance purposes would likely be sourced from an existing underground dedicated water conveyance system with water sources via a local canal maintained by the water purveyor (refer to Section 3.11, Hydrology and Water Quality, for a detailed discussion regarding water resources).

Further, as described in the LESA analysis (Appendix E), Project's Zone of Influence, which is defined as that land near a given project, both directly adjoining and within a defined distance away, that is likely to influence, and be influenced by, the agricultural land use of the subject project site consists of approximately 34% agricultural uses, which received the lowest score of 0 for the Surrounding Agricultural Land Use Rating. As determined in the LESA analysis, the Project site is considered a less than significant agricultural resource. This reflects the site's low agricultural viability due to inactive irrigation since 2023, fallow conditions, and surrounding non-agricultural uses. These findings confirm that the Project would not create environmental changes that could indirectly result in conversion of other farmland to non-agricultural use.

The Project would not involve other changes in the existing environment, which may result in the conversion of other agricultural lands to non-agricultural uses. The Project furthermore would not interfere with neighboring agricultural operations. Therefore, the Project would result in **less-than-significant** impacts involving other changes in the existing environment, consistent with Palo Verde Mesa Solar Project.

## Cumulative Impacts

**Geographic Scope.** Agricultural cumulative impacts include the Project's impacts as well as those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario). The geographic scope for cumulative impacts is Riverside County as a whole. Riverside County ranks high on the list of California counties with respect to urbanization and loss of farmland. As stated in the General Plan EIR, for farmers, urban encroachment adversely affects the efficiency of remaining farming operations due to "increased air pollution, livestock predation by pets, crop diseases resulting from inadequate care of off-farm ornamental plants, restrictions on pesticide use and burning, and requirements to set aside on-farm buffer zones." At the same time, production costs increase due to rising land values, water scarcity, theft and vandalism of farm equipment, crop pilferage, road congestion, and personal injury liability resulting from trespassing on farms. By reducing the profitability of remaining farming operations, urban encroachment tends to have a ongoing effect, encouraging further losses of farms to urban development. Although growth in population is likely to decrease the amount of agricultural land in the County in the future, other factors, including availability of water also contribute to decreases in farmland.

The County General Plan designates 180,178 acres in the unincorporated county for agricultural uses under the "Agriculture" Foundation Component. The intent of the General Plan Agriculture Foundation Component and associated policies is to identify and preserve areas where agricultural uses are the long-term desirable use, as stated in the General Plan Principles; "Provide for the continued and even expanded production of agricultural products by conserving areas appropriate for agriculture and related infrastructure and supporting services." In addition, the intent of these policies is to minimize the conflicts between agricultural and urban/suburban uses. As noted in the General Plan EIR, the amount of land used for the agriculture production would be reduced as not all land used for agricultural production was classified in the General Plan within the Agriculture Foundation Component. The Project site is partially located within the Agriculture Foundation Component, where land use is designated as Agriculture and therefore was designated for long-term agriculture use under the General Plan. However, these parcels are fallow and have not been in active agricultural operation since at least 2007.

Continuing development within the county has resulted in the conversion of land currently used for agricultural production to urban and other land uses. This agricultural conversion has been a continuing trend in the County and has resulted in a net loss of 6,235 acres of agricultural land between 2016 and 2018 (see Table 3.3-1), which is approximately 1.2% of the County's total agricultural land inventory in 2018. Therefore, because 98.8% of the County's existing agricultural inventory was retained for agricultural use, impacts resulting from construction, operation, maintenance, and decommissioning of the Project would not result in a cumulative effect on agriculture when considered in combination with other past, present, or reasonably foreseeable future actions.

**Cumulative Impacts.** The majority of the Project site has not been in agricultural use since 2007, prior to the initiation of the Project. Additionally, due to the increasing cost of water and cost of energy to convey water to the site, the orchard property central to the site has ceased operations and has been fallowed. Further, as concluded in Appendix E, the final LESA score for the Project site is 31.25, which falls within the 0-39, "Not Considered Significant" category under the California LESA Model. This score reflects the site's low agricultural viability due to low soil quality, inactive irrigation, and surrounding non-agricultural uses. Therefore, implementation of the Project would not result in significant agricultural impacts resulting from construction, operation, maintenance, and decommissioning of the Project. As such,

Project impacts, in combination with other past, present, or reasonably foreseeable future actions would not be considered a significant cumulative impact.

As discussed above, the Project site does not include any lands under Williamson Act Contracts or agricultural preserves. Therefore, there would be no contribution to an existing cumulative impact on lands identified as agricultural preserves.

Also as discussed above, the Project site does not contain any forestry resources. Likewise, no lands in within the geographical scope of the cumulative impacts analysis contain forestry resources and/or are zoned for forest land (as defined in PRC Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). Therefore, the Project would not contribute to a cumulatively significant impact with respect to impacts due to a conflict with existing zoning for, or rezoning of, forest land and/or the conversion of forest land to non-forest use.

As discussed under Threshold "a," the Project would convert some land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use as defined by State CEQA Guidelines Appendix G Section II(a), the County's Environmental Assessment Checklist, and the FMMP. However, the conversion would occur on an inactive lemon orchard that does not support active agricultural operation or include an active water supply. Therefore, the Project would not contribute to a cumulatively significant impact with respect to land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. While Palo Verde Mesa Solar Project identified a less than significant cumulative impact with mitigation, the mitigation is not necessary for the Proposed Project.

As discussed under Threshold "b," the Project site is zoned W-2-10 Controlled Development Areas, A-1-10 Light Agricultural, and N-A Natural Assets. However, in accordance with County Ordinance No. 348, solar projects on lots 10 acres or larger are permitted through a CUP within these zoning designations (County of Riverside 2021a). Land use zoning on private parcels directly surrounding the Project site include N-A Natural Assets Zone, W-2-10 Controlled Development Area, A-1-10 Light Agriculture, and M-H Manufacturing Heavy. While adjacent development would have to adhere to County Ordinance No. 348, the County General Plan EIR identifies a significant cumulative agricultural impact due to conversion of designated farmlands, as well as encroachment on agricultural uses (County of Riverside 2015). However, the Project would not considerably contribute to these impacts.

As discussed under Threshold "c" above, the Project would cause development of non-agricultural uses within 300 feet of agriculturally zoned property; however, it would not create significant impacts as an authorized use with a CUP and due to minimal impacts to active agricultural operations during construction and operation. Similarly, other cumulative developments within the region have the potential to introduce non-agricultural uses within 300 feet of agriculturally zoned property. However, the Project and other cumulative developments within the County would be subject to the provisions of County Ordinance No. 625 and would not impact nearby agricultural operations. Therefore, the Project's impacts combined with those of nearby projects would not result in a cumulatively significant impact with respect to development of non-agricultural uses within 300 feet of agriculturally zoned property.

As discussed under Threshold "d" above, all private lands adjacent to the Project site are designated as Open Space-Rural and Agriculture in the Riverside County General Plan Land Use Element. Blythe Airport, located south of the Project site, is designated as Public Facilities. In terms of zoning, the private parcels to the north, east, and west of the Project site are zoned as N-A Natural Assets Zone and W-2-10 Controlled Development Area. The private parcels south of the Project site are zoned as N-A Natural

Assets Zone, W-2-10 Controlled Development Area, A-1-10 Light Agriculture, and M-H Manufacturing Heavy.

The Project is located on approximately 3,705 acres, of which approximately 3,310 acres is located on private lands and approximately 395 acres is located on land administered by the BLM. The 395-acre area on BLM-administered lands is located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects as designated by the Desert Renewable Energy Conservation Plan (DRECP). The Project includes the construction, operation, maintenance and decommissioning of a solar site and transmission lines. The solar site includes access roads, a collector substation, collector lines, Phase 1 transmission line, and battery energy storage. The solar site is located on private land. The 10.5-mile Phase 2 transmission line would include approximately 1.9 miles of new ROW then would use approximately 8.6 miles of the open circuit of the existing double-circuit Arlington transmission line for interconnection to the Colorado River Substation. The transmission line would also include access roads along the ROW. The Phase 2 transmission ROW is located primarily on lands administered by the BLM. The Project is isolated and does not include construction of infrastructure that would encourage further development in the area. Therefore, there are no components of the Project that could indirectly result in the conversion of nearby farmland to non-agricultural uses. As such, the Project's impacts combined with those of nearby projects would not result in a cumulatively significant impact with respect to other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use. These findings are consistent with Palo Verde Mesa Solar Project, except for not requiring mitigation due to the current status of the land being developed.

## 3.3.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following Applicant Proposed Measure (APM) is considered as part of the project description and would be incorporated into the design of the Project.

**APM-WAT-1** *See full text in Chapter 2, Project Description.*

### Mitigation Measures

No mitigation would be required.

## 3.3.5 References

County of Riverside. 2015a. "Multipurpose Open Space Element." Chapter 5 in *Riverside County General Plan*. Revised December 8, 2015. Accessed July 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf.

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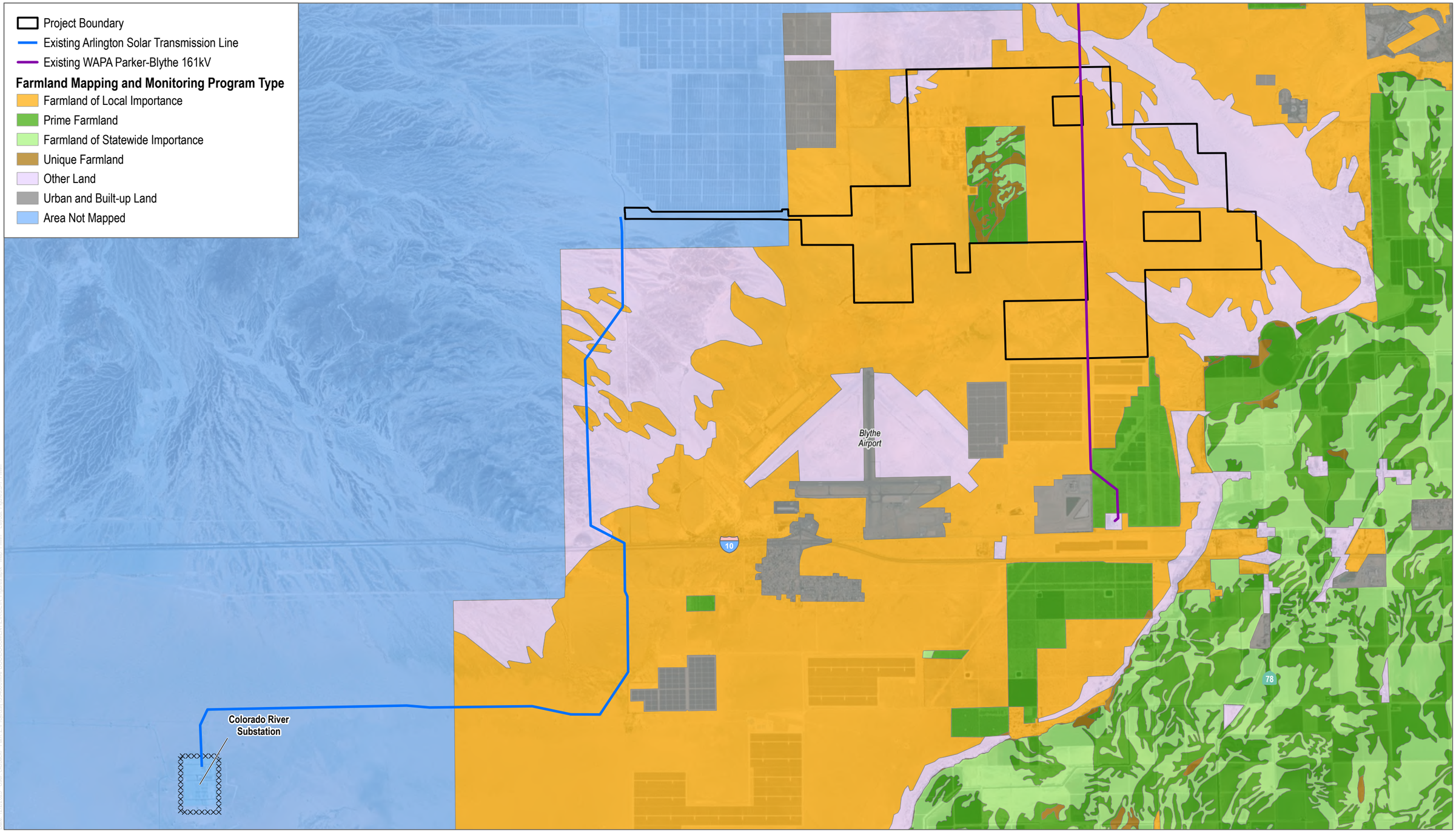
DOC. 2023. *2016–2018 California Farmland Conversion Report*. Accessed July 2024. https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2016-2018/FCR/FCR_1618_Report.pdf.

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U.S. Department of Agriculture. 2023. "CropScape – Cropland Data Layer" [interactive map application]. Accessed July 2024. https://nassgeodata.gmu.edu/CropScape/.

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SOURCE: Esri World Imagery (accessed 2024); Riverside County 2023; California Department of Conservation 2016

DUDEK

N

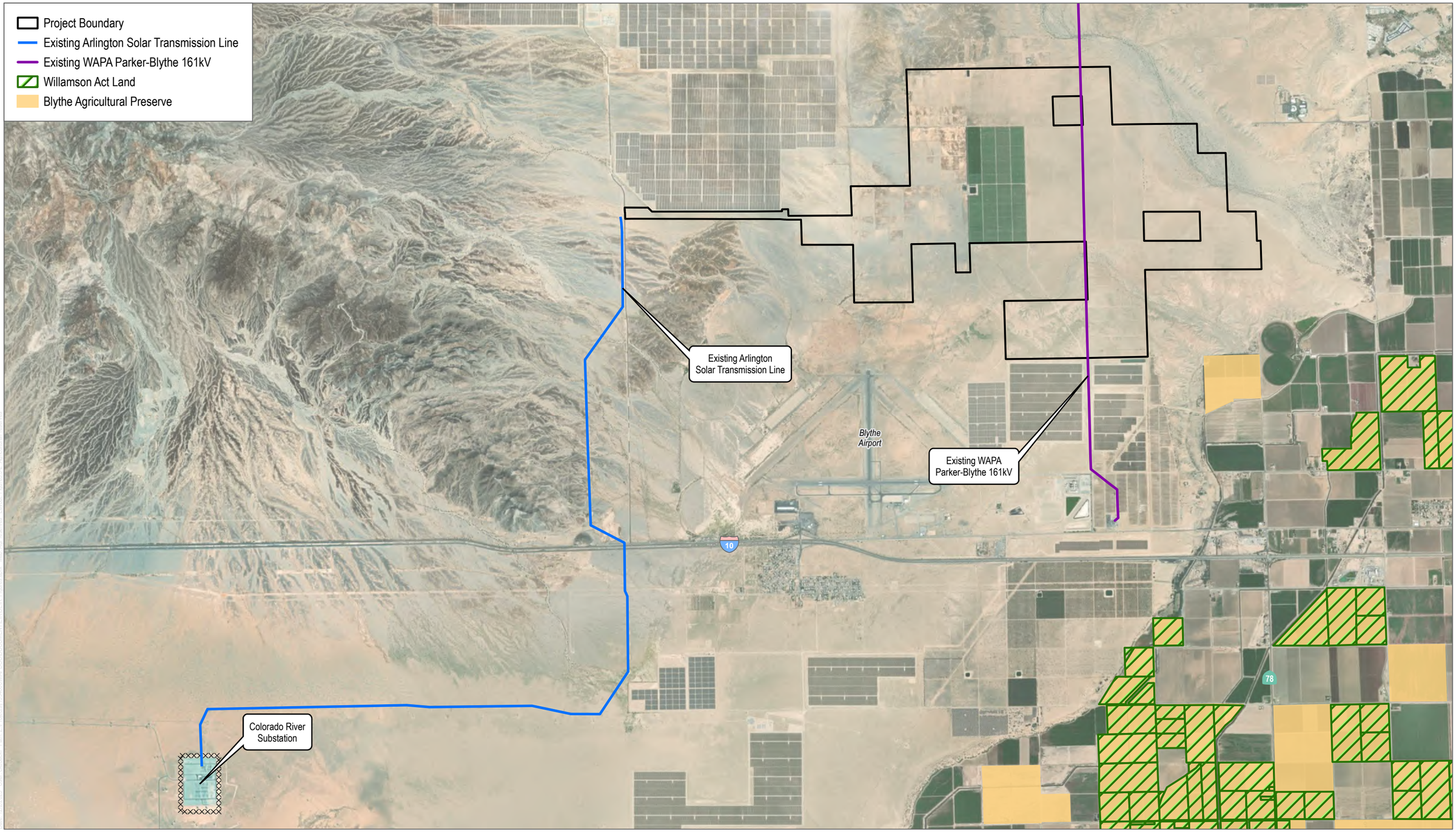
0 2,300 4,600 Feet

**FIGURE 3.3-1**

FMMP Designations

Grace Solar Energy Center

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SOURCE: Esri World Imagery (accessed 2024); Riverside County 2023; California Department of Conservation 2016

DUDEK

N

0 2,300 4,600 Feet

**FIGURE 3.3-2**

Agricultural Preserves

Grace Solar Energy Center

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# 3.4 Air Quality

This section includes an analysis of the impacts to air quality that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on the existing air quality in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to air quality, and includes mitigation measures (MMs) that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

Information contained in this section is based on publicly available data and reports from the California Air Resources Board (CARB), U.S. Environmental Protection Agency (EPA), and Mojave Desert Air Quality Management District (MDAQMD), as well as the following:

**Appendix G** Air Quality and Greenhouse Gas Emissions Technical Report for the Grace Solar Project, Riverside County, California, prepared by Dudek.

## 3.4.1 Regulatory Framework

The key federal, state, and local laws and regulations applicable to air quality are identified and summarized in this section. For more information on federal and state laws, regulations and policies, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

### Federal Laws, Regulations, and Policies

#### *Criteria Air Pollutants*

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric $O_3$ protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur dioxide ($SO_2$), particulate matter with an aerodynamic diameter less than or equal to 10 microns ($PM_{10}$), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for $O_3$, $NO_2$, $SO_2$, $PM_{10}$, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for $O_3$, $NO_2$, $SO_2$, $PM_{10}$, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames.

### *Hazardous Air Pollutants*

The 1977 federal Clean Air Act amendments required EPA to identify National Emission Standards for HAPs to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

### *Federal General Conformity*

Under Section 176(c)(1) of the federal Clean Air Act, federal agencies that "engage in, support in any way or provide financial assistance for, license or permit, or approve any activity"[1] must demonstrate that such actions do not interfere with state and local plans to bring an area into attainment with the NAAQS. The program by which a federal agency determines that its action would not obstruct or conflict with air quality attainment plans is called "general conformity." The implementing regulations for general conformity are found in Title 40, Code of Federal Regulations, Part 51, Subpart W. In addition, MDAQMD has adopted the federal general conformity regulations as Rule 1901 (General Conformity), which applies to any general federal actions that are funded or approved under Title 23 U.S.C.

Under the general conformity regulations, both the direct and indirect emissions associated with a federal action must be evaluated. Subpart W defines direct emissions as:

> [T]hose emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and occur at the same time and place as the action.

Indirect emissions are defined as:

> [T]hose emissions of a criteria pollutant or its precursors that:
>
> (1) Are caused by the Federal action, but may occur later in time and/or may be farther removed in distance from the action itself but are still reasonably foreseeable; and
>
> (2) The Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency.

## State Laws, Regulations, and Policies

### *Criteria Air Pollutants*

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

CARB established the California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. An ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before

[1] Title 40, Code of Federal Regulation, Part 51, Section 51.850.

a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for $O_3$, CO, $SO_2$ (1-hour and 24-hour), $NO_2$, $PM_{10}$, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded.

MDAQMD has based its thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 3.4-1.

**Table 3.4-1. Ambient Air Quality Standards**

| | | California Standards[a] | National Standards[b] | |
|---|---|---|---|---|
| **Pollutant** | **Averaging Time** | **Concentration[c]** | **Primary[c,d]** | **Secondary[c,e]** |
| O3 | 1 hour | 0.09 ppm (180 µg/m3) | — | Same as Primary Standard[f] |
| | 8 hours | 0.070 ppm (137 µg/m3) | 0.070 ppm (137 µg/m3)f | |
| NO2[g] | 1 hour | 0.18 ppm (339 µg/m3) | 0.100 ppm (188 µg/m3) | Same as Primary Standard |
| | Annual Arithmetic Mean | 0.030 ppm (57 µg/m3) | 0.053 ppm (100 µg/m3) | |
| CO | 1 hour | 20 ppm (23 mg/m3) | 35 ppm (40 mg/m3) | None |
| | 8 hours | 9.0 ppm (10 mg/m3) | 9 ppm (10 mg/m3) | |
| SO2[h] | 1 hour | 0.25 ppm (655 µg/m3) | 0.075 ppm (196 µg/m3) | — |
| | 3 hours | — | — | 0.5 ppm (1,300 µg/m3) |
| | 24 hours | 0.04 ppm (105 µg/m3) | 0.14 ppm (for certain areas)[g] | — |
| | Annual | — | 0.030 ppm (for certain areas)[g] | — |
| PM10[i] | 24 hours | 50 µg/m3 | 150 mg/m3 | Same as Primary Standard |
| | Annual Arithmetic Mean | 20 µg/m3 | — | |
| PM2.5[i] | 24 hours | — | 35 mg/m3 | Same as Primary Standard |
| | Annual Arithmetic Mean | 12 µg/m3 | 12.0 mg/m3 | 15.0 µg/m3 |
| Lead[j,k] | 30-day Average | 1.5 µg/m3 | — | — |
| | Calendar Quarter | — | 1.5 mg/m3 (for certain areas)[k] | Same as Primary Standard |
| | Rolling 3-Month Average | — | 0.15 mg/m3 | |
| Hydrogen sulfide | 1 hour | 0.03 ppm (42 µg/m3) | — | — |
| Vinyl chloride[j] | 24 hours | 0.01 ppm (26 µg/m3) | — | — |
| Sulfates | 24- hours | 25 µg/m3 | — | — |
| Visibility reducing particles | 8 hour (10:00 a.m. to 6:00 p.m. PST) | Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the | — | — |

**Table 3.4-1. Ambient Air Quality Standards**

| Pollutant | Averaging Time | California Standards[a] Concentration[c] | National Standards[b] Primary[c,d] | National Standards[b] Secondary[c,e] |
|---|---|---|---|---|
| | | number of particles when the relative humidity is less than 70% | | |

**Source:** CARB 2016.

**Notes:** µg/m$^3$ = micrograms per cubic meter; mg/m$^3$ = milligrams per cubic meter; ppm = parts per million by volume; $O_3$ = ozone; $NO_2$ = nitrogen dioxide; CO = carbon monoxide; $SO_2$ = sulfur dioxide; $PM_{10}$ = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[a] California standards for $O_3$, CO, $SO_2$ (1-hour and 24-hour), $NO_2$, suspended particulate matter ($PM_{10}$, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than $O_3$, $NO_2$, $SO_2$, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The $O_3$ standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m$^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour $O_3$ primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[h] On June 2, 2010, a new 1-hour $SO_2$ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 $SO_2$ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[i] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m$^3$ to 12.0 µg/m$^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m$^3$, as was the annual secondary standard of 15 µg/m$^3$. The existing 24-hour $PM_{10}$ standards (primary and secondary) of 150 µg/m$^3$ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

[j] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[k] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m$^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

### *Toxic Air Contaminants*

The state Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). The California toxic air contaminant (TAC) list identifies more than 700 pollutants; carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified

and prioritized. “High-priority” facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

#### *California Health and Safety Code Section 41700*

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

### Local Laws, Regulations, and Policies

#### *Mojave Desert Air Quality Management District*

While CARB is responsible for the regulation of mobile emissions sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The Project site is located within the Mojave Desert Air Basin (MDAB), which comprises 21,000 square miles, and encompasses the eastern portion of Riverside County (County) consisting of the Palo Verde Valley along with portions of Los Angeles, Kern, and San Bernardino counties. The MDAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the portion of the MDAB where the Project is located. MDAQMD operates monitoring stations in the MDAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. MDAQMD’s Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the MDAB. MDAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment. Currently, the most recent approved MDAQMD AQMPs are the $O_3$ attainment plan and the $PM_{10}$ attainment demonstration and maintenance plan (MDAQMD 2008; MDAQMD 1995).

#### *Applicable Rules*

Emissions that would result from mobile, area, and stationary sources during construction and operation of the Project are subject to the rules and regulations of the MDAQMD. The MDAQMD rules applicable to the Project may include, but are not limited to, the following:

**Rule 219 –** Equipment Not Requiring a Permit. The rule identifies equipment exempt from permit requirements of District Rules 201 and 203. District permit required for Internal combustion engines with manufacturer's maximum continuous rating greater than or equal to 50 brake horsepower.

**Rule 401 – Visible Emissions.** This rule establishes the limit for visible emissions from stationary sources.

**Rule 402 – Nuisance.** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

**Rule 403 – Fugitive Dust Control for the Mojave Desert Planning Area.** This rule ensures that the NAAQS for $PM_{10}$ will not be exceeded due to anthropogenic sources of fugitive dust within the Mojave Desert Planning Area and implements the control measures contained in the Mojave Desert Planning Area Federal PM10 Attainment Plan. MDAQMD Rule 403 includes requirements for a Dust Control Plan, signage and fencing requirements, as well as surface watering and stabilization with chemicals, gravel and asphaltic pavement to eliminate visible fugitive dust from vehicular travel and wind erosion.

**Rule 431 – Sulfur Content of Liquid Fuels.** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SOx and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the MDAQMD. The rule also affects diesel fuel supplied for mobile sources.

**Rule 442 – Usage of Solvents.** The purpose of this rule is to reduce VOC emissions from VOC-containing materials or equipment that is not subject to limits of any rule found in District Regulation XI – Source Specific Standards.

**Rule 1113 – Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

***Southern California Association of Governments***

The Southern California Association of Governments (SCAG) is the regional planning agency for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

In September 2020, SCAG's Regional Council adopted the Connect SoCal (2020–2045 Regional Transportation Plan [RTP]/Sustainable Communities Strategy [SCS]). Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies, and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura (SCAG 2020).

SCAG adopted the Connect SoCal 2024 in April 2024, in which the Connect SoCal 2024 outlines a vision for a more resilient and equitable future, with policies and strategies for achieving the region's shared goals through 2050. The plan includes guidance for local agencies and direction for SCAG to address 22 topic areas, such as Complete Streets, Housing, Climate Resilience and Workforce Development. The Connect SoCal 2024 plan estimates that the average daily traffic delay per capita will decrease from 17.9 minutes in 2019 to 16.8 minutes in 2050 and average daily vehicle miles traveled (VMT) per capita will decrease from 22.8 miles in 2019 to 21.7 miles in 2050 under the plan scenario (SCAG 2024). The plan demonstrates how the region will sustainably accommodate jobs and needed housing, while reducing greenhouse gas emissions from passenger vehicles by 19% by 2035. The plan forecasts that the region will have 2 million new people, 1.6 million new households and 1.3 million new jobs by 2050, and that 61% of the planned development will be in priority areas, which are locations that have existing or planned transit, high-quality bike facilities or are within disadvantaged communities. The plan also includes more than 4,000 projects that will provide more travel options and less congestion for the region, such as 869 new miles of regional express lane network, 181,200 new miles of bike lanes and 2,000 new miles of transit revenue service (SCAG 2024).

***Riverside County General Plan***

The Riverside County (County) General Plan Air Quality Element includes policies to improve air quality through regional cooperation with other jurisdictions; compliance with federal, state, and regional air quality regulations; programs to reduce vehicles miles traveled; energy conservation; and intentional development patterns. The following General Plan policies relevant to the Project are provided below (County of Riverside 2018):

- **Policy AQ 1.4.** Coordinate with the SCAQMD and MDAQMD [Mojave Desert Air Quality Management District] to ensure that all elements of air quality plans regarding reduction of air pollutant emissions are being enforced.
- **Policy AQ 2.1.** The County land use planning efforts shall assure that sensitive receptors are separated and protected from polluting point sources to the greatest extent possible.
- **Policy AQ 2.2.** Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.
- **Policy AQ 2.3.** Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.
- **Policy AQ 4.1.** Require the use of all feasible building materials/methods which reduce emissions.
- **Policy AQ 4.5.** Require stationary pollution sources to minimize the release of toxic pollutants through:
  - Design features;
  - Operating procedures;
  - Preventive maintenance;
  - Operator training; and
  - Emergency response planning.
- **Policy AQ 4.6.** Require stationary air pollution sources to comply with applicable air district rules and control measures.
- **Policy AQ 4.7.** To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB [South Coast Air Basin], the Environmental Protection Agency, and the California Air Resources Board.

- **Policy AQ 4.9.** Require compliance with SCAQMD Rules 403 and 403.1 and support appropriate future measures to reduce fugitive dust emanating from construction sites.
- **Policy AQ 4.10.** Coordinate with the SCAQMD and MDAQMD to create a communications plan to alert those conducting grading operations in the County of first, second, and third stage smog alerts, and when wind speeds exceed 25 miles per hour. During these instances all grading operations should be suspended.
- **Policy AQ 5.2.** Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments.
- **Policy AQ 15.1.** Identify and monitor sources, enforce existing regulations, and promote stronger controls to reduce particulate matter.
- **Policy AQ 17.1.** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible.
- **Policy AQ 17.3.** Identify and create a control plan for areas within the County prone to wind erosion of soil.
- **Policy AQ 17.4.** Adopt incentives, regulations and/or procedures to manage paved and unpaved roads and parking lots so they produce the minimum practicable level of particulates.
- **Policy AQ 17.6.** Reduce emissions from building materials and methods that generate excessive pollutants, through incentives and/or regulations.

Many air quality strategies result in co-benefits with promoting energy efficiency and reducing greenhouse gas (GHG) emissions. See Section 3.7, Energy, and Section 3.9, Greenhouse Gas Emissions, for discussion of the County's GHG emission reduction and energy efficiency policies.

***Palo Verde Valley Area Plan***

The Project is located within the Palo Verde Valley Area Plan (County of Riverside 2021) which does not include any goals or policies related to air quality.

## 3.4.2 Environmental Setting

The Project site is located within the MDAB. Air quality conditions in the MDAB are partly under the jurisdiction of MDAQMD and partly under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Project site is outside the portion of the County that is partly within the jurisdiction of SCAQMD and therefore is only under the jurisdiction of the MDAQMD.

### Meteorological and Topographical Conditions

Air pollution, especially the dispersion of air pollutants, is directly related to a region's topographic features. Air quality is a function of both the rate and location of pollutant emissions and the meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects ambient air quality. The most recent information on the MDAB's typical climatic conditions is summarized in MDAQMD guidance, which is provided below.

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada

mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevadas in the north by the Tehachapi Pass (3,800-foot elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet). The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley).

During the summer, the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south.

The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, to indicate at least 3 months have maximum average temperatures over 100.4°F (MDAQMD 2020).

## Pollutants and Effects

### *Criteria Air Pollutants*

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include $O_3$, $NO_2$, CO, $SO_2$, particulate matter with an aerodynamic diameter less than or equal to 10 microns ($PM_{10}$), particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), and lead. Reactive organic gases (ROGs; also referred to as VOCs)[2] and $NO_x$ are also important because they are precursors to $O_3$. These pollutants, as well as TACs, are discussed in the following paragraphs.[3] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. The following paragraphs provide a summary of the applicable criteria air pollutants. For more information on criteria air pollutants, including descriptions of ozone ($O_3$) and lead, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

**Nitrogen Dioxide**. A large body of health science literature indicates that exposure to $NO_2$ can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for $NO_2$, are results from controlled human exposure studies that show that $NO_2$ exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between $NO_2$ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma and

[2] ROG and VOC are generally considered equivalent for CEQA analyses; as such, ROG and VOC are used interchangeably in this analysis.

[3] The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA's Criteria Air Pollutants and the CARB Glossary of Air Pollution Terms (CARB 2024).

intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to $NO_2$ than adults. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2024).

**Carbon Monoxide**. CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2024).

**Sulfur Dioxide**. $SO_2$ is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. $SO_2$ is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in PM (NRC 2005). When combined with particulate matter (PM), $SO_2$ can injure lung tissue. $SO_2$ can worsen asthma resulting in increased symptoms, increased medication usage, and emergency room visits. Also, exposure at elevated levels of $SO_2$ (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2024).

**Particulate Matter**. A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and $PM_{10}$. The range of human health effects associated with ambient PM levels or demonstrated in laboratory studies has expanded from earlier concerns for total mortality and respiratory morbidity to include cardiac mortality and morbidity, blood vessel constriction, stroke, premature birth, low birth weight, retarded lung growth, enhancement of allergic responses, reduced resistance to infection, degenerative lesions in the brain, and lung cancer (EPA 2004).

For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with pre-existing heart or lung diseases. Short-term exposures to $PM_{10}$ have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2024).

Long-term (months to years) exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to $PM_{10}$ are less clear, although several studies suggest a link between long-term $PM_{10}$ exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that PM in outdoor air pollution causes lung cancer (CARB 2024).

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

The primary health effects of ROGs result from the formation of $O_3$ and its related health effects. High levels of ROGs in the atmosphere can interfere with oxygen intake by reducing the amount of available

oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate health standards for ROGs as a group.

***Non-Criteria Air Pollutants***

The following paragraphs provide a summary of the applicable criteria air pollutants. For more information on non-criteria air pollutants, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

**Toxic Air Contaminants.** A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancerous health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. The California Air Toxics "Hot Spots" Information and Assessment Act, AB 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

**Diesel Particulate Matter**. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. DPM is a subset of $PM_{2.5}$ and contributes to the same noncancerous health effects as $PM_{2.5}$ exposure, including premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children (CARB 2024). DPM is typically composed of carbon particles ("soot," also called black carbon, or BC) and numerous organic compounds, including more than 40 known cancer-causing organic substances. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000).

**Odorous Compounds.** Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is subjective. People may have different reactions to the same odor. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

**Valley Fever**. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern

United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure.

Riverside County is not considered a highly endemic region for Valley Fever. Per the California Department of Public Health, the range over 7 years (2016–2022) for coccidioidomycosis cases in the County is 14.3cases per 100,000 people per year. Statewide incidences in 2022 were 19.1 per 100,000 people (CDPH 2023).

## Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The MDAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, and medical facilities (MDAQMD 2020). The closest off-site sensitive receptors to the Project site includes a single residence located 175 feet to the north of the Project site's boundary, rural residences located about 4,400 feet to the east along 10$^{th}$ Avenue and about 5,500 feet to the east along Arrowhead Boulevard. The nearest school is the Palo Verde River Consortium, or Palo Verde College, a community college approximately 1 mile east of the Project site. Blythe Middle School is located 3.4 miles southeast of the Project site.

## Regional and Local Air Quality Conditions

### *Mojave Desert Air Basin Attainment Designation*

Pursuant to the 1990 federal Clean Air Act amendments, EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on CAAQS rather than NAAQS. Table 3.4-2 depicts the current attainment status of the Project site with respect to NAAQS and CAAQS, as well as the attainment classifications for the criteria pollutants.

**Table 3.4-2. Mojave Desert Air Basin Attainment Status**

| | Designation/Classification | |
|---|---|---|
| **Pollutant** | **National Designation** | **California Designation** |
| Ozone ($O_3$) | Unclassified/Attainment | Nonattainment (Severe) |
| Nitrogen dioxide ($NO_2$) | Unclassifiable/Attainment | Attainment |
| Carbon monoxide (CO) | Unclassifiable/Attainment | Unclassified |
| Sulfur dioxide ($SO_2$) | Unclassifiable/Attainment | Attainment |

**Table 3.4-2. Mojave Desert Air Basin Attainment Status**

| | Designation/Classification | |
|---|---|---|
| Respirable particulate matter ($PM_{10}$) | Unclassified | Nonattainment |
| Fine particulate matter ($PM_{2.5}$) | Unclassified/Attainment | Attainment |
| Lead (Pb)[1] | Unclassifiable/Attainment | Attainment |
| Sulfates ($SO_4$) | No national standard | Attainment |
| Hydrogen sulfide ($H_2S$) | No national standard | Unclassified |
| Vinyl chloride[1] | No national standard | No designation |
| Visibility-reducing particles | No national standard | Unclassified |

**Source:** CARB 2022.
**Notes:** Attainment = meets the standards; Nonattainment = does not meet the standards; Unclassified or unclassifiable = insufficient data to classify; Unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.
[1] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined.

### *Local Ambient Air Quality*

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. MDAQMD and CARB monitor local ambient air quality in the County. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2021 to 2023 are presented in Table 3.4-3.

The Blythe-Murphy Street monitoring station, located at 445 W. Murphy Street, Blythe, California 92225, is the nearest air quality monitoring station to the Project site, located approximately 4.41 miles southeast of the Project site. The data collected at this station are considered representative of the air quality experienced in the Project vicinity given similar climate and meteorological and topographical conditions. Air quality data for $O_3$ from the Blythe-Murphy Street monitoring station are provided in Table 3.4-3. Because $NO_2$, CO, $PM_{10}$, and $PM_{2.5}$ are not monitored at the Blythe-Murphy Street monitoring station, $NO_2$ and CO measurements were taken from the Palm Springs monitoring station located at 590 E Racquet Club Road, Palm Springs, California 92262 (approximately 103 miles west of the Project site), and $PM_{10}$ and $PM_{2.5}$ measurements were taken from the Indio-Jackson Street monitoring station located at 46990 Jackson Street, Indio, California 92201 (approximately 84 miles west of the Project site). $SO_2$ is not currently monitored in the County and data are not available. The number of days exceeding the ambient air quality standards are also shown in Table 3.4-3.

**Table 3.4-3. Local Ambient Air Quality Data**

| Monitoring Station | Unit | Averaging Time | Agency/ Method | Ambient Air Quality Standard | Measured Concentration by Year | | | Exceedances by Year | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2021 | 2022 | 2023 | 2021 | 2022 | 2023 |
| **Ozone ($O_3$)** | | | | | | | | | | |
| Blythe-Murphy Street | ppm | Maximum 1-hour concentration | California | 0.09 | 0.071 | 0.066 | 0.071 | 0 | 0 | 0 |
| | ppm | Maximum 8-hour concentration | California | 0.070 | 0.065 | 0.063 | 0.067 | 0 | 0 | 0 |
| | | | National | 0.070 | 0.064 | 0.063 | 0.065 | 0 | 0 | 0 |
| **Nitrogen Dioxide ($NO_2$)** | | | | | | | | | | |
| Palm Springs-Racquet Club Ave | ppm | Maximum 1-hour concentration | California | 0.18 | 0.035 | 0.037 | 0.035 | 0 | 0 | 0 |
| | | | National | 0.100 | 0.0356 | 0.0375 | 0.0322 | 0 | 0 | 0 |
| | ppm | | California | 0.030 | 0.006 | 0.006 | 0.006 | 0 | 0 | 0 |

**Table 3.4-3. Local Ambient Air Quality Data**

| Monitoring Station | Unit | Averaging Time | Agency/ Method | Ambient Air Quality Standard | Measured Concentration by Year | | | Exceedances by Year | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2021 | 2022 | 2023 | 2021 | 2022 | 2023 |
| | | Annual concentration | National | 0.053 | 0.007 | 0.006 | 0.005 | 0 | 0 | 0 |
| **Carbon Monoxide (CO)** | | | | | | | | | | |
| Palm Springs-Racquet Club Ave | ppm | Maximum 1-hour concentration | California | 20 | 0.8 | 0.8 | 1.1 | 0 | 0 | 0 |
| | | | National | 35 | 0.8 | 0.8 | 1.1 | 0 | 0 | 0 |
| | ppm | Maximum 8-hour concentration | California | 9.0 | 0.5 | 0.4 | 0.5 | 0 | 0 | 0 |
| | | | National | 9 | 0.5 | 0.4 | 0.5 | 0 | 0 | 0 |
| **Coarse Particulate Matter ($PM_{10}$)[a]** | | | | | | | | | | |
| Indio-Jackson Street | µg/m$^3$ | Maximum 24-hour concentration | California | 50 | 100.6 | 160.3 | ND | 29.3 (5) | ND (2) | ND |
| | | | National | 150 | 100.4 | 160.0 | ND | 0.0 (0) | ND (1) | ND |
| | µg/m$^3$ | Annual concentration | California | 20 | 30.1 | ND | ND | — | — | — |
| **Fine Particulate Matter ($PM_{2.5}$)[a]** | | | | | | | | | | |
| Indio-Jackson Street | µg/m$^3$ | Maximum 24-hour concentration | National | 35 | 30.6 | 25.1 | ND | 0.0 (0) | ND (0) | ND |
| | µg/m$^3$ | Annual concentration | California | 12 | 30.6 | 25.1 | ND | — | — | — |
| | | | National | 9.0 | 9.8 | ND | ND | — | — | — |

**Sources:** CARB 2024; EPA 2023.

**Notes:** — = not available; µg/m$^3$ = micrograms per cubic meter; ppm = parts per million.

Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (https://www.epa.gov/outdoor-air-quality-data) represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for $O_3$ and particulate matter. Daily exceedances for particulate matter are estimated days because $PM_{10}$ and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour $O_3$, annual $PM_{10}$, or 24-hour $SO_2$, nor is there a California 24-hour standard for $PM_{2.5}$.

$SO_2$ is not currently monitored in the County and data are not available; therefore, it is not included in the table.

* = There were insufficient data available to determine the value.

[a] Measurements of $PM_{10}$ and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

## 3.4.3 Impact Analysis

### Methodology

#### *Construction and Decommissioning Emissions*

Construction of the Project would result in emissions primarily associated with the use of off-road construction equipment, on-road haul and vendor (material delivery) truck trips, and worker vehicle trips. Construction equipment would meet the U.S. EPA Tier 3 or higher emission standards, consistent with Applicant Proposed Measure **(APM)-AIR-2**. Emissions from construction of the Project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.30[4] using a combination of

[4] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development projects. The model was developed for the California Air Pollution Control Officers Association in collaboration with multiple air districts across the state.

CalEEMod default assumptions and Project-specific information provided by the Applicant where available. The methods and assumptions used to estimate the criteria air pollutant emissions from construction of the Project are described below in detail for each component. For additional details see Appendix G of this ~~Draft~~ Final EIR.

For purposes of estimating Project emissions, and based on information provided by the Applicant, it is assumed that construction of the Project would commence in July 2026 and would last up to approximately 28 months. The analysis contained herein is based on the following schedule assumptions[5] (duration of phases is approximate):

- **Phase 1** Site Preparation, Fencing, and Ingress/Egress: 180 days
- **Phase 2** Civil Improvements – Grading/Roads/ Earthwork: 154 days
- **Phase 3** PV Panel and BESS Construction: 310 days
- **Phase 4** Testing and Commissioning: 79 days

Off-Road Equipment

General off-road construction equipment assumptions (i.e., type and number of pieces) were provided by the Applicant and are summarized in Table 3.4-4. Default values for equipment horsepower and load factor provided in CalEEMod were used for all construction equipment. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site for up to approximately 10 hours per day, up to 7 days per week, during Project construction.[6]

**Table 3.4-4. Construction Off-Road Equipment Assumptions**

| Construction Phase | Equipment Type | Quantity |
|---|---|---|
| Phase 1: Site Preparation, Fencing, and Ingress/Egress | Bull Dozers | 1 |
| | Graders | 1 |
| | Concrete Trucks | 3 |
| | Trencher | 1 |
| | Rubber-Tired Loaders | 1 |
| | Skid Steers | 5 |
| Phase 2: Civil Improvements – Grading/Roads/ Earthwork | Bull Dozers | 6 |
| | Graders | 2 |
| | Off-Highway Trucks | 2 |
| | Skid Steers | 5 |
| | Excavators | 3 |
| | Scrapers | 4 |
| Phase 3: PV Panel and BESS Construction | Skid Steers | 10 |
| | Buggies | 30 |

Numerous lead agencies in the state, including MDAQMD, use CalEEMod to estimate criteria air pollutant emissions in accordance with CEQA Guidelines Section 15064.4(a)(1).

5 Some phases of construction are expected to occur concurrently. Probable overlaps were based on information provided by the Applicant and include Phases 1, 2, and 3.

6 The typical construction schedule is expected to be 8 hours per day, Monday through Friday. However, it may be necessary to extend work to 10 hours per day to meet schedule demands or reduce impacts. Given that applicable significance thresholds are based on maximum daily criteria air pollutant emissions, the 4 days per week/10 hours per day schedule scenario was used to model emissions to provide a worst-case, conservative assessment of potential construction impacts.

**Table 3.4-4. Construction Off-Road Equipment Assumptions**

| Construction Phase | Equipment Type | Quantity |
|---|---|---|
| | Pile Drivers | 15 |
| | Cranes | 1 |
| | Rough Terrain Forklifts | 10 |
| | Helicopter | 1 |
| Phase 4: Testing and Commissioning | N/A | N/A |

**Source:** Appendix G.

On-Road Vehicles

On-road vehicles would be required for worker travel, vendor trips, and haul trips to and from the Project site during construction. General assumptions for on-road vehicle travel are consistent with the Transportation Analysis (Appendix H) prepared for the Project and described below. CalEEMod default emission factors representing the vehicle mix and emissions were used to estimate emissions associated with vehicular sources. For vendor and haul trucks it was assumed that there would be 0.33 miles of unpaved road travel per trip. Fugitive dust emissions for paved and un-paved travel were estimated using default emission factors in CalEEMod. The Applicant would be required to prepare a comprehensive Fugitive Dust Control Plan consistent with MDAQMD Rule 403 (**APM-AIR-1**). In accordance with MDAQMD Rule 403, the Project would employ the following fugitive dust control measures:

- Watering two times daily
- Limiting unpaved road travel speed to 25 miles per hour

**Worker Trips**. Average daily on-site workforce is expected to be 50-100 individuals, with peak daily workforce reaching approximately 600 individuals. The peak number of construction-related automobile trips would be up to 635 one-way trips per day. For purposes of capturing maximum daily emissions, it was assumed that 635 individuals would be traveling to the site daily, assuming come overlap between phases.[7] The Project workforce would likely be drawn primarily from the Blythe and/or the Palm Desert areas, which are approximately 4.5 miles and 90 miles from the Project site, respectively. To provide a conservative analysis, the maximum distance of 50 miles was used to estimate emissions from worker travel to and from the Project site.

**Vendor Trips**. Vendor trip information was provided by the Applicant and would include trips for miscellaneous construction-related deliveries throughout the construction period. For the purposes of this analysis, a 20-mile distance was assumed for vendor trips together with the CalEEMod default vehicle mix to estimate emissions associated with these trips. Collections trucks were also assumed to be parked on the Project site delivering cable and large equipment throughout the area during construction.

**Haul Trips**. The Project would also require use of heavy-duty trucks for delivery of equipment and material, including but not limited to panels, battery energy storage systems (BESS), concrete, water, and offsite haul of wood chips. Trip lengths for haul trips were determined based on likely source locations and are consistent with the Transportation Analysis prepared for the Project (Appendix H). During Phase 1, lemon trees within the existing orchard would be removed and chipped during overall site clearing and grubbing. Approximately 26,000 cubic yards of wood chips would result from the lemon tree clearing

[7] It should be noted that the 635 peak day worker assumption is very conservative and is used to estimate not only maximum daily criteria air pollutant emissions, but also GHG emissions and energy use. Given that the average daily workforce over the construction period is much less (i.e., 50-100 daily workers), GHG emissions and energy use related to these trips, which are reported as annual totals, are likely to be overestimated.

activity, which would either be hauled offsite or buried onsite. If hauled offsite, approximately 1,733 truck trips would be required for tree clearing activity. The modeling assumes hauling of the wood chips offsite. For the purposes of this analysis, to 20-mile distance to the air basin boundary was assumed for these trips. BESS deliveries were assumed to be delivered from the Port of Long Beach in Los Angeles, approximately 452 miles for each round trip. According to the Water Supply Assessment (Appendix F) prepared for the Project, approximately 600 acre-feet (AF) of water would be required for soil compaction, dust control, and sanitary needs during construction. Water would be transported to the Project site from Blythe. Emissions estimates conservatively assume that all water (600 AF) would be delivered by trucks within 20 miles of the Project site. Details of the truck trips are provided in Appendix H.

Grading and Material Movement

Per preliminary Project plans, up to approximately 3,705 acres of land at the site could be disturbed during construction. However, approximately 3,720 acres of land was used in a conservative approach. Given that actual graded acreage would be much less than the 3,720-acre assumption, emissions associated with Project grading (i.e., dust and combustion from off-road equipment) are likely to be overestimated. Fugitive dust from earth movement (e.g., grading) was quantified in CalEEMod using default emission factors. All material (soils) would be balanced on site, and therefore no trips for material import or export were assumed.

Helicopter

A helicopter would be required to string the Phase 2 transmission line across I-10. Associated emissions for additional helicopter trips were calculated using the Federal Office of Civil Aviation emission factors for jet fuel. Emissions from helicopter use were estimated based on the estimated number of landing and takeoff cycles, number of cruising hours per day, and helicopter engine model type. It was assumed that the Project would use the helicopter for a maximum of 4 days, 4 hours per day. Energy-related emissions associated with diesel fuel were estimated using utility-specific and Federal Office of Civil Aviation emission factors.

Decommissioning

The Project has an anticipated Project life of 40 years, at which time the Applicant may choose to update site technology and recommission or decommission the site and remove the systems and their components. Given that decommissioning activities would be similar to construction activities (i.e., use of the same types of equipment and same general activities), the quantified emissions from construction are used as a proxy for decommissioning activities. However, it would be anticipated that decommissioning impacts would be reduced compared to those estimated for the construction activities as the efficiencies of the construction equipment and on-road vehicles would be consistent with the future decommissioning year, which would require full compliance with stringent emissions standards for heavy-duty construction equipment resulting in anticipated substantial reductions in emissions from what is presented for construction activities.

***Operational Emissions***

Operation of the Project would result in criteria air pollutant emissions from daily operation of the Operations and Maintenance O&M building, annual panel washing, and mobile trips for worker travel and water delivery. Emissions from the operational phase of the Project were estimated using CalEEMod Version 2022.1.1.30 using a combination of CalEEMod default assumptions and Project-specific

information provided by the Applicant where available. Operational year 2028 was assumed consistent with the first full year following completion of Project construction.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating and water heating are calculated in the building energy use module of CalEEMod, as describedbelow.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2022). Consumer product ROG emissions are estimated in CalEEMod based on the floor area of nonresidential buildings and on the default factor of pounds of ROG per building square foot per day.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For the County, the average annual "summer" days are estimated to be 180 days; therefore, it is assumed that landscaping equipment would likely only operate during the week (not weekends), so operational days were assumed to be 180 days per year in CalEEMod (CAPCOA 2022).

Off-Road Equipment

Panel washing would occur up to once annually using a high-pressure attachment on a small panel washing vehicle. It was assumed that panel washing would take approximately 5 days to complete, using 16 pressure washers operating 8 hours per day. Default CalEEMod emission factors, and load factor assumptions, were used to estimate emissions from use of equipment during operation.

Stationary Sources

Per preliminary Project details, operation of the Project would include use of up to seven emergency backup generators at the O&M building, substation, and/or BESS. Specifications (i.e., horsepower) for Cat 3516C (2,500 kW capacity) assuming maximum annual usage not to exceed 200 hours.[8]

Water Use

Per the Water Supply Assessment prepared for the Project (Appendix F), approximately 2 AF of water may be required for the annual panel washing and for operation of the O&M building. Similar to water use during construction, water for Project operation would be obtained from either on-site wells or groundwater from nearby wells. Emission estimates for Project operational water use conservatively assume that up to 9 AF of water per year would be delivered by truck from the City of Blythe, however the default distance of 20 miles was utilized which also accounts for movement around the Project site.

[8] Per MDAQMD, emergency backup generators do not operate more than 200 hours a year and are only operational in the event of an emergency power failure or for routine testing and maintenance.

Worker Trips

Approximately six full-time workers would be required for daily O&M activities at the Project site. Consistent with construction worker travel, it was assumed that operational workforce would be located in Blythe and/or Palm Desert, and therefore the maximum distance of 50 miles was assumed. The operational workforce is likely to live closer to the Project site, so the 50-mile distance provides a conservative analysis. CalEEMod default vehicle emission factors and vehicle fleet mix for 2027, as based on the CARB EMission FACtor (EMFAC) 2021 model, were used to estimate emissions associated with vehicular sources.

## Construction Health Risk Assessment

The greatest potential for TAC emissions during project construction would be DPM emissions from heavy equipment operations and heavy-duty trucks. As a precautionary measure, a Health Risk Assessment (HRA) was performed to assess the impact of construction on sensitive receptors proximate to the project site. A construction HRA was performed to evaluate the potential impact to existing off-site receptors as a result of construction of the project. For risk assessment purposes, $PM_{10}$ in diesel exhaust is considered a proxy for DPM. Complete methodology and model results for the construction HRA are included as Appendix G.

Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Section IIII of Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) provides guidance for evaluating whether a project may result in significant impacts. Based on CEQA Guidelines Appendix G, the Project would have a significant impact on air quality if the Project would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Based on CEQA Guidelines Appendix G, as adapted by the County, the Project would have a significant impact on air quality if the Project would.[9]

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

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

[9] Riverside County-adopted thresholds of significance are consistent with CEQA Guidelines Appendix G, with the exception of the following language added to threshold item 3: “which are located within one (1) mile of the project site.” Given that inclusion of this specific distance does not change the analysis or significance determination, Riverside County-adopted threshold language is used exclusively for the impact analysis.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

CEQA Guidelines Appendix G indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project would have a significant impact on air quality. MDAQMD has established Air Quality Significance Thresholds, as revised in February 2020 (MDAQMD 2020), which set forth quantitative emissions thresholds below which a project would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3.4-5 are exceeded.

A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for $O_3$ (see Table 3.4-1), which is a nonattainment pollutant, if the Project's construction or operational emissions would exceed the MDAQMD VOC or $NO_x$ thresholds shown in Table 3.4-5. These emissions-based thresholds for $O_3$ precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse $O_3$ impacts to occur) because $O_3$ itself is not emitted directly (see the discussion of $O_3$ and its sources in Section 3.4.2, Environmental Setting), and the effects of an individual project's emissions of $O_3$ precursors on levels in ambient air cannot be determined through air quality models or other quantitative methods.

**Table 3.4-5. Mojave Desert Air Quality Management District Air Quality Significance Thresholds**

| Pollutant | Construction (pounds per day) | Operation (pounds per day) |
|---|---|---|
| VOC | 137 | 25 |
| $NO_x$ | 137 | 25 |
| CO | 548 | 100 |
| $SO_x$ | 137 | 25 |
| $PM_{10}$ | 82 | 15 |
| $PM_{2.5}$ | 65 | 12 |
| Hydrogen sulfide[a] | 54 | 10 |
| Lead[a] | 3 | 0.6 |

**Source:** MDAQMD 2020.

**Notes:** VOC = volatile organic compound; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = sulfur oxides; PM10 = coarse particulate matter; PM2.5 = fine particulate matter. [a] The Project includes typical equipment and on-road vehicles, which result in negligible (if any) emissions of hydrogen sulfide and lead. Therefore, these pollutants are not discussed in this analysis.

Regarding localized CO, although the MDAQMD does not have screening levels for intersection traffic that could result in potential CO hotspots, several other air districts have established these levels, which are described below to provide context of the magnitude of hourly volumes that could result in significant localized CO:

- The SCAQMD conducted CO modeling for its 2003 Air Quality Management Plan (SCAQMD 2003) for the four worst-case intersections in the South Coast Air Basin. At the time the 2003 Air Quality Management Plan was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least more than 100,000 vehicles per day.

- The Bay Area Air Quality Management District determined that projects would result in a less-than-significant impact to localized CO concentrations if (1) project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, or (2) project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway) (BAAQMD 2023).

Based on the Project's proximity to the South Coast Air Basin, the SCAQMD screening criterion of 100,000 vehicles per day has been applied to this Project as a metric to evaluate CO hotspots.

### *General Conformity*

Per 40 CFR Part 93, Subpart B, *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*, General Conformity de minimis thresholds may be used to ensure that emissions resulting from federal actions do not interfere with a state's plans to attain and maintain NAAQS. Under the General Conformity rule, only actions occurring in designated nonattainment and maintenance areas are subject to the rule. Given that the Riverside County portion of the MDAB is designated as unclassifiable/attainment for all pollutants for the federal NAAQS (see Table 3.4-6), federal actions within the Project area are not subject to the General Conformity review requirements. As such, the National Environmental Policy Act analysis used here compares Project emissions to the de minimis thresholds for the neighboring Salton Sea Air Basin, which are outlined in Table 3.4-6.

**Table 3.4-6. General Conformity De Minimis Thresholds**

| Pollutant | NAAQS Attainment Status | Annual Emissions (tons per year) |
|---|---|---|
| NOX | Severe Nonattainment (O3) | 25 |
| VOC | Severe Nonattainment (O3) | 25 |
| CO | Unclassifiable/Attainment | 100 |
| PM10 | Serious Nonattainment | 70 |
| PM2.5 | Unclassifiable/Attainment | 70 |

**Source:** EPA 2024.
**Notes:** $NO_2$ = nitrogen dioxide; CO = carbon monoxide; $PM_{10}$ = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

## Environmental Impacts

This section includes an examination of the Project's impacts to air quality per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Previous Impacts*

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the project would not conflict with or obstruct implementation of the applicable air quality plan, violate any air quality standards, or contribute substantially to an existing project's air quality violation. The project would also not result in exposing sensitive receptors to substantial pollutant concentrations or expose sensitive receptors that are located within one mile of the project to substantial point source emissions. With implementation of applicable rules and regulations of the MDAQMD including fugitive dust control measures as required under MDAQMND Rule 403, as well as inclusions of applicable BMP's, the project was determined to result in less than significant impacts to air quality.

***Threshold a: Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

*LESS THAN SIGNIFICANT.*

As previously discussed, the Project site is located within the MDAB under the jurisdiction of MDAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the MDAB are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable MDAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments and similar land use plan changes that do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle-miles traveled (VMT) are also deemed to comply with the applicable air quality plan (MDAQMD 2020).The Project includes construction and operation of a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would generate 500 megawatts (MW) of solar energy and up to 500 MW of battery storage. Construction and operation of the Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust Control for the Mojave Desert Planning Area). The Applicant would also prepare a comprehensive Fugitive Dust Control Plan consistent with MDAQMD Rule 403 (**APM-AIR-1**).

As discussed below, Project construction-source emissions would not exceed the applicable MDAQMD regional thresholds for any criteria air pollutant. Construction emissions are considered less than significant and the Project would not increase the frequency or severity of a violation in the federal or state ambient air quality for Project-related construction activities. The health effects of criteria air pollutants are discussed in depth under the next impact criterion.

The Project would not exceed the MDAQMD's mass daily threshold for any criteria air pollutant during construction or operations and thus, would not conflict with the MDAQMD Ozone Attainment Plan for the MDAB. Because the Project would not conflict with the MDAQMD Ozone Attainment Plan impacts related to the Project's potential to conflict with or obstruct implementation of the applicable air quality plan is considered **less than significant** consistent with Palo Verde Mesa Solar Project.

***Threshold b: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?***

*LESS THAN SIGNIFICANT.*

Past, present, and future development projects may contribute to adverse air quality impacts in the MDAB on a cumulative basis. By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would result in a cumulatively considerable net increase of any criteria pollutant. If a project's emissions would exceed the applied significance thresholds, it would result in a cumulatively considerable net increase in a criteria pollutant. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Construction and operation of the Project would result in emissions of criteria air pollutants, which may result in a cumulatively considerable net increase in emissions of criteria air pollutants for which the MDAB is designated as nonattainment under the NAAQS or CAAQS. As discussed in Section 3.4.2, the Riverside County portion of the MDAB has been designated as a nonattainment area for $O_3$ and $PM_{10}$ under CAAQS. The following discussion quantitatively evaluates potential short-term construction and long-term operational impacts that would result from implementation of the Project.

***Construction Emissions***

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., vendor trucks and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed under the subheading "Construction and Decommissioning Emissions" in Section 3.4.3, Impact Analysis, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during construction. Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the Applicant and are intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed Project information was not available.

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, and vehicle emissions. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in $PM_{10}$ and $PM_{2.5}$ emissions. The Project would be required to comply with MDAQMD Rule 403 to control dust emissions generated during the grading activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites two times per day depending on weather conditions. The Project would also employ an off-road speed limit of 25 miles per hour.[10] Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, $NO_x$, CO, $PM_{10}$, and $PM_{2.5}$.

Table 3.4-7 presents the estimated maximum daily construction emissions generated during construction of the Project and compares to the MDAQMD thresholds. Estimated maximum daily construction emissions of all activities were compared to both thresholds and were not split between air districts. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix G.

**Table 3.4-7. Estimated Construction Criteria Air Pollutant Emissions – Unmitigated**

| Year | ROG | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| | Daily (pounds per day) | | | | | |
| 2026 | 19.64 | 131.11 | 125.12 | 0.31 | 31.59 | 15.76 |
| 2027 | 14.16 | 128.48 | 307.36 | 0.38 | 31.02 | 15.52 |

[10] Pursuant to **MM-AQ-1**, vehicle speeds shall be restricted to 15 miles per hour on all roads used for any vehicular traffic at the Project site.

**Table 3.4-7. Estimated Construction Criteria Air Pollutant Emissions – Unmitigated**

| Year | ROG | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| 2028 | 13.72 | 124.91 | 297.04 | 0.37 | 30.46 | 10.33 |
| MDAQMD Threshold | 137 | 137 | 548 | 137 | 82 | 65 |
| **Threshold Exceeded?** | No | No | No | No | No | No |
| **Annual (Tons per Year)** | | | | | | |
| 2026 | 0.39 | 3.57 | 4.35 | 0.01 | 0.87 | 0.38 |
| 2027 | 2.42 | 22.51 | 37.32 | 0.06 | 5.61 | 2.30 |
| 2028 | 0.66 | 6.06 | 12.97 | 0.02 | 1.61 | 0.53 |
| De Minimis Threshold | 25 | 25 | 100 | - | 70 | 70 |
| **Threshold Exceeded?** | No | No | No | No | No | No |

**Source:** Appendix G.
**Notes:** ROG = reactive organic gas; $NO_x$ = oxides of nitrogen; CO = carbon monoxide; $SO_x$ = sulfur oxides; $PM_{10}$ = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District; <0.01 = value less than reported 0.01 pounds per day. The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect compliance with MDAQMD Rule 403 (Fugitive Dust), including watering of the Project site and unpaved roads two times per day.

As shown in Table 3.4-7, annual construction emissions would not exceed the daily MDAQMD significance thresholds for VOC, $NO_x$, CO, $SO_x$, $PM_{10}$, $PM_{2.5}$ or the federal de minimis thresholds for any criteria air pollutants. As such, impacts related to construction would be **less than significant**.

### *Operational Emissions*

Operation of the Project would generate ROG, $NO_x$, CO, $SO_x$, $PM_{10}$, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from passenger vehicles and heavy-duty trucks, and from area sources, including the use of consumer products. Table 3.4-8 presents the annual area, energy, off-road, stationary, and mobile emissions associated with the first full year of operation (2027) of the Project. Details of the emission calculations are provided in Appendix G.

Estimated total daily operational emissions are compared to both the MDAQMD and the de minimis thresholds as presented in Table 3.4-8.

**Table 3.4-8. Estimated Operational Criteria Air Pollutant Emissions – Unmitigated**

| Year | ROG | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| **Daily (pounds per day)** | | | | | | |
| Mobile | 0.04 | 0.06 | 1.38 | <0.01 | 0.41 | 0.10 |
| Area | 0.08 | <0.01 | 0.12 | <0.01 | <0.01 | <0.01 |
| Energy | <0.01 | 0.03 | 0.03 | <0.01 | <0.01 | <0.01 |
| Off-Road | 0.62 | 5.11 | 3.84 | 0.01 | 0.20 | 0.19 |
| Stationary | 19.25 | 86.10 | 49.09 | 0.09 | 2.83 | 2.83 |
| **Total** | **19.99** | **91.3** | **54.46** | **0.1** | **3.44** | **3.12** |
| MDAQMD Threshold | *137* | *137* | *548* | *137* | *82* | *65* |
| **Threshold Exceeded?** | No | No | No | No | No | No |
| **Annual (Tons per Year)** | | | | | | |
| Mobile | 0.01 | 0.01 | 0.17 | <0.01 | 0.07 | 0.02 |
| Area | 0.01 | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 |
| Energy | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Off-Road | <0.01 | 0.01 | 0.01 | <0.01 | <0.01 | <0.01 |
| Stationary | 3.85 | 17.22 | 9.82 | 0.02 | 0.57 | 0.57 |
| **Total** | **3.87** | **17.25** | **10.01** | **0.02** | **0.64** | **0.59** |
| De Minimis Threshold | 25 | 25 | 100 | - | 70 | 70 |

**Table 3.4-8. Estimated Operational Criteria Air Pollutant Emissions – Unmitigated**

| Year | ROG | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Threshold Exceeded? | No | No | No | - | No | No |

**Source:** Appendix G.
**Notes**: ROG = reactive organic gas; $NO_x$ = oxides of nitrogen; CO = carbon monoxide; $SO_x$ = sulfur oxides; $PM_{10}$ = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District.
Totals may not sum due to rounding.

As shown in Table 3.4-8, the daily and annual operational emissions for the Project would not exceed MDAQMD thresholds or federal de minimis thresholds for and criteria pollutant. As such, impacts would be **less than significant**.

The MDAB has been designated as a state nonattainment area for $O_3$ and $PM_{10}$. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the MDAB including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction of the Project would generate VOC and $NO_x$ emissions (which are precursors to $O_3$) and emissions of $PM_{10}$. As indicated in Table 3.4-7, Project-generated construction emissions would not exceed the MDAQMD emission-based significance thresholds for any criteria air pollutant. The Project would not exceed MDAQMD emission-based significance thresholds for any criteria air pollutant during operation.

***Decommissioning Emissions***

The Project is anticipated to operate for up to 40 years, after which the Applicant may choose to update site technology and recommission or decommission the site and remove the systems and their components. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and in accordance with all applicable federal, state, and County regulations.

It is anticipated that equipment and activities similar to Project construction would be required during decommissioning of the site. While similar equipment use and activities are anticipated, impacts related to air quality emissions would be less than those during construction given that equipment and vehicles are expected to be cleaner and more fuel-efficient in the future. However, to provide a conservative analysis, it is assumed that decommissioning impacts are equal to construction impacts. As such and consistent with construction impacts, decommissioning is assumed to have a **less-than-significant** impact related to exceedance of MDAQMD daily thresholds.

***Cumulative Emissions***

Regarding potential cumulative localized impacts, air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and MDAQMD develop and implement plans for future attainment of ambient air quality standards.

As discussed in response to Threshold “a” above, the Project would not conflict with the AQMP, which is intended to bring the MDAB into attainment for all criteria pollutants, because the Project would not exceed the MDAQMD significance thresholds which are designed to assist the region in attaining the applicable State and national ambient air quality standards. The Project would have a less-than-significant impact regarding cumulatively considerable net increases of criteria pollutants as demonstrated by Table 3.4-7. As such, construction of the Project would not result in a cumulative impact.

No mitigation is required for long-term (operational) impacts due to Project implementation.

The Project and all cumulative projects within the region would be subject to MDAQMD regulatory requirements including Rule 403 for Fugitive Dust and Rule 402 for Nuisance. The Applicant would be required to prepare a comprehensive Fugitive Dust Control Plan consistent with MDAQMD Rule 403 (**APM-AIR-1**). Compliance with Rule 403 would reduce short-term particulate pollutant emissions and would control fugitive dust and nuisance at the respective project sites. Compliance with MDAQMD Rule 402 would ensure that discharge from any source of air contaminants or other material that could cause injury, detriment, nuisance, or annoyance would be prohibited. The Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is nonattainment (i.e., state $O_3$ and $PM_{10}$ standards). Impacts would be considered **less-than-significant** consistent with Palo Verde Mesa Solar Project.

***Threshold c: Would the Project expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?***

*LESS-THAN-SIGNIFICANT WITH MITIGATION INCORPORATED*.

Health Impacts of Toxic Air Contaminants

In addition to impacts from criteria pollutants, Project impacts may include emissions of pollutants identified by the state and federal government as TACs or HAPs. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs. The following measures are required by state law to reduce diesel particulate emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use Off-Road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, Section 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing), off-road, diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to 5 minutes; electric auxiliary power units should be used whenever possible.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The MDAQMD recommends an incremental cancer risk threshold of 10 in a million (MDAQMD 2020). "Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology.

Although Project construction activities are short-term and variable, in the abundance of caution and to provide information disclosure, a construction HRA was performed for the Project to evaluate the risk from diesel exhaust emissions on existing proximate offsite sensitive receptors. The detailed HRA is provided in Appendix G. Table 3.4-9 summarizes the results of the HRA for project construction.

**Table 3.4-9. Construction Health Risk Assessment Results - Unmitigated**

| Impact Parameter | Units | Project Impact | MDAQMD CEQA Threshold | Level of Significance |
|---|---|---|---|---|
| MEIR | Per Million | 6.87 | 10.0 | Less than Significant |
| HIC | Not Applicable | 0.01 | 1.0 | Less than Significant |

**Source:** Appendix G.
**Notes:**
CEQA = California Environmental Quality Act; MEIR = Maximum Exposed Individual Resident. HIC = Chronic Hazard Index; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District.

As shown in Table 3.4-9, the results of the construction HRA for the Project demonstrate that construction emissions would result in a potential incremental increase in cancer risk at the MEIR that would not exceed the 10 in a million-cancer risk threshold. In addition, construction emissions would be below the Chronic Hazard Index at the MEIR. Therefore, potential impacts associated with exposure of sensitive receptors to TACs would be **less than significant**.

***Health Impacts of Carbon Monoxide***

As described previously, exposure to high concentrations of CO can result in dizziness, fatigue, chest pain, headaches, and impairment of central nervous system functions. Mobile-source impacts, including those related to CO, occur essentially on two scales of motion. Regionally, Project-related vehicle travel would add to regional trip generation and increase the VMT within the local airshed and the MDAB. Locally, construction and operational traffic would be added to the roadway system in the vicinity of the Project site. Although the MDAB is currently an attainment area for CO, there is a potential for the formation of microscale CO "hotspots" to occur immediately around points of congested traffic. Hotspots can form if such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and/or is operating on roadways crowded with non-Project traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the MDAB is steadily decreasing.

During construction, the Project would generate trips associated with construction worker vehicles and vendor and haul trucks. Title 40 of the California Code of Regulations, Section 93.123(c)(5), Procedures for Determining Localized CO, $PM_{10}$, and $PM_2$ Concentrations (hot-spot analysis), states that:

> CO, $PM_{10}$, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established 'Guideline' methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site.

While Project construction would involve on-road vehicle trips from trucks and workers during construction, construction activities would last up to approximately 28 months and therefore would not require a Project-level construction hotspot analysis.

As discussed above, high CO concentrations would be associated with severely congested intersections operating at an unacceptable level of service (LOS) (LOS E or worse is unacceptable). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact (i.e., LOS E or worse) at a signalized intersection that would potentially subject sensitive receptors to CO hotspots. According to the Project's Transportation Analysis, operation of the Project would require a nominal amount of permanent vehicular traffic and would not result in intersections operating at an acceptable LOS (Appendix H). Therefore, the Project would not result in CO hotspot-related impacts. As such, potential Project-generated impacts associated with CO hotspots would be **less than significant**.

***Valley Fever***

As discussed under the subheading "Non-Criteria Air Pollutants" in Section 3.4.2, Valley Fever is not highly endemic to the County as the latest report from the California Department of Public Health listed the County as having 14.3 cases per 100,000 people (CDPH 2023). The Project would employ dust MMs by watering two times per day and limiting speed on unpaved roads to 25 miles per hour. The Project

would be constructed in accordance with MDAQMD Rule 403, which includes the preparation of a Fugitive Dust Control Plan (**APM-AIR-1**), limits the amount of fugitive dust generated during construction, and minimizes the release of the *Coccidioides immitis fungus* from construction activities. However, construction workers have increased risk of exposure since this job results in the disturbance of soils where fungal spores are found. Valley Fever infection rates are highest in California from June to November, and the illness has been reported within the County. Therefore, a risk of Valley Fever infection exists for construction personnel working on the Project in the peak summer and fall months. Therefore, the Project would have a potentially significant impact with respect to Valley Fever exposure for sensitive receptors.

**MM-AQ-1** would be required to reduce impacts to less than significant. **MM-AQ-1** includes a worker training program for Valley Fever that describes potential health hazards associated with Valley Fever, common symptoms, proper safety procedures to minimize health hazards, and notification procedures if suspected work-related symptoms are identified during construction. With implementation of **MM-AQ-1**, the risk of workers and nearby sensitive receptors being exposed to Valley Fever spores would be reduced. Impacts would be **less-than-significant with mitigation** incorporated.

Palo Verde Mesa Solar Project determined a less than significant impact to sensitive receptors from substantial pollutant concentrations, which is different from the Proposed Project. However, the Palo Verde Mesa Solar Project did not include an analysis of Valley Fever under the Air Quality analysis, and instead, included it under the Hazards and Hazardous Materials Analysis, where impacts were less than significant with mitigation incorporated. The mitigation associated with Valley Fever for the Proposed Project and Palo Verde Mesa Solar Project include a worker training program, thus findings are effectively consistent.

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

*LESS THAN SIGNIFICANT*.

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints. Land uses and industrial operations typically associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding.

Odors potentially would be generated from vehicles and equipment exhaust emissions during construction of the Project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be **less than significant** consistent with Palo Verde Mesa Solar Project.

Operation of a solar facility does not include any activities that would not create any new sources of odor. Therefore, Project operations would result in no impacts due to the creation of odors.

## Cumulative Impacts

**Geographic Scope.** The geographic scope of the air quality impacts is primarily focused on the area where the Project is located, known as the MDAB. The MDAB has been designated as a nonattainment area for certain criteria pollutants, specifically $O_3$ and $PM_{10}$. This nonattainment status is a result of cumulative emissions from various sources of air pollutants within the region, including motor vehicles, off-road equipment, and commercial and industrial facilities.

**Cumulative Impacts.** The construction, operation, and decommissioning emissions related to the Project would be likely to occur concurrently with those of other cumulative projects in the MDAB. Regarding potential cumulative localized impacts, air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and MDAQMD develop and implement plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would be cumulatively considerable. If a project's emissions would exceed the applied significance thresholds, it would be cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

As discussed under Threshold "a" above, Project construction-source emissions for for any criteria pollutant would not exceed applicable MDAQMD regional thresholds. The Project would have a less-than-significant impact regarding cumulatively considerable net increases of criteria pollutants for which the Project region is in nonattainment (i.e., CO). As such, construction of the Project would not result in a cumulative impact.

Air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and MDAQMD develops and implement plans for future attainment of ambient air quality standards. The potential for the Project to result in a cumulatively considerable impact, specifically, a cumulatively considerable new increase of any criteria pollutant for which the Project region is nonattainment under an applicable NAAQS and/or CAAQS, is addressed in response to Threshold "b." The Project would not exceed the daily MDAQMD significance thresholds for any criteria pollutant. The Project would have a less- than-significant impact regarding cumulatively considerable net increases of criteria pollutants for which the Project region is in nonattainment (i.e., CO). As such, construction of the Project would not result in a cumulative impact.

As discussed under Threshold "c," the Project carries the potential to emit hazardous air pollutants or toxic air contaminants, similar to those of projects within 1 mile of the Project site. Consequently, it would fall under the purview of CARB Regulation for In-Use Off-Road Diesel Vehicles and regulations governing engine idling time for diesel vehicles. In line with other regional projects and projects within 1 mile of the Project, the Project would comply with MDAQMD Rule 403, Fugitive Dust, which would include preparation of a Fugitive Dust Plan (**APM-AIR-1**) and measures to reduce emissions of $PM_{10}$ (dust), such as watering at least twice daily and enforcing a speed limit of 25 miles per hour on unpaved roads. With implementation of APMs, the Project would not exceed the ambient air quality standards for $PM_{10}$ during construction. Similarly, emissions of TACs during construction would not exceed applicable thresholds during construction for off-site or on-site receptors. The Project would also not cause or create a CO hotspot. The Project would not emit substantial quantities of criteria pollutant emissions or TACs during operation.

During peak summer and fall months, construction personnel working on the Project could face an elevated risk of exposure to Valley Fever spores. This is primarily site-specific and would not combine with other projects to create a cumulative impact.

As discussed under Threshold "d," the Project may have the potential to generate odors from vehicles and equipment exhaust emissions during construction. However, the incremental contribution of such odors are primarily site-specific and would disperse rapidly from the Project site and be consistent with those generated by similar projects in the same air basin. Odor impacts are generally limited to the immediate area surrounding the source. Potential odors from the Project site would be temporary and limited (due to the Project land use type, which is not typically a substantial source of odors), and other projects in the MDAB would be subject to SCAQMD or MDAQMD Rule 402. These odors are not expected to significantly impact substantial numbers of people. The Project would not introduce any new sources of odor during its operations. As a result, the Project would not result in a cumulatively considerable impact regarding the potential to result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Similarly, Palo Verde Mesa Solar Project determined that cumulative impacts to air quality would be less than significant. Thus, the Proposed Project significance determinations are consistent with Palo Verde Mesa Solar Project.

## 3.4.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following APMs are considered as part of the project description (see Chapter 2, Project Description) and would be incorporated into the design of the Project.

**APM-AIR-1:** The Applicant will develop and implement a dust control plan that includes the use of dust palliatives to ensure compliance with Mojave Desert Air Quality Management District Rule 403. The dust control plan is expected to focus on reducing fugitive dust from construction activities.

**APM-AIR-2:** The Applicant will use equipment that meets U.S. Environmental Protection Agency Tier 3 or higher emissions standards.

### Mitigation Measures

The following MM was developed to substantially lessen the potentially significant effects to air quality expected to result from the construction, operation, maintenance, and decommissioning of the Project. Compliance with this MM would reduce Project impacts to less than significant.

**MM-AQ-1** **Valley Fever Training.** Prior to any Project grading activity, the primary Project construction contractor shall prepare and implement a worker training program that describes potential health hazards associated with Valley Fever, common symptoms, proper safety procedures to minimize health hazards, and notification procedures if suspected work-related symptoms are identified during construction. The worker training program shall identify safety measures to be implemented by construction contractors during construction. At a minimum, safety measures shall include the following:

- Provide high efficiency particulate air (HEPA)-filtered air-conditioned enclosed cabs on heavy equipment. Train workers on proper use of cabs, such as turning on air conditioning prior to using the equipment.
- Provide communication methods, such as two-way radios, for use by workers in enclosed cabs.

- Provide personal protective equipment (PPE), such as half-mask and/or full-mask respirators equipped with particulate filtration, to workers active in dusty work areas.
- Provide separate, clean eating areas with hand-washing facilities for construction workers.
- Clean equipment, vehicles, and other items before they are moved off site to other work locations.
- Provide training for construction workers so they can recognize the symptoms of Valley Fever and promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- Direct workers that exhibit Valley Fever symptoms to immediately seek a medical evaluation.
- Prior to initiating any grading, the construction contractor shall provide the County with copies of all educational training material.

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# 3.5 Biological Resources

This section includes an analysis of the impacts to biological resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed Grace Solar Energy Center (Project). The analysis in this section describes the applicable regulations, provides information on existing biological resources in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to biological resources, and lists mitigation measures that would be incorporated into the Project to avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The term "Project site" refers to the solar array installation areas and existing transmission line and encompasses approximately 3,705 acres, as shown in Figure 3.5-1A, Biological Survey Areas. The term "combined study area" (CSA) refers to the Project site plus an approximate 250-foot buffer off portions of the Project site, as well as off the existing transmission line that connects to the Southern California Edison Colorado River Substation. The CSA also includes additional areas along the northern portion of the existing transmission line where impacts may occur (i.e., potential substation and laydown yard). The CSA encompasses approximately 4,801 acres (Figure 3.5-1A). The Project site occurs entirely within the boundary of the CSA.

The information in this section is based on multiple online sources and published documents, as well as the following:

**Appendix C** Grace Solar Energy Center Biological Resources Technical Report, prepared by Dudek.

**Appendix I** Grace Solar Energy Center Aquatic Resources Delineation Report, prepared by Dudek.

## 3.5.1 Regulatory Framework

The key federal, state, and local laws and regulations applicable to biological resources are identified and summarized in this section.

### Federal Laws, Regulations, and Policies

**Federal Land Policy and Management Act (43 USC 170–1787).** Outlined within the United States Code (USC), the Federal Land Policy and Management Act directs management of public lands managed by the U.S. Forest Service, National Park Service, and U.S. Bureau of Land Management (BLM). It also addresses land use planning, rights-of-way, wilderness, and multiple-use policies.

**Federal Endangered Species Act (16 USC 1531 et seq.).** The federal Endangered Species Act (FESA) establishes legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. FESA is administered by the U.S. Fish and Wildlife Service (USFWS) for terrestrial species. Under FESA, USFWS may designate critical habitat for listed species. FESA defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." FESA Section 7 requires federal agencies to consult with USFWS prior to submittal of permit applications 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 FESA, "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.

FESA allows for the issuance of Incidental Take Permits for listed species under Section 7, which is generally available for a project that also requires other federal agency permits or other approvals, and under Section 10, which provides for the approval of Habitat Conservation Plans on private property without any other federal agency involvement. Upon development of a Habitat Conservation Plan, USFWS can issue Incidental Take Permits for listed species.

**Migratory Bird Treaty Act (16 USC 703–712).** The Migratory Bird Treaty Act of 1918 (MBTA) implements four international conservation treaties that the United States entered into with Canada in 1916,[1] Mexico in 1936,[2] Japan in 1972,[3] and Russia in 1976[4] for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The MBTA protects more than 800 species of birds and prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). In December 2017, the Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interpreted the MBTA to prohibit only intentional take. However, on October 4, 2021, USFWS published a rule revoking this MBTA interpretation, with the result that USFWS has returned to interpreting the MBTA as prohibiting incidental take and applying enforcement discretion to the incidental take of migratory birds. USFWS has indicated that it intends to establish a regulatory framework for authorizing incidental take of migratory birds, but has not yet done so.

**Bald and Golden Eagle Protection Act (16 USC Section 668–668d).** Two species of eagles that are native to the United States, bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted protection within the United States under the Bald and Golden Eagle Protection Act to prevent the species from becoming extinct. The Bald and Golden Eagle Protection Act prohibits the take, possession, and commerce of bald eagles and golden eagles. Under the act and subsequent rules published by USFWS, take may include actions that injure an eagle or affect reproductive success (productivity) by substantially interfering with normal behavior or causing nest abandonment. USFWS can authorize incidental take of bald and golden eagles for otherwise lawful activities.

**Clean Water Act (33 USC Section 1251 et seq.).** Formerly the Federal Water Pollution Control Act of 1972, the Clean Water Act (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, enforced by the U.S. Environmental Protection Agency, 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. The CWA is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

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1 https://www.fws.gov/media/convention-between-united-states-and-great-britain-protection-migratory-birds

2 https://www.fws.gov/media/convention-protection-migratory-birds-and-game-mammals-mexico

3 https://www.fws.gov/media/convention-between-government-united-states-america-and-government-japan-protection-migratory

4 https://www.fws.gov/media/convention-between-united-states-america-and-union-soviet-socialist-republics-concerning

Per the Code of Federal Regulations (CFR), CWA Section 404 (33 CFR Section 328.2[f]) authorizes the U.S. Army Corps of Engineers (USACE) to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Discharges to waters of the United States must be avoided where possible, and minimized and mitigated where avoidance is not possible. Permits are issued by USACE. The CWA does not clearly define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes a water of the United States (provided in 33 CFR 328.3[a]) has changed multiple times over the past few decades, starting with the *United States v. Riverside Bayview Homes, Inc.* court ruling in 1985.

Subsequent court proceedings, rulemakings, and congressional acts in 2001 (*Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*), 2006 (*Rapanos v. United States*), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule), and 2021 (*Pasqua Tribe et al v. United States Environmental Protection Agency*, resulting in remand and vacatur of the Navigable Waters Protection Rule and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation. A Revised Definition of "Waters of the United States" rule (Rule) (88 CFR 3004–3144) became effective on March 20, 2023, restoring federal jurisdiction over waters that were protected prior to 2015 under the CWA for traditional navigable waters, the territorial seas, interstate waters, and upstream water resources that significantly affect those waters. The Rule represented a re-expansion of federal jurisdiction over certain water bodies and wetlands previously exempt pursuant to the 2020 Navigable Waters Protection Rule. The Rule also considered various subsequent court decisions, including two notable Supreme Court decisions. However, the applicability of the Rule was substantially affected by a subsequent May 2023 Supreme Court ruling, as discussed further below.

The Rule reinstated the "Significant Nexus" test, which refers to waters that either alone, or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (86 FR 69372–69450). The "Significant Nexus" test attempts to establish a scientific connection between smaller water bodies, such as ephemeral or intermittent tributaries, and larger, more traditional navigable waters, such as rivers. Significant nexus evaluations take into consideration hydrologic and ecologic factors, including volume, duration, and the frequency of surface water flow in the resource and its proximity to a traditional navigable water, and the functions performed by the resource on adjacent wetlands. The Rule also adopts the "Relatively Permanent Standard" test. To meet the "Relatively Permanent Standard," water bodies must be relatively permanent, standing, or continuously flowing and have a continuous surface connection to such waters.

In *Sackett v. EPA*, the United States Supreme Court narrowed the scope of "waters of the United States," and therefore the CWA. Eliminating the significant nexus test, the *Sackett* court found that "the CWA's use of 'waters' encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." To qualify as waters of the United States, a water must not only be relatively permanent, but also connected to traditional navigable waters. Finally, "the CWA extends only to those wetlands that are as a practical matter indistinguishable from waters of the United States," meaning that "the wetland has a continuous surface connection with that water, making it difficult to determine where the water ends and the wetland begins." Subsequently, on August 29, 2023, USACE and the U.S. Environmental Protection Agency issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule.

CWA Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States.

CWA Section 401 (33 USC 1341) requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA, such as applicable effluent limitations and water quality standards. This certification ensures that the proposed activity follows state and/or federal water quality standards. The State Water Resources Control Board and Regional Water Quality Control Boards (RWQCBs) administer the 401 certification program in California.

**Executive Order 11990, Protection of Wetlands.** Executive Order 11990 states that "each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." The term "wetlands" means those areas that are inundated by surface water or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. To meet these objectives, Executive Order 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Executive Order 11990 applies to the following:

- Acquisition, management, and disposition of federal lands and facilities construction and improvement projects that are undertaken, financed, or assisted by federal agencies
- Federal activities and programs affecting land use, including water and related land resources planning, regulation, and licensing activities

The procedures require determination of whether or not a project will be in or will affect wetlands. If so, a wetlands assessment must be prepared that describes the alternatives considered. The procedures include a requirement for public review of assessments.

**Noxious Weed Act (7 USC Sections 2801 et seq.).** The Noxious Weed Act "seeks to control the spread of noxious weeds which interfere with the growth of useful plants, clog waterways, cause disease, or have other adverse effects upon man or his environment and which are therefore detrimental to agriculture and commerce." "Noxious weed" is defined as any living stage (including seeds and reproductive parts) of any parasitic or other plant of a kind, or subdivision of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, navigation, fish, and wildlife resources of public health.

**Executive Order 13112, Invasive Species.** Executive Order 13112 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. "Invasive species" means, with regard to a particular ecosystem, a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health.

**Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds.** Executive Order 13186 directs federal agencies to review the effects of actions and agency plans on migratory birds according to the National Environmental Policy Act or other established environmental review processes, with emphasis on species of concern (Executive Order 13186 Section 6); to identify unintentional take

reasonably attributable to agency actions, focusing first on species of concern, priority habitats, and key risk factors; and to develop and use principles, standards, and practices to lessen the amount of unintentional take (Executive Order 13186 Section 9).

**California Desert Conservation Area Plan, As Amended.** In 1976, Congress designated a 25-million-acre expanse of resource-rich desert lands in southern California as the California Desert Conservation Area (CDCA) through the Federal Land Policy and Management Act. In 2009, Congress passed the Omnibus Public Land Management Act, which directed BLM to include lands managed for conservation purposes within the CDCA as part of the National Conservation Lands. The CDCA Plan guides the management of BLM-administered lands in the California Desert District, including the Mojave, Sonoran, and a small portion of the Great Basin Deserts (BLM 1980). The CDCA Plan directs management policy for multiple resources, including wildlife and vegetation. On BLM lands within the CDCA, many special management areas and other designations have been established. These include Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, Areas of Critical Environmental Concern, Desert Wildlife Management Areas, critical habitats, Long-Term Visitor Areas, and designated routes and areas for off-highway-vehicle use, among others. Many of these areas prohibit or limit development.

The Project site is within the CDCA Plan Area, but the Project site itself is not within land with special designation. Lands with special designations that are within the vicinity of the Project site (approximately 5 miles) are discussed below.

**Northern and Eastern Colorado Desert Coordinated Management Plan.** The Northern and Eastern Colorado Desert Coordinated Management Plan provides more specific management direction for BLM lands in the Colorado Desert (BLM 2002), including the BLM lands located within the Project site. The Northern and Eastern Colorado Desert Coordinated Management Plan establishes several Desert Wildlife Management Areas, which were identified as locations where Mojave desert tortoise (*Gopherus agassizii*) populations could be managed to achieve recovery that cover much of the USFWS-designated critical habitat for Mojave desert tortoise.

**Desert Renewable Energy Conservation Plan Land Use Plan Amendment to the CDCA.** The purpose of the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA) is to conserve and manage plant and wildlife communities on federally managed lands in the desert regions of California while facilitating federal permitting of compatible transmission and renewable energy projects. The DRECP covers more than 10 million acres of BLM land (BLM 2016). The BLM Record of Decision for the DRECP was issued in September 2016. Transmission and renewable projects that comply with the Conservation and Management Actions (CMAs) specified in the DRECP can be approved by BLM in a Development Focus Area without the need for a LUPA. BLM describes the DRECP as a landscape-level plan that streamlines renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. Although only BLM ultimately adopted the DRECP (no state or local agency, including the County of Riverside [County], adopted the DRECP), such that it applies to federal lands only, the DRECP as proposed for adoption included non-federal lands, as well.

Thus, the DRECP is a relevant regional plan for review of the Project under the California Environmental Quality Act (CEQA); specifically, the DRECP's landscape-level focus on the conservation of unique desert ecosystems in the plan area makes it a useful tool for identifying the most appropriate lands for solar development within Riverside County.

The CSA occurs on approximately 4,801 acres, of which approximately 3,334 acres is on private lands and approximately 1,467 acres is on land administered by the BLM Palm Springs-South Coast Field Office (Figure 3.5-1A). The area associated with the Phase 2 transmission line on BLM-administered lands occurs

within a Development Focus Area for transmission, solar, wind, and geothermal projects, as designated by the DRECP, with a majority of the Phase 2 transmission line being within the Arlington existing right-of-way. The DRECP Final Environmental Impact Statement was approved by a Record of Decision signed on September 14, 2016 (BLM 2015, 2016).

## State Laws, Regulations, and Policies

**California Endangered Species Act (California Fish and Game Code Section 2050 et seq.).** The California Endangered Species Act (CESA) was enacted in 1984 to parallel FESA, and allows the California Fish and Game Commission to designate species, including plants, as threatened or endangered. There are currently 156 species, subspecies, and varieties of plants that are protected as threatened or endangered under CESA. CESA prohibits take of state-listed threatened or endangered species, or candidates for listing, except as authorized under the California Fish and Game Code (CFGC). For purposes of CESA and the CFGC generally, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." In contrast to FESA, take under the CFGC does not include harm to or harassment of listed species. The California Department of Fish and Wildlife (CDFW) may authorize otherwise prohibited take of CESA-listed species with the issuance of an Incidental Take Permit, consistent with CFGC Sections 2081(b) and (c), among other options.

**Fully Protected Designations (CFGC Sections 3511, 4700, 5050, and 5515).** CFGC Sections 3511, 4700, 5050, and 5515 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. On July 10, 2023, Senate Bill 147 was signed into law and amends the CFGC to allow a 10-year permitting mechanism for a defined set of projects within the renewable energy, transportation, and water infrastructure sectors. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as California Species of Special Concern because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

**Birds (CFGC Sections 3503, 3503.5, and 3513).** The CFGC prohibits take, possession, or the needless destruction of the nest or egg of any bird, except as otherwise provided by the CFGC or related regulation. CFGC Section 3503.5 makes it unlawful to take, possess, or destroy birds of prey (in the orders Falconiformes and Strigiformes), or to take, possess, or destroy the nest or eggs of any such bird. Section 3513 prohibits take or possession of any migratory nongame bird, as designated in the federal MBTA. CFGC Section 3513 provides for the adoption of the provisions of the federal MBTA (described above).

**Protected Furbearers (14 CCR 460).** Section 460 in Title 14 of the California Code of Regulations (CCR) specifies that several furbearing mammals, including desert kit fox (*Vulpes macrotis arsipus*), may not be taken at any time. CDFW, in general, may permit capture or handling of these species for scientific research, but not in other circumstances.

**California Native Plant Protection Act (CFGC Sections 1900–1913).** California adopted the Native Plant Protection Act in 1977, prior to the enactment of the CESA by name in 1984. The Native Plant Protection Act, in general, protects endangered and rare plants designated under the act. CESA, in general, as subsequently enacted in 1984, governs the listing of and related protection of endangered plants; the take prohibition in CESA incorporates certain exceptions in Native Plant Protection Act Section 1913. Regulations adopted by the California Fish and Game Commission provide authority to CDFW to permit incidental take of Native Plant Protection Act–designated rare plants, subject to certain conditions.

**California Desert Native Plants Act (California Food and Agriculture Code Section 80001 et seq.; CFGC Sections 1925–1926).** The provisions in the California Desert Native Plants Act (California Food and Agriculture Code, Division 23) protect specific California desert native plants (i.e., species in the families Agavaceae, Cacti, Fouquieriaceae; species in the genera *Prosopis* and *Parkinsonia* [*Cercidium*]; and the species catclaw acacia [*Acacia greggii*], desert holly [*Atriplex hymenelytra*], smoke tree [*Dalea spinosa*], and ironwood [*Olneya tesota*]) from unlawful harvest on private and public lands in the California deserts of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the California Desert Native Plants Act prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt and the required tags and seals.

**Natural Community Conservation Planning Act (CFGC Sections 2000–2954).** CDFW's Natural Community Conservation Planning (NCCP) program is an effort by the State of California and numerous private and public partners to take a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species. It is broader in its orientation and objectives than CESA and FESA because these laws are designed to identify and protect individual species that have already declined significantly in number.

An NCCP program identifies and provides for the regional protection of plants and animals and their habitats, while allowing compatible and appropriate economic activity. Working with landowners, environmental organizations, and other interested parties, a local agency oversees the numerous activities that compose the development of an NCCP program. CDFW and USFWS provide the necessary support, direction, and guidance to NCCP participants.

There are currently 17 approved NCCP programs (includes six subarea plans) and more than 9 NCCP programs in various stages of planning (includes two subarea plans), which together cover more than 8 million acres and provide conservation for nearly 400 special-status species and a wide diversity of natural community types throughout California.

**Lake and Streambed Agreement (CFGC Sections 1600–1617).** CDFW regulates project activities that would, among other things, divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake.

**Porter-Cologne Water Quality Control Act of 1969 (California Water Code Sections 13000 et seq.).** The Porter-Cologne Water Quality Control Act provides RWQCBs regulation of waters of the state, including state coordination with the CWA where federally jurisdictional waters are present.

The Project site is within the Colorado River (Region 7) RWQCB area.

## Local Laws, Regulations, and Policies

Various local laws, regulations, and policies apply to activities occurring on privately owned lands.

**Riverside County General Plan.** The Riverside County General Plan includes policies addressing biological resources within the Land Use (LU) and Multipurpose Open Space (OS) Elements, as follows (County of Riverside 2015, 2021):

- **Policy LU 9.1.** Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values.

- **Policy LU 9.2.** Require that development protect environmental resources by compliance with the Multipurpose Open Space Element of the General Plan and federal and state regulations such as CEQA, NEPA [the National Environmental Policy Act], the Clean Air Act, and the Clean Water Act.
- **Policy LU 24.1.** Cooperate with the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and any other appropriate agencies in establishing programs for the voluntary protection, and where feasible, voluntary restoration of significant environ mental habitats (Action Item 10).
- **Policy OS 6.1.** During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.
- **Policy OS 18.1.** Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCPs [Multiple Species Habitat Conservation Plans] and through implementing related Riverside County policies. [The Project site is not within an MSHCP area.]

***Palo Verde Valley Area Plan***

The Project is located within the Palo Verde Valley Area Plan (County of Riverside 2021), which contains policies that guide the physical development and land uses within the Palo Verde Valley Area. The following policy in the Habitat Conservation Element is applicable to the Project.

- **Policy PVVAP 12.1.** Protect biological resources in the Palo Verde Valley planning area through adherence to the Environmentally Sensitive Lands, Wetlands and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element.

## 3.5.2 Environmental Setting

### Regional Setting

This description of the biological resources in the CSA is based on the Biological Resources Technical Report (BRTR) for the Grace Solar Energy Center Project and all associated appendices (Appendix C).

The CSA is situated on the western edge of the Colorado Desert in California, within the Colorado River Valley. Land use within the CSA currently consists of fallow agricultural fields and recreational off-highway-vehicle use areas; however, historically, the CSA was used for agricultural cultivation. Nearby land uses include citrus orchards to the east, the Blythe Airport to the south, and a solar development to the northwest (Google Earth 2023). BLM lands in this area generally comprise native creosote (*Larrea tridentata*) scrub interspersed with recreational trails and associated recreational disturbance. There is some mesquite habitat (*Prosopis* spp.) bordered by large trees planted southeast of the CSA, along the edge of private parcels.

The CSA primarily occurs within the Southeast McCoy Mountains hydrologic area (U.S. Geological Survey [USGS] Hydrologic Unit Code [HUC] 12 150301040802), with portions extending into adjacent hydrologic areas Cinnabar Wash–Palo Verde Valley (USGS HUC 12 150301040804) and Lower McCoy Wash (USGS HUC 12 150301040505). Due to the low precipitation rates in this region, surface water is minimal and limited to ephemeral and intermittent drainages. Lands in this area that are not used for agriculture are crossed by a number of these ephemeral and intermittent drainages, generally flowing from northwest to southeast toward the Colorado River. These features either dissipate prior to reaching the edge of the Palo Verde Valley or flow into the Palo Verde Valley (City of Blythe 2007).

Topography within the CSA is characterized by a slight slope to the southeast toward McCoy Wash. Elevations range from approximately 330 feet above mean sea level (amsl) to approximately 480 feet amsl. There are 12 soil units mapped within the CSA: Aco gravelly loamy sand, Aco sandy loam, Badland, Carrizo gravelly sand, Chuckwalla very gravelly silt loam, gravel pits, Orita fine sand, Orita gravelly loamy sand, Orita gravelly fine sandy loam, Rositas fine sand 0% to 2% slopes, Rositas fine sand 2% to 9% slopes, and Rositas gravelly loamy sand 0% to 2% slopes (USDA 2023). Sand dunes are known to occur north and south of I-10 in the Project region.

**Survey History**

Numerous surveys have been conducted within the CSA from 2019 through 2025 in various biological survey areas. The BRTR shows the various survey boundaries (Appendix C). Below is a list of the surveys conducted, in chronological order:

Palo Verde Mesa Solar Project

- 2011
  - Habitat assessment of the Palo Verde Mesa project site.
  - Focused burrowing owl (*Athene cunicularia*) surveys.
- 2013
  - Focused burrowing owl (*Athene cunicularia*) surveys.

Grace Solar Energy Center Project

- 2019
  - Habitat assessment of the Project site.
- 2022
  - Focused burrowing owl (*Athene cunicularia*) surveys within the 2022 Burrowing Owl Survey Area (Figure 3.5-1B, 2022 Burrowing Owl and Mojave Desert Tortoise Survey Areas).
  - Protocol presence/absence Mojave desert tortoise surveys within the Project site (Figure 3.5-1B, 2022 Burrowing Owl and Mojave Desert Tortoise Survey Areas).
  - Aquatic resources delineation within the Project site (Figure 3.5-1C, Vegetation Mapping and Aquatic Resources Delineation Survey Areas).
  - Focused special-status plant surveys within the Project site (Figure 3.5-1D, Special-Status Plant Survey Areas).
- 2023
  - Spring special-status plant surveys within the CSA, a 250-foot buffer of the limits of disturbance, and a 250-foot buffer around four new transmission line poles north of Interstate 10 (I-10; Figure 3.5-1D, Special-Status Plant Survey Areas).
  - Fall 2023/December 2023 aquatics resources delineation in an approximate 250-foot buffer off the transmission line route plus some additional areas where impacts may occur (i.e., potential substation and laydown yard; Figure 3.5-1D, Special-Status Plant Survey Areas).

- Vegetation mapping of the Project site and an approximate 250-foot buffer off of the transmission line route plus some additional areas where impacts may occur (i.e., potential substation and laydown yard; Figure 3.5-1C, Vegetation Mapping and Aquatic Resources Delineation Survey Areas).
- Fall special-status plants surveys on the Project site, a 250-foot buffer of the limits of disturbance, and a 250-foot buffer around four new transmission line poles north of I-10 (Figure 3.5-1D, Special-Status Plant Survey Areas).

■ 2024

- Spring special-status plant surveys of an approximate 250-foot buffer off of the transmission line route plus some additional areas where impacts may occur (i.e., potential substation and laydown yard; Figure 3.5-1D, Special-Status Plant Survey Areas).
- Non-protocol Mojave desert tortoise surveys in July 2024 within portions of the CSA (Figure 3.5-1E, 2024-25 Mojave Desert Tortoise and Burrowing Owl Survey Areas).
- Fall protocol desert tortoise presence/absence surveys of the Project site, including linear protocol surveys of the transmission line route (Figure 3.5-1E, 2024-25 Mojave Desert Tortoise and Burrowing Owl Survey Areas).

■ 2025

- Protocol burrowing owl breeding season surveys of the Project site and transmission line, plus a 500-foot buffer where legally accessible between March and July 2025 (Figure 3.5-1E, 2024-25 Mojave Desert Tortoise and Burrowing Owl Survey Areas).
- Avian point count surveys at survey points across the Project site and transmission line, plus a 500-foot buffer (Figure 3.5-1F, 2025 Avian Point Count Survey Locations).
- Milkweed and biological soil crus surveys in sampling plots across the Project site and transmission line corridor (Figure 3.5-1G. 2025 Milkweed and Biological Soil Crust Survey Areas).

## Vegetation Communities

Dudek biologists used CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and the California Natural Community List (CDFW 2023), based on A Manual of California Vegetation, Online Edition (CNPS 2023a), to map the entire CSA. These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages). Vegetation communities and land covers were delineated to the vegetation alliance level and, where appropriate, the association level. Some modifications, such as the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986; Oberbauer et al. 2008), were incorporated to accommodate the lack of conformity of the observed communities to those included in these references.

A total of 28 vegetation communities and land cover types were mapped within the CSA. Acreages of vegetation communities in the CSA are summarized in Table 3.5-1 and mapped in Figure 3.5-2, Vegetation Mapping. Vegetation communities considered sensitive biological resources by CDFW under CEQA (CDFW 2023) are noted in the table. CDFW rankings of 1, 2, or 3 are considered sensitive, and impacts to these communities typically require mitigation.

**Table 3.5-1. Vegetation Communities and Land Cover Types within the Vegetation Mapping Survey Area**

| Vegetation Community or Land Cover Type | Floristic Alliance | Association | Ranking[1] | Acreage[2] | | | |
|---|---|---|---|---|---|---|---|
| | | | | Project Site | Phase 2 Transmission Line | Project Buffer/ Other Survey Areas | Total |
| **Grass and Herb Dominated** | | | | | | | |
| Big galleta shrub-steppe[3] | *Pleuraphis rigida* | *Pleuraphis rigida* | G3/S2 | -- | 17.9 | 26.9 | 44.8 |
| | | *Grass and Herb Dominated Subtotal* | | -- | *17.9* | *26.9* | *44.8* |
| **Scrub** | | | | | | | |
| Rigid spineflower–hairy desert sunflower desert pavement[3] | *Chorizanthe rigida–Geraea canescens* desert pavement | *Chorizanthe rigida–Geraea canescens* | Sensitive | 40.1 | 36.6 | 168.0 | 244.6 |
| Creosote bush scrub | *Larrea tridentata* | *Larrea tridentata* | G5/S5 | 389.7 | 62.8 | 209.3 | 661.7 |
| | | *Larrea tridentata*/wash | G5/S5 | 38.3 | 6.9 | 115.6 | 160.7 |
| | | *Larrea tridentata–Krameria grayi–Pleuraphis rigida*[3] | Sensitive | | 0.2 | 28.1 | 28.3 |
| | | *Larrea tridentata–Atriplex polycarpa* | G5/S5 | 6.9 | 1.1 | 0.0 | 8.1 |
| | | *Larrea tridentata–Pleuraphis rigida*[3] | G4/S3 | -- | 117.9 | 193.2 | 311.1 |
| Creosote bush–white bursage scrub | *Larrea tridentata–Ambrosia dumosa* | *Larrea tridentata–Ambrosia dumosa/Pleuraphis rigida*[3] | G4/S3 | 6.4 | -- | 0.1 | 6.5 |
| | | *Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa* | G5/S5 | -- | 6.1 | 1.0 | 7.0 |
| | | *Larrea tridentata–Ambrosia dumosa* | G5/S5 | 400.4 | 5.1 | 92.3 | 497.8 |
| | | *Larrea tridentata–Ambrosia dumosa–Fouquieria splendens* | G5/S5 | -- | 0.2 | 0.2 | 0.4 |
| | | *Larrea tridentata–Ambrosia dumosa–Olneya tesota* | G5/S5 | -- | 1.2 | 6.0 | 7.2 |
| Creosote bush–brittle bush scrub | *Larrea tridentata–Encelia farinosa* | *Larrea tridentata–Encelia farinosa–Ambrosia dumosa* | G5/S4 | -- | 0.3 | -- | 0.3 |
| | | *Larrea tridentata–Encelia farinosa* | G5/S5 | 64.4 | -- | 0.6 | 65.0 |

**Table 3.5-1. Vegetation Communities and Land Cover Types within the Vegetation Mapping Survey Area**

| Vegetation Community or Land Cover Type | Floristic Alliance | Association | Ranking[1] | Acreage[2] | | | |
|---|---|---|---|---|---|---|---|
| | | | | Project Site | Phase 2 Transmission Line | Project Buffer/ Other Survey Areas | Total |
| White bursage scrub | *Ambrosia dumosa* | *Ambrosia dumosa*[3] | Sensitive | 47.8 | -- | -- | 47.8 |
| | | | *Scrub Subtotal* | *994.1* | *238.3* | *814.3* | *2,046.7* |
| **Riparian** | | | | | | | |
| Blue palo verde–ironwood woodland[3] | *Parkinsonia florida–Olneya tesota* | *Olneya tesota* | Sensitive | 1.5 | 14.4 | 42.8 | 58.7 |
| | | *Olneya tesota/Larrea tridentata–Encelia farinosa* | Sensitive | -- | 0.5 | 2.1 | 2.6 |
| | | *Parkinsonia florida* | Sensitive | 103.0 | 1.8 | 2.8 | 107.7 |
| | | *Parkinsonia florida–Olneya tesota* | Sensitive | 79.1 | 2.9 | 5.4 | 87.4 |
| Arrow weed thickets[3] | *Pluchea sericea* | N/A | G4/S3 | 0.6 | -- | -- | 0.6 |
| Tamarisk thickets | *Tamarix* spp. | *Tamarix* spp. | GNA/SNA | 4.3 | -- | -- | 4.3 |
| | | | *Riparian Subtotal* | *188.4* | *19.7* | *53.2* | *261.3* |
| **Unvegetated** | | | | | | | |
| Barren | N/A | N/A | N/A | 227.2 | -- | 0.2 | 227.4 |
| Abandoned Orchard | N/A | N/A | N/A | 310.4 | -- | -- | 310.4 |
| | | | *Unvegetated Subtotal* | *537.6* | -- | *0.2* | *537.8* |
| **Disturbed and Developed** | | | | | | | |
| Disturbed habitat | N/A | N/A | N/A | 76.3 | 48.4 | 33.2 | 158.0 |
| Fallow | N/A | N/A | N/A | 1,569.5 | -- | 8.4 | 1,577.9 |
| Open water | N/A | N/A | N/A | 5.3 | -- | -- | 5.3 |
| Ornamental plantings | N/A | N/A | N/A | 0.0 | 8.9 | 64.8 | 73.7 |
| Urban/developed | N/A | N/A | N/A | 76.3 | 48.4 | 33.2 | 158.0 |
| | | | *Disturbed and Developed Subtotal* | *1,651.5* | *57.3* | *106.4* | *1,815.2* |
| | | | **Grand Total[2]** | **3,371.6** | **333.2** | **1,001.0** | **4,705.8**[4] |

[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2022):
1 = critically imperiled

2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
N/A = not applicable
GNR = unranked, global rank not yet assessed
SNR = unranked, subnational rank not yet assessed
Sensitive = no specific ranking at the association level, but considered sensitive by the California Department of Fish and Wildlife (CDFW 2023).
[2] Totals may not sum due to rounding.
[3] Communities listed by the California Department of Fish and Wildlife as sensitive (CDFW 2023).
[4] Total acreage varies from the CSA acreage due to adjustments to the project footprint. These adjustments include portions of the site where vegetation mapping was not performed..

### *Big Galleta Shrub-Steppe*

Big galleta (*Hilaria rigida* [=*Pleuraphis rigida*]) shrub-steppe alliance includes big galleta (*Hilaria rigida*) as the dominant or co-dominant species in the herbaceous and subshrub layers. Big galleta shrub-steppe alliance has open to intermittent cover with seasonal annuals and herbs less than 1 meter (3.3 feet) in height. Species associated with this alliance include red brome (*Bromus rubens*), silky dalea (*Dalea mollissima*), matchweed (*Gutierrezia sarothrae*), desert willow (*Chilopsis linearis*), and desert tea (*Ephedra californica*). This alliance is found in flat ridges, lower bajadas, slopes, dune aprons, and stabilized dunes. Soils may be clayey, sandy, or rocky (CNPS 2023a).

The following association within the big galleta shrub-steppe alliance was mapped within the CSA: *Pleuraphis rigida*. This association was only found along the transmission line corridor south of I-10.

Associated species observed in the field for the *Pleuraphis rigida* alliance include big galleta, creosote bush (*Larrea tridentata*), Emory's indigo bush (*Psorothamnus emoryi*), desert palafox (*Palafoxia arida* var. *arida*), desert sand verbena (*Abronia villosa*), and fanleaf crinklemat (*Tiquilia plicata*).

The big galleta shrub-steppe alliance has a rarity rank of G3S2 (CDFW 2023). This ranking indicates that the alliance is vulnerable globally (G) and imperiled within California (S) (NatureServe 2022); therefore, this community is considered sensitive under CEQA. This community is not considered a sensitive community by BLM (BLM 2002, 2016).

### *Rigid Spineflower–Hairy Desert Sunflower Desert Pavement*

Rigid spineflower (*Chorizanthe rigida*)–hairy desert sunflower (*Geraea canescens*) desert pavement alliance is characteristically present in the herbaceous layer, which is sparse to intermittent. The non-vascular (cryptogamic crust) layer is also sparse to intermittent, and the shrub layer is sparse. Species associated with the rigid spineflower–hairy desert sunflower desert pavement alliance include trailing windmills (*Allionia incarnata*), Tournefort's mustard (*Brassica tournefortii*), coastal heron's bill (*Erodium cicutarium*), desert Indianwheat (*Plantago ovata*), and white bursage (*Ambrosia dumosa*). This alliance is found in desert pavement, broad alluvial fans, and lower slopes in the desert. The ground surface is sandy and gravelly mixed alluvium with various rocks and gravel, along with interstitial fine sediments (CNPS 2023a).

One association within the rigid spineflower–hairy desert sunflower desert pavement alliance was mapped within the CSA: *Chorizanthe rigida–Geraea canescens* desert pavement association.

Associated species observed within this association included a low cover (less than 2%) of rigid spineflower. The CSA also contained disturbed forms of this association as a result of historical past agriculture uses, and within the transmission line alignment, past associated utility project disturbance. Some portions of transmission line alignment are currently undergoing restoration activities.

The rigid spineflower–hairy desert sunflower desert pavement alliance is ranked by CDFW (2023) as a G4S4 alliance. This ranking indicates that it is secure both globally and within California (NatureServe 2022); however, the association is considered sensitive under CEQA. Additionally, desert pavement, such as this, is considered a BLM sensitive vegetation community (BLM 2002, 2016). See "BLM Sensitive Land Covers and Vegetation Communities, Desert Pavement and Soil Crust" below for a discussion of desert pavement in context of the DRECP.

***Creosote Bush Scrub***

The creosote bush scrub alliance contains creosote bush as the dominant or co-dominant in the shrub canopy and has an intermittent to open canopy with shrubs less than 3 meters (9.8 feet) in height. The herbaceous layer is open to intermittent with seasonal annuals or perennial grasses. Species associated with this alliance include Shockley's goldenhead (*Acamptopappus shockleyi*), white bursage, allscale (*Atriplex polycarpa*), woolly brickellbush (*Brickellia incana*), and Anderson thornbush (*Lycium andersonii*). This alliance occurs in alluvial fans, bajadas, upland slopes, and minor intermittent washes. Soils are well drained, sometimes with desert pavement (CNPS 2023a).

The following associations within the creosote bush scrub alliance were mapped within the CSA: *Larrea tridentata*, *Larrea tridentata*/wash, *Larrea tridentata–Krameria grayi–Pleuraphis rigida*, *Larrea tridentata-Pleuraphis rigida*, and *Larrea tridentata–Atriplex polycarpa*.

Associated species observed in the field for the *Larrea tridentata* association included creosote bush, with a lower cover of white bursage scrub and Tournefort's mustard. Associated species observed in the field for the *Larrea tridentata–Atriplex polycarpa* association included creosote bush and allscale, with a lower cover of Emory's indigo bush and white bursage scrub. Along the transmission line alignment, *Larrea tridentata*/wash was mapped where creosote bush was dominant in a wash setting; associated species at low cover included manybristle chinchweed (*Pectis papposa*), slender spiderling (*Boerhavia triquetra* var. *intermedia*), New Mexico silverbush (*Ditaxis neomexicana*), littleleaf ratany (*Krameria erecta*), big galleta grass, and cheesebush (*Ambrosia salsola*). The *Larrea tridentata–Krameria grayi–Pleuraphis rigida* association in the CSA was dominated by creosote bush, white ratany (*Krameria bicolor* [=*K. grayi*]), and big galleta, with lesser components of manybristle chinchweed, white bursage, slender spiderling, and sweetbush (*Bebbia juncea* var. *aspera*). The *Larrea tridentata–Pleuraphis rigida* association is dominated by creosote bush and big galleta, with lesser components of desert sand verbena, desert palafox, manybristle chinchweed, Tournefort's mustard, puncturevine (*Tribulus terrestris*), and prickly Russian thistle (*Salsola tragus*).

The creosote bush scrub alliance has a rarity rank of G5S5 by CDFW (2023). This ranking indicates that it is secure both globally and within California (NatureServe 2022). This community is not considered a sensitive community by BLM (BLM 2002, 2016). However, the *Larrea tridentata–Krameria grayi–Pleuraphis rigida* and *Larrea tridentata–Pleuraphis rigida* associations are considered sensitive by CDFW (2023), and are therefore considered sensitive under CEQA.

***Creosote Bush–White Bursage Scrub***

Creosote bush–white bursage scrub alliance includes creosote bush and white bursage as co-dominant species in the shrub canopy. The creosote bush–white bursage scrub alliance has a two-tiered, open to intermittent canopy with shrubs less than 3 meters (9.8 feet) in height. The herbaceous layer is absent to intermittent with seasonal annuals. Species associated with this alliance include cheesebush, saltbush (*Atriplex* sp.), sweetbush, branched pencil cholla (*Cylindropuntia ramosissima*), cottontop cactus (*Echinocactus polycephalus*), desert pepperweed (*Lepidium fremontii*), and desert senna (*Senna armata*). This alliance is found in washes and rills, alluvial fans, bajadas, valleys, basins, upland slopes, mesas, and erosional highlands. The soils are well-drained, alluvial, colluvial, sandy, sometimes underlain by a hardpan that may be calcareous, igneous, and/or covered with desert pavement (CNPS 2023a).

The following associations within the creosote bush–white bursage scrub alliance were mapped within the CSA: *Larrea tridentata–Ambrosia dumosa*, *Larrea tridentata–Ambrosia dumosa*/Pleuraphis *rigida*, *Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa*, *Larrea tridentata–Ambrosia dumosa*–Fouquieria

splendens, and *Larrea tridentata–Ambrosia dumosa–Olneya tesota*. The *Larrea tridentata–Ambrosia dumosa/Pleuraphis* rigida association was only found off site, along the transmission line alignment.

Associated species observed in the field for the creosote–white bursage (*Larrea tridentata–Ambrosia dumosa*) association include a co-dominance of creosote bush and white bursage, and a lower cover of the following species: blue palo verde (*Parkinsonia florida*), wire lettuce (*Stephanomeria pauciflora*), *Ephedra* spp., big galleta, Thurber's sandpaper plant (*Petalonyx thurberi* ssp. *thurberi*), manybristle chinchweed, slender spiderling, puncturevine, popcorn flower (*Cryptantha* sp.), euphorbia (*Euphorbia* sp.), and ratany (*Krameria* sp.). Associated species observed in the field for the creosote–white bursage/Pleuraphis rigida association include big galleta, cheesebush, and desert lantern (*Oenothera deltoides*). Associated species observed in the field for the Larrea tridentata–Ambrosia dumosa–Olneya tesota association include ironwood, white bursage, creosote bush, slender spiderling, and manybristle chinchweed, with some big galleta grass. Species associated with the *Larrea tridentata–Ambrosia Dumosa Fouquieria splendens* association include manybristle chinchweed, ocotillo, creosote bush, and white bursage, with smaller amounts of New Mexico silverbush, littleleaf ratany, and hairy prairie clover (*Dalea mollis*). Along the Phase 2 transmission line route, the Larrea tridentata association is dominated by creosote bush, with smaller amounts of white bursage, manybristle chinchweed, desert palafox, desert sand verbena, euphorbia, puncturevine, sixweeks grama (*Bouteloua barbata* var. *barbata*), and Tournefort's mustard.

The creosote bush–white bursage scrub alliance is ranked by CDFW (2023) as a G5S5 alliance. This ranking indicates that it is secure both globally and within California (NatureServe 2022); therefore, this community is not considered sensitive under CEQA. However, CDFW (2023) ranks the *Larrea tridentata–Ambrosia dumosa/Pleuraphis rigida* association as G4S3, indicating that it is apparently secure globally, but vulnerable within California (NatureServe 2022); thus, this association is considered sensitive under CEQA. This community is not considered a sensitive community by BLM (BLM 2002, 2016).

***Creosote Bush–Brittle Bush Scrub***

Creosote bush–brittle bush (*Encelia farinosa*) scrub alliance includes these two species as co-dominant and equally conspicuous in the shrub canopy. The creosote bush–brittle bush scrub alliance has a two-tiered, open to intermittent canopy with shrubs less than 3 meters (9.8 feet) in height. The herbaceous layer is open with seasonal annuals. Species associated with this alliance include desert agave (*Agave deserti*), sweetbush (*Bebbia juncea*), teddybear cholla (*Cylindropuntia bigelovii*), low woollygrass (*Dasyochloa pulchella*), and desert trumpet (*Eriogonum inflatum*). This alliance is found in small washes, rills, alluvial fans, bajadas, and colluvium on upland slopes. Soils are well drained and rocky, may have desert pavement surfaces, and are often derived from granitic or volcanic rock (CNPS 2023a).

The following associations within the creosote bush–brittle bush scrub alliance were mapped within the CSA: *Larrea tridentata–Ambrosia dumosa*, *Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa*, *Larrea tridentata-Ambrosia dumosa–Fouquieria splendens*, *Larrea tridentata–Ambrosia dumosa–Olneya tesota*, and *Larrea tridentata–Ambrosia dumosa/Pleuraphis rigida.*

Associated species observed in the field for the *Larrea tridentata–Ambrosia dumosa* association include Tournefort's mustard and desert Indianwheat (*Plantago ovata*). The *Larrea tridentata–Ambrosia dumosa/Pleuraphis rigida* association was dominated by creosote bush, white bursage, and big galleta, with lesser components of manybristle chinchweed, ratany (*Krameria* sp.), and euphorbia (*Euphorbia* sp.). The *Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa* association is dominated by creosote bush,

white bursage, and allscale, with lesser components of popcorn flower, brittlebush, manybristle chinchweed, and slender spiderling.

The creosote bush–brittle bush scrub alliance is ranked by CDFW (2023) as G5S4, and the *Larrea tridentata–Encelia farinose* association was ranked as G5S5. This indicates that the alliance is secure globally and apparently secure within California, and the association is secure both globally and in California (NatureServe 2022). Furthermore, this community is not considered sensitive under CEQA. This community is not considered a sensitive community by BLM (BLM 2002, 2016).

***White Bursage Scrub***

White bursage scrub alliance includes white bursage as the dominant or co-dominant species in the shrub canopy. The white bursage scrub alliance has an open to intermittent canopy with shrubs less than 1 meter (3.3 feet) in height. The herbaceous layer is open to intermittent, with seasonal annuals. Species associated with this alliance include goldenhead (*Acamptopappus sphaerocephalus*), desert holly (*Atriplex hymenelytra*), cottontop cactus, Death Valley joint fir (*Ephedra funerea*), and creosote bush. This alliance is found in older washes and river terraces, alluvial fans, bajadas, rocky hills, partially stabilized and stabilized sand fields, and upland slopes. Soils are sandy, clay-rich, or calcareous, and may have pavement surfaces (CNPS 2023a).

The following association within the white bursage scrub alliance was mapped within the CSA: *Ambrosia dumosa*.

Associated species observed in the field for the *Ambrosia dumosa* association include white bursage, with a lower cover of creosote bush.

The white bursage scrub alliance is ranked by CDFW (2023) as a G5S5 alliance. This ranking indicates that it is secure both globally and within California (NatureServe 2022); however, this community is considered sensitive under CEQA. This community is not considered a sensitive community by BLM (BLM 2002, 2016).

***Blue Palo Verde–Ironwood Woodland***

Blue palo verde–ironwood (*Olneya tesota*) woodland includes blue palo verde and ironwood as co-dominant species, or either species is dominant, in the tree or tall shrub canopy. The blue palo verde–ironwood woodland alliance has an open to continuous canopy with trees less than 14 meters (45.9 feet) in height. The shrub layer is intermittent or open, and the herbaceous layer is sparce with seasonal annuals. Species associated with this alliance include desert willow, smoke tree (*Psorothamnus spinosus*), cheesebush, California barrel cactus (*Ferocactus cylindraceus*), and catclaw acacia (*Senegalia greggii*). This alliance is found in desert arroyo margins, seasonal watercourses and washes, bottomlands, middle and upper bajadas and alluvial fans, and lower slopes. Soils are sandy, well-drained, and derived from alluvium or colluvium (CNPS 2023a).

The following associations within the blue palo verde–ironwood woodland alliance were mapped within the CSA: *Olneya tesota*, *Olneya tesota/Larrea tridentata–Encelia farinosa*, *Parkinsonia florida*, and *Parkinsonia florida–Olneya tesota*. The *Olneya tesota* association was only found off site, along the transmission line corridor both north and south of I-10.

Associated species observed in the field for the *Olneya tesota* association include ironwood, creosote bush, white bursage scrub, big galleta, slender spiderling, and manybristle chinchweed. Associated species observed in the field for the *Parkinsonia florida* association include creosote bush, white bursage, wire lettuce, Emory's indigo bush, smallseed sandmat, sixweeks grama, slender spiderling, and sixweeks

threeawn (*Aristida adscensionis*). Associated species observed in the field for the *Parkinsonia florida–Olneya tesota* association include ironwood, creosote bush, cheesebush, devil's claw, and smoke tree. Associated species for the *Olneya tesota/Larrea tridentata–Encelia farinosa* association include ironwood, brittlebush, creosote bush, and white ratany (*Krameria bicolor*), with a smaller amount of New Mexico silverbush, manybristle chinchweed, and big galleta grass.

The blue palo verde–ironwood woodland alliance is ranked by CDFW (2023) as a G4S4 alliance. This ranking indicates that it is apparently secure both globally and within California (NatureServe 2022); however, the *Olneya tesota*, *Olneya tesota/Larrea tridentata–Encelia farinosa*, *Parkinsonia florida*, and *Parkinsonia florida–Olneya tesota* associations are considered sensitive under CEQA. Additionally, this community is considered a riparian community under the DRECP (BLM 2016) and is considered a BLM sensitive vegetation community (BLM 2002). See the subheading "DRECP Riparian Vegetation Types," below, for a discussion of DRECP riparian vegetation communities.

***Arrow Weed Thickets***

Arrow weed (*Pluchea sericea*) thickets alliance include arrow weed as the dominant or co-dominant in the shrub canopy. The arrow weed thicket alliance has an intermittent to continuous canopy with shrubs less than 5 meters (16.4 feet) in height. The herbaceous layer is sparse with seasonal annuals. Species associated with this alliance include iodine bush (*Allenrolfea occidentalis*), mulefat (*Baccharis salicifolia*), narrowleaf willow (*Salix exigua*), Fremont cottonwood (*Populus fremontii*), and honey mesquite (*Prosopis glandulosa*). This alliance is found around springs, seeps, irrigation ditches, canyon bottoms, stream borders, and seasonally flooded washes. Soils are alluvial- or aeolian-derived sands or clay loams that are usually alkaline or saline (CNPS 2023a).

No association within the arrow weed thicket alliance was mapped within the CSA. The associated species that was observed in the field for the alliance was arrow weed. This community was associated with a construction basin within the northern portion of the CSA.

The arrow weed thicket alliance is ranked by CDFW (2023) with a rarity of G4S3. This indicates that it is apparently secure globally, but vulnerable within California (NatureServe 2022); therefore, this community is considered sensitive under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

***Tamarisk Thickets***

Tamarisk (*Tamarix ramosissima*) thickets semi-natural alliance includes tamarisk or another *Tamarix* species as the dominant species in the shrub canopy. The tamarisk thicket alliance has a continuous or open canopy with shrubs less than 8 meters (26.2 feet) in height. The herbaceous layer is sparce. Species associated with this alliance include Fremont cottonwood or *Salix* species. This alliance is found in arroyo margins, lake margins, ditches, washes, rivers, and other watercourses (CNPS 2023a).

The following association within the tamarisk thicket alliance was mapped within the CSA: *Tamarix* spp. Associated species observed in the field for the *Tamarix* spp. association include tamarisk, arrow weed, and blue palo verde.

The tamarisk thicket alliance is a semi-natural alliance ranked by CDFW (2023) as not applicable globally and within California because the ecosystem is not a suitable target for conservation activities (NatureServe 2022). This community is not considered sensitive under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

### *Barren*

Barren land is defined as any unvegetated area that is not developed and has no evidence of removed past agricultural or other land uses that would warrant a disturbed habitat category. This is evident by the species composition containing less than 10% shrub cover; therefore, these areas did not meet membership rules for a shrub community.

Associated species observed in the field include less than 1% of white bursage scrub and 1% to 5% of creosote bush.

Barren land is not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it has been included is this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

### *Disturbed Habitat*

Disturbed habitat refers to areas where soils have been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats. These areas provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species, such as ornamentals or ruderal exotic species that take advantage of disturbance.

In the CSA, disturbed habitat occurs within unpaved, dirt roads. Some areas of disturbed habitat are characterized by tire marks, soil erosion, garbage and cans, and sand/dirt piles.

Disturbed habitat is not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

### *Fallow*

Fallow land is defined as areas that have been disturbed from past agricultural uses that have now ceased. They are evidenced by remnant agricultural disturbances—such as crop lines—along with native and non-native vegetation that is beginning to grow back. These areas contained less than 10% shrub cover, and thus, do not meet the membership rules for a shrub community.

Associated species observed in the CSA include less than 1% of creosote bush and 1% to 5% of white bursage scrub, along with bare ground.

Fallow land is not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it has been included in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

### *General Agriculture*

Agricultural lands are an anthropogenic habitat and are not described by CDFW (2023) or the California Native Plant Society (CNPS 2023b). Within the CSA, agricultural lands consisted of orchards where on-site farming practices included possible soil disking, plowing, and herbicide application, as well as regular anthropogenic maintenance and disturbance associated with ongoing management actions.

Agricultural lands are not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it has been included in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

***Open Water***

Although not recognized by the Manual of California Vegetation, Online Edition (CNPS 2023a), or the Natural Community List (CDFW 2023), open water is described by Oberbauer et al. (2008). Oberbauer et al. (2008) describe open water as ponded bodies of water persisting year-round that consist of less than 10% vegetative cover. Open water may support submerged aquatic communities and can contain various substrate compositions, largely determined by the surrounding environment (Oberbauer et al. 2008).

Only one area was mapped as open water within the CSA: a constructed basin that is being filled in the northern portion of the CSA.

Open water is not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it best describes what was observed in the field. This community is not globally or state ranked and is not considered a sensitive natural community by CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016). However, open water may be considered jurisdictional as an aquatic resource, which is further discussed below under the subheading "Aquatic Resource Delineation" (see also Appendix A of Appendix C).

***Ornamental Plantings***

Parks and ornamental plantings refer to areas where non-native ornamental species and landscaping schemes have been installed and maintained, usually as part of commercial or residential properties or parks. This habitat type typically supports myriad ornamental species, including Bermudagrass (*Cynodon dactylon*), hottentot fig (*Carpobrotus edulis*), Peruvian peppertree (*Schinus molle*), Brazilian peppertree (*Schinus terebinthifolius*), and red apple iceplant (*Aptenia cordifolia*).

Within the CSA, ornamental pines (*Pinus* ssp.) occur along a linear row, acting as a windbreak for an adjacent orchard to the east.

Parks and ornamental plantings are not a listed vegetation community under the California Natural Community List (CDFW 2023); however, this category has been used in this report because it best describes what was observed in the field. As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

***Urban/Developed***

Urban or developed land covers refer to areas that have been constructed on or otherwise physically altered to the point where vegetation is no longer present. Urban or developed areas are characterized by permanent or semi-permanent structures, hardscapes, and landscaped areas that require irrigation.

Within the CSA, the urban/developed land cover consists of paved portions of Buck Road. Portions of Black Creek Road, Black Rock Road, I-10, and the substation were also mapped off site along the transmission line corridor.

Developed land is not a listed vegetation community under the California Natural Community List (CDFW 2023); however, it has been used in this report because it best describes what was observed in the field.

As such, this community is not globally or state ranked and is not considered a sensitive natural community under CEQA. This community is not considered sensitive by BLM (BLM 2002, 2016).

The Palo Verde Mesa Solar Project identified similar vegetation communities to the currently proposed Project as discussed in the Biological Resources Technical Report (Power Engineers 2012); however, the Palo Verde Mesa Solar Project used the Holland classification system (1886) in some instances, which resulted in collapsed vegetation community categories, such as disturbed desert dry wash woodland versus blue palo verde–ironwood woodland. Vegetation communities not mentioned in the Palo Verde Mesa Biological Resources Technical Report included Big galleta shrub steppe, rigid spineflower–hairy desert sunflower desert pavement, and white bursage.

## BLM Sensitive Land Covers and Vegetation Communities

### *Desert Pavement*

Desert pavements are formed by wind-deposited clay, silt, and salt into the spaces between gravel clasts (Dickerson 2008). As wetting and drying cycles expand the clay and salt, the surface layer of gravel expands upward, allowing additional clay and silt to be deposited within the gravel. Over time, silt and clay builds beneath the gravel, several inches thick, forming a desert pavement (Dickerson 2008).

Desert pavement was mapped within the CSA as rigid spineflower–hairy desert sunflower desert pavement alliance, as depicted in Figure 3.5-2. In total, 245 acres of desert pavement was mapped within the CSA, and this desert pavement is considered sensitive by BLM (BLM 2002, 2016). The CSA also included disturbed forms of this association because of historical agriculture uses, and within the transmission line alignment due to past utility project disturbance, with some portions of these areas currently undergoing restoration activities associated with other projects

The Palo Verde Mesa Solar Project vegetation surveys resulted in approximately 23.06 acres of desert pavement (mapped as creosote bush scrub-desert pavement) as occurring within the solar facility site. It was also noted the presence of narrow margins of desert pavement along the western boundary of the study area (Power Engineers 2012).

### *Soil Crust*

Biological soil crust (also referred to as cryptobiotic soil crust) is a complex of living organisms composed of cyanobacteria, lichen, bryophyte, moss, and liverwort that help stabilize, add nutrients, and keep moisture within the soil. The distribution of biological soil crusts depends on a variety of factors, notably soil texture and depth and level of disturbance, with a higher potential for biological soil crust occurring on soils with low disturbance and fine-grained (i.e., clays, loams, silts), shallow soils (Belnap et al. 2001). The soil types within the CSA are provided in Table 3.5-2.

**Table 3.5-2. Summary of Soil Units Within the Combined Study Area**

| Soil Map Unit Name | Landform | Drainage Class | Hydric[1] | Combined Study Area (acres) |
|---|---|---|---|---|
| Aco gravelly loamy sand | Terraces slightly above flood plain | Well drained | No | 343 |
| Aco sandy loam | Terraces slightly above flood plain | Somewhat excessively drained | No | 390 |
| Badland | Bedrock | N/A | No | 157 |
| Carrizo gravelly sand | Flood plains, fan piedmonts, and bolson floors | Excessively drained | No | 537 |

**Table 3.5-2. Summary of Soil Units Within the Combined Study Area**

| Soil Map Unit Name | Landform | Drainage Class | Hydric[1] | Combined Study Area (acres) |
|---|---|---|---|---|
| Chuckwalla very gravelly silt loam | Fan terraces | Well drained | No | 155 |
| Gravel pits | Sandy and gravelly alluvium | Excessively drained | No | 18 |
| Mapping not completed | N/A | N/A | N/A | 658 |
| Orita fine sand | Fan remnants and terraces | Well drained | No | 434 |
| Orita gravelly loamy sand | Fan remnants and terraces | Well drained | No | 82 |
| Orita gravelly fine sandy loam | Fan remnants and terraces | Well drained | No | 242 |
| Rositas fine sand, 0% to 2% slopes | Dunes and sand sheets | Somewhat excessively drained | No | 606 |
| Rositas fine sand, 2% to 9% slopes | Dunes and sand sheets | Somewhat excessively drained | No | 355 |
| Rositas gravelly loamy sand, 0% to 2% slopes | Dunes and sand sheets | Somewhat excessively drained | No | 823 |
| | | | **Total** | **4,801** |

**Source:** USDA 2023.
**Notes:** BLM = U.S. Bureau of Land Management; N/A = not applicable.
Totals may not sum due to rounding.
[1] Hydric soil defined by the U.S. Department of Agriculture (i.e., formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part) if hydric conditions are present within the soil unit.

Sampling surveys were conducted to characterize and estimate biological soils crusts in the Project site and transmission line corridor. A total of 72, 2.5-acre randomly selected sampling plots (3 plots were reduced size at site boundary) were surveyed for biological soil crusts, stratified by vegetation grouping and included 23 plots in scrub vegetation, 5 plots in riparian vegetation, 38 plots in disturbed and barren land covers, and 6 plots in the transmission line corridor (Figure 3.5-3, Biocrust Mapping Results). Of the total 173.8 acres of sampling plots surveyed, 3.3 acres of biological soil crusts were mapped. Cyanobacteria, smooth to rugose, was the most common biological soil crust observed, and gray to black lichen was also recorded. No other types of biological soil crusts were observed.

Within scrub vegetation on private lands, 0.60 acres of biological soil crusts were mapped comprising 1.10% of the scrub sampling plots. Within riparian vegetation on private lands, 1.17 acres of biological soil crusts were mapped comprising 10.85% of the riparian sampling plots. Within disturbed and barren land covers on private lands, 0.64 acres of biological soil crusts were mapped comprising 0.68% of the disturbed and barren sampling plots. Within the transmission line corridor on BLM lands, 0.92 acres of biological soil crusts were mapped comprising 6.22% of the transmission line sampling plots.

Using the biological soil crust sampling results stratified by vegetation/land cover, the Project site is estimated to support 10.9 acres of biological soil crusts within scrub vegetation. Within riparian vegetation, the Project site is estimated to support 20.4 acres of biological soil. Within disturbed and barren land covers, the Project site is estimated to support 14.4 acres of biological soil crusts. The transmission line corridor is estimated to support 20.7 acres of biological soil crusts.

The Palo Verde Mesa Solar Project did not conduct surveys for biological soil crusts.

### *DRECP Riparian Vegetation Types*

Sensitive riparian types identified in the DRECP include Madrean warm semi-desert wash woodland/ scrub, Mojavean semi-desert wash scrub, Sonoran-Coloradan semi-desert wash woodland/scrub, southwestern North American riparian evergreen and deciduous woodland, and southwestern North American riparian/wash scrub. Sensitive wetland vegetation types identified in the DRECP include arid west freshwater emergent marsh, Californian warm temperate marsh/seep, North American warm desert alkaline scrub and herb playa and wet flat, and southwestern North American salt basin and high marsh (BLM 2016).

Some of the above-described communities contain microphyll woodlands that consist of drought-deciduous, small-leaved (microphyllus), mostly leguminous trees. This community commonly occurs in bajadas and washes where water availability is somewhat higher than the plains occupied by creosote bush, and has been called the "riparian phase" of desert scrub (BLM 2016). Microphyll woodlands are composed of the following alliances: desert willow, mesquite, smoke tree, and blue palo verde–ironwood.

There is one DRECP riparian vegetation type that occurs within the survey area: blue palo verde–ironwood woodland, which is within the Madrean warm semi-desert wash woodland/scrub macrogroup and the Sonoran–Coloradan semi-desert wash woodland/scrub group (BLM 2016). There are no DRECP wetlands within the survey area. The spatial distribution of this DRECP riparian vegetation community is presented in Figure 3.5-4, DRECP Riparian Vegetation, and acreages are presented in Table 3.5-3

**Table 3.5-3. DRECP Riparian Vegetation Communities Within the Combined Study Area**

| Macrogroup[1] | Group | Vegetation Community | Project Site (acres) | Transmission Line (acres) | Buffer/Other Survey Areas (acres) | Total (acres) |
|---|---|---|---|---|---|---|
| Madrean warm semi-desert wash woodland/scrub | Sonoran–Coloradan semi-desert wash woodland/scrub | Blue palo verde–ironwood woodland | 183.5 | 19.7 | 53.2 | 256.4 |

**Source:** BLM 2016.
**Notes**: DRECP = Desert Renewable Energy Conservation Plan; BLM = U.S. Bureau of Land Management.
[1] CNPS 2023a.

The Palo Verde Mesa Solar Project included a total of 182.6 acres of desert dry wash woodland. According to the Palo Verde Mesa Solar Project EIR, this community was considered equivalent to blue palo verde-smoke tree series and to CDFW desert riparian woodland wash. This was comprised of approximately 153.5 acres of desert dry wash woodland and 29.1 acres of disturbed desert dry wash woodland (Power Engineers 2012).

### *Dunes and Sand Resources*

The DRECP (BLM 2016) provided mapping of dune vegetation communities (i.e., North American warm desert dunes and sand flats) and dunes and sand resources. No dune vegetation communities occur in the CSA based on the BLM DRECP LUPA mapping; however, BLM DRECP LUPA dunes and sand resources were mapped in the CSA along the transmission line route to the substation south of I-10 (BLM 2016 Appendix D, Figure D-15). The Project-specific vegetation mapping did not identify dune vegetation communities within the CSA. Although the Project transmission line corridor south of I-10 is within the DRECP dunes and sand resources mapped area, the Project-specific mapping mapped this area as creosote bush scrub (*Larrea tridentata–Pleuraphis rigida, Larrea tridentata, Larrea tridentata-—Atriplex* polycarpa), big galleta

shrub-steppe (*Pleuraphis rigida*), blue palo verde–ironwood woodland (*Parkinsonia florida, Parkinsonia florida–Olneya tesota, Olneya tesota*), and disturbed habitat.

Aeolian transport and dunes and sand systems in the California deserts have been well studied (e.g., East et al. 2021; Lancaster 2014; Muhs et al. 2003). Additionally, numerous Project-specific assessments of sand transport have been conducted in the vicinity of the Colorado River Substation in association with other projects, including the Colorado River Substation (ESA PWA 2011), Genesis Solar Power Project (WorleyParsons 2010), Desert Quartzite Solar Project (Kenney GeoScience 2017), and Crimson Solar Project (Kenney GeoScience 2018). An inferred regional sand transport pathway in the eastern Mojave Desert of California is through Clark's Pass (Pinto Valley), extending northwest to southeast from the Dale Lake playa (east of Twentynine Palms) into the Ford–Palen dune fields of the Chuckwalla Valley (Lancaster 2014; Muhs et al. 2003). Dune systems in the Chuckwalla Valley are currently considered mostly stable, and the regional sand migration corridors are thought to no longer function as a continuous sand migration pathway. Sand sources in the Project vicinity are primarily from local sand sources associated with local fluvial systems (e.g., desert washes and alluvial fans) and not from a regional sand transport corridor (Kinney GeoScience 2017, 2018).

The Palo Verde Mesa Solar Project did not map any dune vegetation communities within the Project's study area.

## Aquatic Resources Delineation

The aquatic resources delineation was conducted by Dudek in June and July 2022, and in January, November, and December 2023, and consisted of both desktop and field investigations (Appendix I).

The USACE wetlands delineation was conducted in accordance with the 1987 USACE Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a). A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual (USACE 2008b) was used to determine the limits of non-wetland waters. Non-wetland waters were delineated on topographical maps in conjunction with Esri Field Maps on a mobile device paired with a Trimble GNSS R1 receiver. The width of each non-wetland water was determined in the field according to the OHWM manual. Wetland Determination Forms were completed for certain points within drainages or vegetation communities where a predominance of hydrophytic vegetation was present, and hydrology, vegetation, and soils were assessed to determine whether USACE three-parameter wetlands were present. USACE OHWM Forms were completed at representative cross-sections of non-wetland waters to capture their characteristics and widths. Dudek used the Beta Streamflow Duration Assessment Method for the Arid West (Mazor et al. 2021) stream duration assessment method within representative streams.

Waters of the state regulated by the RWQCB were mapped in accordance with the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2021). As described in these procedures, wetland waters of the state are mapped based on the procedures in USACE's 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987) and its 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008a). Non-wetland waters are mapped at the OHWM based on the procedures defined in USACE's 2008 A Field Guide to Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b).

Streambeds under the jurisdiction of CDFW were delineated using the Cowardin method of waters classification, which defines waters boundaries by a single parameter (i.e., hydric soils, hydrophytic

vegetation, or hydrology) (Cowardin et al. 1979). Additionally, CDFW jurisdictional areas were delineated based on watercourse characteristics present in the field, which include surface flow, sediment transportation and sorting, physical indicators of channel forms, channel morphology, and drainage swales. These characteristics are based on the CDFW guidance document A Review of Stream Processes and Forms in Dryland Watersheds (Vyverberg 2010) and the California Energy Commission's Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants (CEC 2014).

***Results of the Aquatic Resources Delineation***

The results of the aquatic resources delineation (Appendix I) concluded that there are 129.9 acres (358,365 linear feet) of non-wetland waters potentially regulated by the RWQCB and CDFW within the CSA. In addition, CDFW may regulate 30.9 acres of stream or lakebed beyond the OHWM (to top of bank) and 114.1 acres of associated riparian habitat (beyond top of bank). None of the features in the CSA are anticipated to be subject to USACE jurisdiction because these features are isolated and/or do not meet the relatively permanent standard and therefore do not meet the current definition of a water of the United States. However, a final determination would be made by USACE during the Approved Jurisdictional Delineation process. Figure 3.5-5, ~~Project Impacts to Aquatic Resources~~ Aquatic Resources Delineation, shows the jurisdictional delineation within the CSA. This mapping is preliminary until verified by the regulating agencies.

The Palo Verde Mesa Solar Project did not conduct an aquatic resources delineation. The EIR noted that several washes and a tributary to the Colorado River (i.e., McCoy Wash) were noted as terminating or passing through the Project area. McCoy Wash and several of the other washes entering the Project area were also noted by the EIR to be recognized by the National Wetlands Inventory. The EIR stated that these features may fall under jurisdictional protection (County of Riverside 2016).

## Special-Status Plants and Wildlife

Special-status species are those that have been afforded special recognition by federal, state, and/or local resource agencies or organizations; are often of relatively limited distribution; and typically have unique habitat conditions, which also tend to be in decline. Special-status criteria include the following:

- Officially listed or candidates for listing by the federal or California government as endangered, threatened, of special concern, or rare under FESA or CESA
- Plants or animals that meet the criteria for listing as rare or endangered, as described in CEQA Section 15380
- BLM Sensitive Species designated by the BLM California State Director (BLM 2023)
- Plants listed in the California Native Plant Society's Inventory of Rare and Endangered Plants of California as List 1 and 2 (CNPS 2024)
- Wildlife species identified by CDFW as Species of Special Concern (SSC) (CDFW 2025b)
- Species considered special status in local or regional plans, policies, or regulations, such as the Northern and Eastern Colorado Desert Coordinated Management Plan/Environmental Impact Statement (BLM 2002)
- Species protected under other statutes or regulations (e.g., MBTA, Bald and Golden Eagle Protection Act, Native Plant Protection Act)

## Special-Status Plant

Focused special-status plant surveys of the CSA were conducted in 2022, 2023, and 2024 (Appendix C). Field survey methods and mapping of rare plants conformed to the California Native Plant Society's Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special-Status Native Populations and Natural Communities (CDFW 2018), and General Rare Plant Survey Guidelines (Cypher 2002). The BRTR (Appendix C) identifies special-status plants with the potential to occur within the Project site and vicinity (approximately 5 miles); evaluates the probability of occurrence for each species based on habitat, elevational, and geographic ranges; and presents field survey results.

Two special-status plant species were identified during the special-status plant survey efforts: Abrams' spurge (*Chamaesyce abramsiana*; California Rare Plant Rank [CRPR] 2B.2) and Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*; CRPR 2B.2). The locations of these occurrences are depicted in Figure 3.5-6, Project Impacts to Special-Status Plant Species. Although not observed during the project-specific protocol-level surveys, Harwood's eriastrum (*Eriastrum harwoodii)* has a high potential to occur, and suitable habitat is present along the Phase 2 transmission line south of I-10. In addition, four species with CRPR 4 were observed in the CSA—Utah vine milkweed (*Funastrum utahense*), desert unicorn-plant (*Proboscidea althaeifolia*), and ribbed cryptantha (*Johnstonella costata*). Species with CRPR 4 are not considered rare but are limited in distribution or infrequent throughout a broader range in California (e.g., "watch list" species) (CNPS 2023b). Given that CEQA requires findings of significance for projects that "threaten to … reduce the number or restrict the range of a rare or endangered plant," these species will not be analyzed further. Additionally, these four species are not considered sensitive by BLM (2016).

### *Harwood's Milk-Vetch*

Harwood's milk-vetch has 84 records occurring within California and 54 in Riverside County. There are numerous occurrences of Harwood's milk-vetch in the CSA (CCH 2024). Harwood's milk-vetch is a CRPR 2B.2 species. This species is an annual herb that blooms January through May at elevations of 0 to 2,325 feet amsl. It occurs on desert dunes and Mojavean desert scrub, and sometimes in gravelly and sandy soils (CNPS 2024). There are approximately 583 Harwood's milk-vetch individuals within the CSA based on the Project-specific surveys. Locations of Harwood's milk-vetch within the CSA are shown in Figure 3.5-6.

### *Harwood's Eriastrum*

Harwood's eriastrum has 139 records occurring within California and 57 in Riverside County. There are known occurrences near the CSA (CCH 2024). Harwood's eriastrum is a CRPR 1B.2 species and is also considered sensitive by BLM (2016). This species is an annual herb that blooms March through June at elevations from 410 to 3,000 feet amsl. It occurs within Mojavean desert scrub and Sonoran desert scrub (CNPS 2024). Harwood's eriastrum has a high potential to occur, and suitable habitat is present along the transmission line south of I-10.

### *Abrams' Spurge*

Abrams' spurge has 144 records occurring within California and 47 in Riverside County. There are known occurrences near the CSA (CCH 2024). Abrams' spurge is a CRPR 2B.2. This species is an annual herb that blooms August through November at elevations from −15 to 4,295 feet amsl. It occurs within riparian scrub and Sonoran d0esert scrub (CNPS 2024). There are approximately 352 Abrams' spurge individuals within the CSA based on the Project-specific surveys. Locations of Abrams' spurge within the CSA are shown in Figure 3.5-6.

### *Cacti, Yucca, and Native Trees*

Native cacti, succulents, and trees are generally not ranked as special-status plants, but the harvesting of these native plants is regulated under the California Desert Protection Act (CFGC Sections 1900–1913) and the California Desert Native Plants Act (CDNPA) of 1981 (California Food and Agricultural Code Section 800001 et seq.; CFGC Sections 1925–1926). Any vegetation to be salvaged and removed from the CSA (such as cactus or yucca) would be subject to sale at appraised value (43 CFR 5420.0-6). If the cacti or yucca is salvaged and/or transplanted from BLM lands, as approved by BLM, then this resource is not subject to sale but remains in BLM ownership. The species that were observed in the CSA are listed below, with the number of each individual observed listed after the species name. The locations of the species are shown in Figure 3.5-7, Project Impacts to California Desert Plants ~~Act Species~~.

- Chuckwalla cholla (*Cylindropuntia chuckwallensis*), 29 observed
- Wiggins' cholla (*Cylindropuntia echinocarpa*), 294 observed
- Branched pencil cholla, 56 observed
- Ironwood, 611 observed
- Blue palo verde, 5,999 observed
- Honey mesquite, 15 observed
- California barrel cactus, 56 observed
- Ocotillo, 11 observed
- Beavertail pricklypear (*Opuntia basilaris*), 1 observed
- Catclaw acacia, 16 observed

The Palo Verde Mesa Solar Project did not conduct focused special-status plant surveys or California desert native plant surveys. Rather, a field survey was conducted to assess the potential for the Project site to support special-status species based on the reported habitat preferences and past occurrences of species within the region. A total of 9 special-status plant species were either detected within the study area or were determined to have potential to occur (Power Engineers 2012).

Harwood's milk-vetch was stated as being known to occur within the study area, while Harwood's eriastrum and Abrams' spurge were determined to have a potential to occur given the presence of suitable habitat within the study area. In addition, the Palo Verde Mesa Solar Project EIR states that Bitter rubberweed (*Hymenoxys odorata*) (CRPR List 2), and Dwarf germander (*Teucrium cubense* ssp. *depressum*) (CRPR List 2) are known to occur within the study area based on database searches (Power Engineers 2012).

## Special-Status Wildlife

Dudek conducted a suite of focused surveys and assessments to determine the presence or potential presence of sensitive biological resources. Dudek conducted surveys for special-status wildlife in 2019, 2022, 2024, and 2025. Focused surveys and assessments were performed for Mojave desert tortoise (*Gopherus agassizii*) and burrowing owl (*Athene cunicularia*). Mojave fringe-toed lizard (*Uma scoparia*; BLM Sensitive Species) was incidentally observed and has a high potential to occur along the transmission line corridor where there is dune habitat present. Because the proposed Project has a high likelihood to

support this species, focused surveys are not necessary to determine presence. Focused surveys conducted for the proposed Project are described in the BRTR (Appendix C).

During all wildlife surveys, biologists recorded all wildlife species observed, regardless of status. All special-status wildlife that are anticipated to have a potential to occur on the Project site or were observed during field surveys are listed and described in Appendix C. A detailed discussion of all special-status wildlife analyzed for the Project, including their ranges and habitat requirements, is presented in the BRTR (Appendix C). Species present or with high potential to occur are reviewed further below.

No focused wildlife surveys were conducted in support of the Palo Verde Mesa Solar Project; however, a field survey was conducted to assess the potential for the Project site to support special-status species based on the reported habitat preferences and past occurrences of species within the region (Power Engineers 2012).

***Mojave Desert Tortoise; Federal Threatened, State Endangered, DRECP Focus Species***

Typical habitat for Mojave desert tortoise includes creosote bush (*Larrea tridentata*) scrub in areas where precipitation ranges from 2 inches to 8 inches per year, with a relative high diversity of perennial plants and high productivity of ephemeral plants. Throughout most of the Mojave Desert, Mojave desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants. Soils must be friable enough for digging burrows, but firm enough so that the burrows do not collapse (USFWS 2008). Although populations of Mojave desert tortoises are not generally known to inhabit elevations much above 4,000 feet amsl, they can occur from below sea level to an elevation of 7,300 feet amsl. Occupied habitat varies from flats and slopes dominated by creosote bush scrub at low elevations, to rocky slopes in blackbrush (*Coleogyne ramosissima*) and juniper (*Juniperus californica*) woodland ecotones at high elevations (USFWS 2008).

Mojave desert tortoise surveys were conducted within the Desert Tortoise Survey Area in 2022 and 2024 (see Appendix C). All survey efforts were protocol-level Mojave desert tortoise surveys except those conducted in July 2024. The July 2024 survey efforts were conducted outside of the active tortoise periods (i.e., April through May and September through October) per the USFWS's Desert Tortoise (Mojave Population) Field Manual (USFWS 2009); therefore, the July 2024 survey efforts were not considered to be protocol-level surveys. Nonetheless, the data collected during the July 2024 survey efforts are included in this report because they provide information on desert tortoise burrow resources within the CSA. All survey efforts, except the July 2024 surveys, were conducted in accordance with protocols established in USFWS's Desert Tortoise (Mojave Population) Field Manual (USFWS 2009).

No sign of desert tortoise (i.e., scat, tracks, courtship rings, drinking depressions, bone fragments) was observed during the protocol-level presence/absence surveys conducted within the Desert Tortoise Survey Area, nor during the non-protocol surveys conducted within the Project site during July 2024. A total of 83 animal burrows were documented to be large enough to accommodate an adult tortoise (s 3.5-8, Project Impacts to Desert Tortoise Burrow Locations). Of the 83 identified burrows, 76 burrows were categorized as Class 4 and 4 burrows were categorized as Class 5. Both Class 4 and 5 burrows indicate the burrow originated with a species other than desert tortoise, often American badger or desert kit fox. One burrow was categorized as Class 3 and two burrows were not classes. These burrows were likely created or modified by desert tortoises but are currently inactive and degraded.

USGS developed a statistical probability model for desert tortoise occurrence for the Mojave Desert and portions of the Sonoran Desert in California that provides a spatial depiction of predicted desert tortoise

occupancy on a scale ranging from very low (0.0) to very high (1.0) (Nussear et al. 2009). For regional planning purposes, the DRECP used the Nussear et al. (2009) model with model values of 0.5 or higher for identifying desert tortoise suitable habitat. Within the Project site, the predicted desert tortoise occupancy model values range from 0.0 to 0.2. Along the Project's transmission line route, the predicted desert tortoise occupancy model values range from 0.1 to 0.3.

The Palo Verde Mesa Solar Project EIR states that it was determined that desert tortoise has a low potential to occur within the solar facility site and a moderate potential to occur within the transmission line corridor area; however, as stated previously, no protocol/focused wildlife surveys were conducted to determine presence or absence of desert tortoise (County of Riverside 2016).

***Mojave Fringe-Toed Lizard; State Species of Special Concern, BLM Sensitive, DRECP Focus Species***

Mojave fringe-toed lizard is only found in, and immediately around, areas of the Mojave Desert that contain deposits of aeolian or fine windblown sands (Jones and Lovich 2009). These sands are typically associated with dunes, washes, hillsides, margins of dry lakes, and sandy hummocks from 295 feet to 2,986 feet amsl (76 FR 61321–61330; Norris 1958; Stebbins 2003). Sand dune ecosystems, including their source sand and sand corridors, are necessary for the long-term survivorship of aeolian sand specialists (Barrows 1996).

Mojave fringe-toed lizard was incidentally observed during 2024 surveys along the Project's transmission line route south of I-10, where there is sand/dune habitat present, and has a high potential to occur along the transmission line corridor south of I-10.

The Palo Verde Mesa Solar Project EIR states that Mojave fringe-toed lizard is present within transmission line corridor. No individuals were detected during the survey of the solar facility site; however, the literature review revealed a substantial population is present, south of I-10 in association with sand sheets and dune habitat (Power Engineers 2012).

***Western Burrowing Owl; State Candidate, USFWS Bird of Conservation Concern, BLM Sensitive, DRECP Focus Species***

Burrowing owl is a grassland species that requires open habitat, well-drained soils, and areas with sparse vegetation (Gervais et al. 2008; Poulin et al. 2020). However, burrowing owls also inhabit a variety of landscapes, including steppes, deserts, prairies, and agricultural lands, as well as along margins of airports, agricultural roadsides, parks, and golf courses (Gervais et al. 2008; Poulin et al. 2020). Suitable habitat also includes areas with burrows or burrow-like structures (e.g., culverts) (Gervais et al. 2008). Suitable breeding sites consist of low, sparse vegetation (Clayton and Schmutz 1999; James et al. 1991); these sites are often associated with high densities of burrowing mammals (Poulin et al. 2020), such as ground squirrels (*Otospermophilus beecheyi*), and always have available perching sites, such as fences or raised rodent mounds (Johnsgard 1988). Burrowing owls typically forage in areas with low-growing, sparse vegetation (Poulin et al. 2020). Burrowing owls are opportunistic feeders and prey on arthropods, small mammals, birds, amphibians, and reptiles (Karalus and Eckert 1987; Poulin et al. 2020).

Burrowing owl focused surveys and burrow mapping efforts were conducted within the 2022 Burrowing Owl Survey Area beginning in April 2022, as detailed in the BRTR (Appendix C). These surveys were conducted in accordance with the protocols established in CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012).

Protocol breeding season surveys for burrowing owl were conducted across the entire CSA in 2025. The 2025 survey efforts resulted in a total of 3,783 potentially suitable burrowing owl burrows being mapped

within the CSA. Of these, 23 burrows were noted to have burrowing owl sign (i.e., whitewash, pellets, and/or prey remains/bones). In addition, there were five (5) observations of burrowing owl within the Project site on five (5) separate dates (specifically March 4, 5, 10, 17, and 21, 2025). However, no active burrows/nests were documented during the 2025 breeding season.

Wildlife cameras were deployed at 20 of the 29 suitable burrow locations noted to have burrowing owl sign to gain a better understanding of how the Project site and transmission line corridor were being used by burrowing owl during the 2025 breeding season, based on the above mentioned observations of burrowing owl during the first survey pass. The cameras were run for a minimum of 5 consecutive days for 24 hours per day with a 1–minute time delay between trigger events. The nine (9) remaining burrows initially noted to contain burrowing owl sign were not monitored with wildlife cameras as they were no longer suitable at the time of camera deployment due to having been partially or completely backfilled, or collapsed after the initial survey pass. Survey passes 3 and 4 were also negative for observations of burrowing owl individuals and for any new burrowing owl sign at burrow locations. Many of the burrows mapped during the initial survey pass had been backfilled or collapsed and were no longer suitable. Observations of round-tailed ground squirrels (*Xerospermophilus tereticaudus*) and desert kit fox (*Vulpes macrotis arsipus*) were noted and are likely the cause of these changes to burrow status.

In summary, while the 2025 protocol survey efforts detected both individual burrowing owls as well as burrowing owl sign at burrow locations within the Project site, transmission line corridor, and 500-foot buffer, no burrowing owl breeding was documented within the Project site during the 2025 breeding season. Figure 3.5-9, Project Impacts to Burrow Resources, depicts the locations of all suitable burrowing owl burrows mapped during the 2025 protocol survey efforts.

The Palo Verde Mesa Solar Project EIR states that protocol burrowing owl surveys conducted in 2011 and 2013 concluded that while the solar facility site contains suitable habitat for this species, no verified burrowing owl burrows were identified. However, three active burrows were identified within the transmission line study area (County of Riverside 2016).

***Loggerhead Shrike; State Species of Special Concern (nesting), Bird of Conservation Concern***

Preferred habitat for loggerhead shrikes (*Lanius ludovicianus*) is open areas that include scatter scrubs, trees, posts, fences, utility lines, other structures that provide hunting perches with views of open ground, and nearby spiny vegetation or human-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey items for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canyon cover are most important (Yosef 1996).

At least one loggerhead shrike was observed during survey efforts in 2024 within the southeastern portion of the Project site, and there were several incidental observations of at least one individual during the 2025 survey efforts within the northeastern portion of the Project site, as well as within the transmission line corridor, south of I-10.As such, the species has a high potential to nest within the CSA.

The Palo Verde Mesa Solar Project EIR states that loggerhead shrike was observed during biological surveys conducted in 2011 and that the project site contains suitable nesting habitat for this species (County of Riverside 2016).

***LeConte's Thrasher, State Species of Special Concern and BLM Sensitive***

LeConte's thrasher (*Toxostoma lecontei*) is found in Southern California inhabiting open desert washes, desert scrub, alkali desert scrub, and desert succulent shrub habitats (Dobkin and Gran holm 2005). They tend to prefer gently rolling, well-drained slopes with bare ground or spare grass (Fitton 2008). The majority of their diet consists of insects that they find within the leaf litter under desert shrubs (Sheppard 1996). LeConte's thrashers do not migrate; they establish a home range and territory that are based on their nesting phase (Sheppard 1996).

This species has a moderate potential to nest within the CSA. This species was not observed during the survey efforts for the Project; however, suitable foraging and nesting habitat occur within the CSA.

The Palo Verde Mesa Solar Project EIR states that LeConte's thrasher was observed during biological surveys conducted in 2011 and that the project site contains suitable nesting habitat for this species (County of Riverside 2016).

***Burro Deer, California Protected Game Species and DRECP Focus Species***

Burro deer (*Odocoileus hemionus eremicus*) is a subspecies of mule deer (*Odocoileus hemionus*) that inhabits dry desert wash woodland communities within the Sonoran Desert, specifically the Colorado Desert region near the Colorado River. Most burro deer show seasonal movement patterns, often moving down into the desert areas for water or forage resources; however, some burro deer remain residents along the Colorado River. During the extreme heat of summer, this species will often concentrate along the Colorado River and the Coachella Canal where there are areas of dense microphyll woodland communities that provide forage and cover. As the heat subsides, burro deer tend to move up large desert washes into the nearby mountains and foothills (Celentano and Garcia 1984, as cited in BLM 2015).

Burrow deer has a high potential to occur within the CSA. This species was not observed during the survey efforts for the Project; however, suitable foraging habitat occurs in the CSA.

An analysis of burro deer potential to occur was not included in the Palo Verde Mesa Solar Project EIR.

***Desert Kit Fox; California Protected Furbearing Mammal***

Desert kit foxes occupy generally arid regions that receive less than approximately 16 inches of rain annually (Zoellick 1985). They are associated with desert scrub, alkali scrub, creosote brush scrub, creosote–white bursage desert scrub, and mixed salt desert scrub vegetation communities (O'Farrell and Gilbertson 1986; Zoellick 1985; Zoellick et al. 1989). Ideal terrain is flat and open but slopes up to 15% constitute fair habitat; soils with sandy or loamy friable soils for burrowing are required (O'Farrell and Gilbertson 1986; USFWS 2010). Kit foxes are primarily carnivorous, feeding predominantly on black-tailed jackrabbits (*Lepus californicus*), desert cottontails (*Sylvilagus audubonii*), kangaroo rats (*Dipodomys* ssp.), and ground squirrels, but also occasionally on other rodents, insects, reptiles, birds, bird eggs, and vegetation (Hall 1981).

This species is present within the Project site, as it was incidentally observed on several occasions during 2025 survey efforts and was detected at several burrow camera locations within the CSA. Figure 3.5-9 shows the locations of burrows/dens determined to be suitable for desert kit fox during the 2025 survey efforts, and Figure 3.5-10, Special-Status Wildlife Sightings, depicts the locations of incidental observations of desert kit fox within the CSA.

The Palo Verde Mesa Solar Project EIR states that while no desert kit foxes were detected during the survey efforts, potential desert kit fox burrows and complexes were observed throughout the entire solar array site and within the transmission line corridors (County of Riverside 2016).

***American Badger; State Species of Special Concern***

American badger is generally associated with dry, open, treeless regions; prairies and grasslands; low-intensity agriculture (e.g., pasture and dry land crops); drier, open shrublands and forests; parklands; and cold desert areas (Long 1973; Zeiner et al. 1990).

American badger was detected within the transmission line corridor during the 2025 burrow camera study. Figure 3.5-9 depicts the burrow location that included American badger sign (i.e., scratch marks along the side walls of the burrow), and Figure 3.5-10 depicts the location of the American badger observation via wildlife cameras.

The Palo Verde Mesa Solar Project EIR states that while American badger was not detected during survey efforts, this species may occur regionally and could intermittently occur in unmanaged portions of the solar facility site or transmission line corridor (County of Riverside 2016).

***Monarch Butterfly, Federal Proposed Threatened (Overwintering Population)***

Monarch butterfly (*Danaus plexippus*) is a seasonally migrating species, migrating between overwintering sites and spring breeding areas. Milkweed plants (*Asclepias* spp.) are critical to the survival of this species, and distribution of the species is controlled by the distribution of various milkweeds. The species' eggs are deposited and hatch on the underside of leaves of the milkweed plant. Upon hatching, the larvae feed on the fine hairs on the leaves of the plant and stay on the same plant throughout its molting stages. After molting, the larvae leave the milkweed and construct its chrysalis elsewhere. However, once an adult monarch butterfly emerges from the chrysalis, it soon returns to a milkweed plant for foraging and shelter (Urquhart 1987).

This species is not expected to overwinter in the CSA. While rush milkweed (*Asclepias subulata*) and one white-stemmed milkweed plant (*Asclepius albicans*) was documented as occurring within the CSA, there were no observations of any monarch butterflies during Project survey efforts. Nonetheless, milkweed is both a nectar and host resource for monarch butterflies; therefore, there is a potential for monarch butterflies to be found within the CSA. Western monarch is known to migrate in the spring and fall through Blythe, California. Tagging evidence, including one monarch tagged in Tucson in early November was seen in early February in Palm Desert, California. This data demonstrates that the Project site is located within a documented migration corridor for monarch butterfly (Southwest Monarch Study 2025). Monarch butterflies are not expected to overwinter within the CSA, as the CSA lacks eucalyptus/pine/cypress groves and given its distance from the California coast.

Sampling surveys were conducted to characterize and estimate the extent of milkweed species, the monarch butterfly host and nectar plant species, in the Project site and transmission line corridor. A total of 72, 2.5-acre randomly selected sampling plots (3 plots were reduced size at site boundary) were surveyed for milkweed species, stratified by vegetation grouping, and included 23 plots in scrub vegetation, 5 plots in riparian vegetation, 38 plots in disturbed and barren land covers, and 6 plots in the transmission line corridor. Within the total 173.8 acres of sampling plots surveyed, milkweed was recorded in 12 out of the 72 sampling plots, including 6 of the 23 scrub plots and 6 of the 38 disturbed and barren plots. Milkweed was not recorded in the 5 riparian plots or in the 6 transmission line plots. All milkweed species recorded were rush milkweed, with the exception of a single individual of whitestem milkweed (*Asclepias albicans*). Within the 6 scrub plots with milkweed, a total of 18 individuals were

mapped, ranging in number of individuals per plot from 1 to 4. This equates to a milkweed density in scrub vegetation from 0.40 to 1.62 milkweed individuals per acre in plots with milkweed, and a total average density across all scrub plots of 0.32 milkweed individuals per acre. Within the 6 disturbed and barren plots with milkweed, a total of 53 individuals were mapped, ranging in number of individuals per plot from 2 to 18. This equates to a milkweed density in disturbed and barren land covers ranging from 0.81 to 7.28 milkweed individuals per acre in plots with milkweed, and a total average density across all disturbed and barren plots of 0.56 milkweed individuals per acre. Additionally, 169 milkweed individuals were recorded outside sampling plots. Using the average milkweed density from the milkweed sampling results, scrub vegetation within the Project site is estimated to support a total of 315 milkweed individuals, and disturbed and barren land covers within the Project site is estimated to support a total of 669 milkweed individuals.

An analysis of monarch butterfly potential to occur was not included in the Palo Verde Mesa Solar Project EIR.

***Nesting Birds and Raptors***

The CSA supports suitable habitat for nesting and migratory bird species protected under the MBTA. Bird species observed in the CSA are listed in Appendix C of the BRTR (Appendix C), and numerous other common bird species have the potential to nest in the CSA. Removal of vegetation considered suitable for nests and indirect effects to nesting (e.g., noise) have the potential to impact protected bird species if conducted during the nesting season (i.e., January 15 through September 15).

The Palo Verde Mesa Solar Project EIR states that several bird species protected by the MBTA were observed on and adjacent to the project site during surveys and that the project site supports habitat for nesting birds (County of Riverside 2016).

***Native Bats***

Several bat species occur within the region and could use the CSA for foraging, including Arizona myotis (*Myotis occultus*; California SSC), cave myotis (*Myotis velifer*; California SSC and BLM Sensitive), pallid bat (*Antrozous pallidus*; California SSC and BLM Sensitive), Townsend's big-eared bat (*Corynorhinus townsendii*; California SSC and BLM Sensitive), hoary bat (*Lasiurus cinereus*), western yellow bat (*Lasiurus xanthinus*; California SSC), and California leaf-nosed bat (*Macrotus californicus*; California Species of Special Concern and BLM Sensitive). Although the CSA provides some suitable foraging habitat for the above bat species, these bat species have a low potential to roost within the CSA due to lack of preferred roosting habitat (i.e., caves/mines, cliffs, or trees with suitable foliage). As such, the Project is not anticipated to result in direct impacts to native bat species.

The Palo Verde Mesa Solar Project EIR also states that while several bat species including pallid bat, hoary bat, California leaf-nosed bat, Arizona myotis, and cave myotis, could forage within the project site, the project site and surrounding region lacks roosting habitat, therefore these species are not expected to roost within the project site (County of Riverside 2016).

## Wildlife Movement

Wildlife corridors and habitat linkages are landscape features that provide for wildlife movement and connectivity between wildlife populations, reducing the effects of habitat fragmentation and isolation. Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the movement of animals. They contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and

mating and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires). Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals, and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal (Penrod et al. 2012).

The Project site is in the easternmost portion of Riverside County and west of the City of Blythe. Lands to the east of the Project site consist of a large agricultural zone that continues east to the Colorado River. An existing, large-scale solar farm is immediately northwest of the Project site. Lands to the south consist of a small-scale solar farm, the Blythe Airport, agricultural fields, and I-10. Finally, lands north of the Project site consist of open, undeveloped lands that include McCoy Wash, connecting the McCoy Mountains west of the Project site and the Little Maria and Big Maria Mountains north of the Project site to the agricultural zone east of the Project site (Figure 3.5-11, Wildlife Corridors and Linkages). Currently, there are little to no restrictions to wildlife movement between Blythe, the McCoy Mountains to the west, the Little Maria and Big Maria Mountains to the north, and I-10 to the south.

The California Desert Linkage Network (CDLN) Project (Penrod et al. 2012) provides a detailed habitat connectivity analysis for the deserts of California. The CDLN Project modeled linkage areas between landscape blocks in the California desert region, and the McCoy Wash CDLN linkage area was modeled in northeastern portion of Project site and the Mule–McCoy CDLN linkage area was modeled along the Phase 2 transmission line route (Penrod et al. 2012). These linkage areas coincide with areas mapped as by CDFW as Areas of Conservation Emphasis Terrestrial Connectivity Rank 4 (Figure 3.5-12, Terrestrial Connectivity – Areas of Conservation Emphasis [ACE]; CDFW 2019).

McCoy Wash provides wildlife movement opportunities between the agricultural zone west of the Colorado River and the McCoy Mountains. Although the McCoy Mountains do not generally provide suitable habitat for the movement of American badgers, desert kit foxes, or desert tortoises, movement opportunities for these species exist north of the McCoy Mountains and west toward the Palen Mountains. The Project site does not overlap the entire width of the mapped linkage area. Although McCoy Wash flows through the northeastern portion of the Project site, this feature would be avoided by the Project. In addition, there are open, undeveloped lands immediately north of the Project site that would continue to provide for relatively unrestricted movement of wildlife, thus still allowing this mapped linkage area to be functional. Despite complete fencing of nearby solar sites (i.e., McCoy Solar Energy Project, Blythe Solar Power Project, and Arlington Solar Energy Center), these sites have retained habitat usefulness for desert kit fox throughout the construction and post-construction phases based on observations of the species near these sites.

The Palo Verde Mesa Solar Project EIR states that the project area could be used as a seasonal or non-seasonal movement corridor by various wildlife species. It describes the project site as generally lower quality corridor habitat due to its low cover of native forage, but that wildlife may use these areas to pass between wilderness areas in the mountains and surrounding environment. It states that the McCoy wash may provide funneling areas for wildlife to pass through as native vegetation remains intact within this area (County of Riverside 2016).

## 3.5.3 Impact Analysis

In the impact assessment presented in this Supplemental Environmental Impact Report (SEIR), potential direct, indirect, and cumulative impacts of the Project are identified and disclosed. 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). Direct and indirect impacts include those from development, operation and maintenance (O&M), and decommissioning of the Project.

The Palo Verde Mesa Solar Project EIR determinations are summarized under each threshold and species/resources. Applicable significance conclusions are compared to those of the Palo Verde Mesa Solar Project.

## Methodology

The existing biological resources with potential to occur within the Project site (described in Section 3.5.2, Environmental Setting; Appendix C, BRTR; and Appendix I, Aquatic Resources Delineation Report) were used to determine biological resources within the CSA. The potential impacts of the Project are then determined based on how the Project could impact the biological resources according to the criteria specified below.

## Criteria for Determining Significance

Section IV of Appendix G to the State CEQA Guidelines addresses typical adverse effects to biological resources and includes the following threshold questions to evaluate a project's impacts on biological resources. Would the Project:

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

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

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?

Significance thresholds set forth in Riverside County's Environmental Assessment Checklist are derived from Section IV of Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact on biological resources if construction and/or operation of the Project would:

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

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12).

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

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service.

f) 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.

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Each potential impact was evaluated to determine if it would be significant and, if so, if feasible mitigation would reduce its impact to less than significant. There are three categories of measures designed to avoid, minimize, or mitigate Project impacts to biological resources:

- Project-Specific Applicant Proposed Measures (APMs) related to biology. The Applicant has committed to implementing APMs to avoid and minimize the effects of the Project on biological resources for the entire Project on BLM-administered lands and private lands.
- DRECP Conservation and Management Actions (CMAs) would provide additional protection of biological resources on BLM-administered lands. The Project's conformance with these potentially applicable biological resource CMAs would be determined by BLM.
- Mitigation Measures (MMs) to supplement the APMs, where needed, to reduce significant or potentially significant impacts to the extent feasible under CEQA. The MMs specify further detail, such as performance standards and reporting requirements, to ensure mitigation will effectively avoid or substantially lessen significant or potentially significant impacts to the extent feasible, consistent with CEQA.

In addition to the APMs, CMAs, and MMs, the Applicant would likely need to obtain multiple permits and approvals for the Project, and authorizations issued by regulatory agencies (such as CDFW, BLM, and USFWS) would likely include conditions of approval for the same species and resources analyzed in this SEIR. Those additional conditions may be more or less stringent than the potentially feasible measures identified in this SEIR to avoid or substantially lessen significant or potentially significant impacts under CEQA. 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.

This discussion of impacts to biological resources does the following:

- Describes each potential impact to biological resources according to a series of significance criteria identified by the State CEQA Guidelines and County thresholds.

- Identifies which APMs or MMs would avoid or substantially lessen significant or potentially significant impacts to the extent feasible.
- Identifies potential CMAs necessary for BLM lands.
- Provides 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 feasible mitigation.

## Environmental Impacts

This section includes an examination of the Project's impacts to biological resources per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines, as identified above.

**Direct permanent impacts** refer to complete loss of a biological resource. For purposes of this SEIR, it refers to the area where vegetation clearing, grubbing, or grading replaces biological resources. Direct permanent impacts were quantified by overlaying the proposed impact limits onto the biological resources map. Direct permanent impacts include the development of the battery energy storage system (BESS) site, panel locations, stormwater facilities, O&M building, roads, and the substation. A small number of permanent impacts would be associated with the installation of new poles along the transmission line alignment.

**Direct temporary impacts** refer to temporary loss of a biological resource. For the purposes of this SEIR, it refers to the area where vegetation would be cleared but then restored to pre-existing conditions. Direct temporary impacts include laydown areas within the solar site and associated with installing new polls, as well as temporary construction pull-sites for stringing the 230-kilovolt transmission line.

**Indirect impacts** are reasonably foreseeable effects caused by a Project's implementation on remaining or adjacent biological resources outside the direct disturbance zone. For purposes of this SEIR, indirect impacts may affect areas outside the disturbance zone. Indirect impacts may be short term and construction related, or long term and associated with development in proximity to biological resources.

**Avoidance** in this SEIR refers to areas within the CSA that would be fully avoided and left in their natural state. The proposed Project has been sited to avoid the McCoy Wash and a large unnamed wash in the southern portion of the Project site. Avoidance of the McCoy Wash and the large unnamed wash would be protected via deed restriction or similar mechanism.

The Project would involve construction, O&M, and eventual decommissioning of a solar energy facility and BESS facility, along with associated infrastructure. The Project would result in potential short-term and long-term direct and indirect impacts to biological resources that are addressed in this section of the SEIR. The impacts discussion is organized by the County of Riverside's CEQA significance criteria. The direct and construction-related indirect impacts are analyzed for each specific resource under the applicable significance criteria.

In addition to the potential direct and construction-related indirect impacts associated with the proposed Project, long-term, operation-related indirect impacts could occur to vegetation communities, including riparian habitat, special-status plants, special-status wildlife, jurisdictional waters of the United States/State, and wildlife movement. O&M and decommissioning could also cause indirect impacts to these special-status or sensitive biological resources. During O&M, impacts would be limited to the repair and maintenance of solar panels, associated electrical components, O&M facilities, access roads, fencing, drainages, and culverts. Vegetation trimming would occur infrequently and in localized areas, without the

use of heavy equipment for routine operations. Ground disturbance could result in soil erosion, and herbicide use for weed management may degrade adjacent non-target vegetation and wildlife habitat.

Washing of solar panels would introduce additional water to the site, potentially affecting vegetation composition or persistence. However, panel washing would occur infrequently (up to 4 times annually) and only if natural rainfall is insufficient to clear dust and debris. No chemical agents would be used for washing, and the additional water is not expected to significantly alter vegetation communities or wildlife habitats.

Fencing would be wildlife-friendly, maintaining wildlife movement through the site. Birds may face risks of injury from collisions with solar panels or electrocution from the transmission line. Herbicide applications to treat invasive weeds during O&M may pose risks to terrestrial and aquatic wildlife. Persistent herbicides could harm wildlife through ingestion of treated plants or contact with treated soil (e.g., digging or rolling). Ground disturbance associated with maintenance may directly crush or bury wildlife in repair areas. Additionally, maintenance activities may temporarily increase human presence, opportunistic predation, noise, dust, night lighting, and vehicle traffic, potentially disrupting wildlife behavior or causing mortality.

Decommissioning impacts would resemble those during construction, occurring primarily in previously disturbed areas. Activities would involve similar equipment and workforce as construction, but would be less intensive, including the removal of all equipment, cables, facilities, primary roads, and concrete pads. Habitat disturbance may result from dismantling and transporting materials or site remediation. The Project would be decommissioned following an agency-approved Closure and Decommissioning Plan, with most components recycled or reused. The site would then be revegetated with native plants and reseeded as required by the Closure and Decommissioning Plan.

Potential direct and indirect impacts from O&M and decommissioning would be minimized, avoided, or offset through measures such as biological monitoring by qualified biologists, worker training regarding sensitive biological resources, flagging and surveying work areas, weed management, restoration of disturbed areas, and the protection of wildlife and special-status species.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** Overall, the 2017 Palo Verde Mesa Solar Project EIR determined that development of the Project would result in less than significant impacts with implementation of mitigation measures listed in the 2017 Palo Verde Mesa Solar Project EIR. The Palo Verde Mesa Solar Project EIR determined, as a result of ground-disturbing construction activities, that development of the Project would result in significant direct and indirect impacts to non-listed[5] special status species and jurisdictional water resources. The EIR determined that although the ground disturbing activities would have a variety of direct and indirect impacts to biological resources within the Project site, impacts would be less than significant with implementation of MM-BIO-1 through MM-BIO-10.

***Threshold a: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?***

*LESS THAN SIGNIFICANT*. The Project CSA is not within an area covered by an adopted Habitat Conservation Plan, a Natural Community Conservation Plan, or other approved local or state conservation plan. However, the DRECP is generally considered a regional conservation plan relevant to review under CEQA

[5] The 2017 EIR refers to desert tortoise as a non-listed special-status wildlife species; however, this species was federally listed in 1990 and is addressed as a listed species in this SEIR.

because it serves as a tool for identifying the most appropriate lands for renewable energy development within Riverside County. The DRECP is a LUPA that applies to BLM-administered lands only, and the Project components on BLM-administered lands would be evaluated for consistency with the DRECP by BLM. The Project is not required to be consistent with the DRECP from a regulatory compliance perspective on private lands because the County of Riverside, as the land agency having jurisdiction over the Project components located on private lands, did not adopt the DRECP.

The Project would not conflict with the DRECP land use designations as the Project site is located within lands designated by the DRECP for solar, wind, and geothermal development. Additionally, BLM would review the Project components located on BLM-administered lands for conformance with the DRECP, including the CMAs designed to protect biological resources on BLM-administered lands. Therefore, approval of the Project under CEQA would not result in significant impacts to the environment because of a conflict with an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state Habitat Conservation Plan. Impacts would be less than significant.

The 2017 Palo Verde Mesa Solar Project EIR concluded that the effects from the Project would be less than significant, as the Project site was not located within areas that contain provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat (County of Riverside, 2016). This is consistent with the findings of the Proposed Project.

***Threshold b: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. The Project has the potential to impact one federal or state endangered or threatened species, Mojave desert tortoise. No live desert tortoise or active signs of presence were observed nor documented in the Desert Tortoise Survey Area during the Project-specific survey efforts; however, there were 83 potentially suitable desert tortoise burrows documented during survey efforts in CSA (Appendix C). These 83 burrows consist of 76 Class 4 burrows, 4 Class 5 burrows, 1 Class 3 burrows, and 2 burrows that are not classed. Burrows classed as a 4 or 5 are burrows that were likely created by species other than Mojave desert tortoise, often American badger or desert kit fox. A Class 3 burrow indicates the burrow was likely created or modified by a Mojave desert tortoise but is currently inactive and degraded. (Figure 3.5-8, Project Impacts to Desert Tortoise Burrow Locations).

The USGS occupancy model for desert tortoise within the Project site ranged from very low to low (model values 0.0 to 0.2), and in the transmission line route are in the low range (model values 0.1 to 0.3).

If present in the Project site during construction, O&M, or decommissioning, potential direct impacts to desert tortoise could include mechanical crushing of individuals or burrows by vehicles and construction equipment, mortality or injury resulting from vehicle collision, entrapment within trenches or construction materials, increased predation from common raven, and habitat loss. Potential indirect impacts to desert tortoise could include disruption of tortoise behavior and movements, noise and vibration from construction equipment, spread of invasive weeds that degrade habitat value, and increased human presence. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts. Project-specific surveys for the site and transmission line route did not result in observations of live individuals or active desert tortoise sign, and the Project site is not in an area of moderate or high probability of occupancy; therefore, the Project is not expected to result in a substantial impact on the local Mojave desert tortoise population. The portions of the Project site on BLM-administered lands are within a DRECP Development Focus Area that was identified for renewable energy

development and was determined by the USFWS as an area that would not likely jeopardize the continued existence of desert tortoise.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to desert tortoise: APM-BIO-1 (Pre-Construction Survey for Desert Tortoise), APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), APM-VR-1 (Light Control), and APM-WAT-1 (Preparation of a Stormwater Pollution Prevention Plan).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to desert tortoise: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-6 (Subsidized Predators Standards), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-IFS-2-9 (Desert Tortoise CMAs), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen potential impacts, the Project could result in significant impacts to desert tortoise, including mortality or injury, if they are present on the private land portions of the Project site during construction, O&M, and/or decommissioning, absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to desert tortoise. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures, including those for desert tortoise. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site, including specific training related to desert tortoise. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site, including measures that would minimize the effects to Mojave desert tortoise, if present. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-9** (Desert Tortoise Protection) would require implementation of multiple measures to protect desert tortoise, including qualified desert tortoise biologists monitoring Project activities within desert tortoise habitat, specifications related to handling and stopping work, worker training, pre-construction surveys, exclusion fencing, avoidance, and notifications for dead or injured tortoises. **MM-BIO-10** (Raven Management) would require payment of a fee for regional raven management and other measures to be implemented on the site to avoid and minimize raven predation on desert tortoise. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for desert tortoise. With implementation of the APMs as supplemented by the MMs, the impact of the Project on Mojave Desert tortoise on private lands would be **less than significant with mitigation** which is consistent with the findings for the Palo Verde Mesa Solar Project.

The 2017 Palo Verde Mesa Solar Project EIR concluded that desert tortoise had a moderate potential to occur within the transmission corridor and a low potential to occur within the solar facility area. As such, it was determined that the Project could result in direct and indirect impacts to desert tortoise; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016).

While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include minimization of impacts to native vegetation (**MM-BIO-3**), compensatory mitigation for impacts to native vegetation (**MM-BIO-13**) and conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to desert tortoise habitat, and to comply with the DRECP, implemented in 2016.

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

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. The Project has the potential to impact candidate, sensitive, or special-status wildlife and plant species, as described below. This is the same conclusion reached in the 2017 Palo Verde Mesa Solar Project EIR.

## Candidate, Sensitive, or Special-Status Wildlife Species

### *Burrowing Owl*

Burrowing owl is a USFWS Bird of Conservation Concern, California Candidate species for listing and Species of Special Concern, and BLM Sensitive species. The 2025 protocol breeding season surveys for burrowing owl resulted in a total of 3,669 acres potentially suitable burrowing owl burrows being mapped within the Project site, transmission line corridor, and 500-foot buffer. Of these, 32 burrows were noted to contain potential burrowing owl sign (i.e., whitewash, pellets and/or prey remains/bones). In addition, biologists documented six (6) observations of an individual burrowing owl within the Project site on five (5) separate dates during the first survey pass in March 2025. However, no active nests/burrows were documented during the 2025 protocol breeding season surveys. Therefore, burrowing owl is considered to be present within the CSA and has a moderate potential to nest within the CSA.

If present within the Project site during construction, O&M, or decommissioning, potential direct impacts to burrowing owls could include mortality due to collisions, crushing of active burrows by vehicles or equipment, collision with Project facilities, loss of active nests or fledglings, and habitat loss (Figure 3.5-9, Project Impacts to Burrow Resources). Potential indirect impacts to burrowing owls if present could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence affecting behavior. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to burrowing owl, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), and APM-BIO-5 (Pre-Construction Nesting Bird Surveys), APM-VR-1 (Light Control), and APM-WAT-1 (Preparation of a Stormwater Pollution Prevention Plan).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to burrowing owls: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction),

LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-16-17 (Activity-Specific Bird and Bat CMAs), LUPA-BIO-IFS-12-14 (Burrowing Owl CMAs), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to burrowing owls, including mortality or injury, on the private land portions of the CSA during construction, O&M, and/or decommissioning, absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to burrowing owls. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-7** (Minimization of Impacts to Birds and Bats) would require preparation and implementation of a Bird and Bat Conservation Strategy and pre-construction nesting bird surveys, and **MM-BIO-8** (Burrowing Owl Protection) would include specific measures for the protection of burrowing owls. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for burrowing owls. With implementation of the APMs as supplemented by the MMs, the impact of the Project on burrowing owl on private lands would be less than significant with mitigation which is consistent with the findings of the Palo Verde Mesa Solar Project.

The 2017 Palo Verde Mesa Solar Project EIR concluded that burrowing owl had potential to occur within the transmission corridor and the solar facility area. As such, it was determined that the Project could result in direct and indirect impacts to burrowing owl; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to reflect the latest protocol survey data where no occupied burrows were identified. **MM-BIO-8** (Burrowing Owl Protection) employs an avoidance first approach, and if burrowing owls are identified on site during project construction and avoidance is not feasible, then consultation with CDFW and potential compensatory mitigation would be required. Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, and to comply with the DRECP, implemented in 2016.

***Loggerhead Shrike***

Loggerhead shrike is a California Species of Special Concern. Loggerhead shrike has a moderate potential to nest on the Project site, and at least one loggerhead shrike was observed within the CSA during Project-specific surveys. If present within the Project site or transmission line corridor during construction, O&M, or decommissioning, potential direct impacts to loggerhead shrikes could include mortality due to collision with vehicles or equipment, collision with Project facilities, loss of active nests or fledglings, and habitat loss. Potential indirect impacts to loggerhead shrikes could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence

affecting behavior. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to loggerhead shrike, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), and APM-BIO-5 (Pre-Construction Nesting Bird Surveys).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to loggerhead shrike: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-16-17 (Activity-Specific Bird and Bat CMAs), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to loggerhead shrike, including mortality or injury, on the private land portions of the Project site during construction, O&M, and/or decommissioning, absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to loggerhead shrike. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-7** (Minimization of Impacts to Birds and Bats) would require preparation and implementation of a Bird and Bat Conservation Strategy and pre-construction nesting bird surveys. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for loggerhead shrike. With implementation of the APMs as supplemented by the MMs, the impact of the Project on loggerhead shrike on private lands would be **less than significant with mitigation** which is consistent with the findings of Palo Verde Mesa Solar Project.

The 2017 Palo Verde Mesa Solar Project EIR stated that loggerhead shrike was observed on the project site during biological surveys and as such, it was determined that the Project could result in direct and indirect impacts to loggerhead shrike; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-5** and **MM-BIO-13**. Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to nesting bird habitat, and to comply with the DRECP, implemented in 2016.

### *LeConte's Thrasher*

LeConte's thrasher is a California Species of Special Concern and considered sensitive by BLM. LeConte's thrasher has a moderate potential to nest within the CSA. This species was not observed during any Project-specific surveys; however, suitable foraging and nesting habitat occurs within the CSA. If present on the Project site during construction, O&M, or decommissioning, potential direct impacts to LeConte's thrasher could include mortality due to collision with vehicles or equipment, collision with Project facilities, loss of active nests or fledglings, and habitat loss. Potential indirect impacts to LeConte's thrasher if present could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence affecting behavior. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to LeConte's thrasher, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), and APM-BIO-5 (Pre-Construction Nesting Bird Surveys).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to LeConte's thrasher: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-16-17 (Activity-Specific Bird and Bat CMAs), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen potential impacts, the Project could result in significant impacts to LeConte's thrasher, including mortality or injury, on the private land portions of the Project site during construction, O&M, and/or decommissioning, absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to LeConte thrasher. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-7** (Minimization of Impacts to Birds and Bats) would require preparation and implementation of a Bird and Bat Conservation Strategy and pre-construction nesting bird surveys. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for LeConte's thrasher. With implementation of the APMs as supplemented by the MMs, the impact of the Project on LeConte's thrasher on private lands would be less than significant with mitigation which is consistent with the findings of Palo Verde Mesa Solar Project.

The 2017 Palo Verde Mesa Solar Project EIR stated that LeConte's thrasher was observed on the project site during biological surveys and as such, it was determined that the Project could result in direct and indirect impacts to LeConte's thrasher; however, these impacts would be less than significant with

mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-5** and **MM-BIO-13**. Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to nesting bird habitat, and to comply with the DRECP, implemented in 2016.

***American Badger***

American badger is a California Species of Special Concern. American badger has a moderate potential to occur within the CSA. It was not observed during any site surveys; however, suitable habitat and burrows were observed within the CSA. Biologists recorded 74 mammal burrows/dens, 3 of which were noted to contain potential American badger sign. Additionally, American badger was detected within the transmission line corridor as well as the western portion of the CSA during burrow monitoring efforts for burrowing owl. The species has also been observed in the vicinity of the Project recently (i.e., 2021) (CDFW 2025b). If present on the Project site during construction, O&M, or decommissioning, potential direct impacts to American badger could include mortality or injury resulting from vehicle collision, entrapment within trenches or construction materials, and habitat loss (Figure 3.5-9, Project Impacts to Burrow Resources). Potential indirect impacts to American badgers could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence affecting behavior. Potential long-term indirect impacts are addressed above.

The Applicant has committed to implementing APMs that would reduce potential impacts to American badgers, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to American badger: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to American badgers, including mortality or injury, if present on the private land portions of the CSA during construction, O&M, and/or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to American badger. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-11 (**Desert Kit Fox and American Badger Relocation) would require pre-construction surveys and passive relocation, if necessary. **MM-BIO-13** (Compensation for Impacts to

Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for American badger. With implementation of the APMs as supplemented by the MMs, the impact of the Project on American badgers on private lands would be **less than significant with mitigation** which is consistent with Palo Verde Mesa Solar Project.

2017 Palo Verde Mesa Solar Project EIR stated that American badger was not detected and no badger burrows were detected during survey efforts in support of the Project; however, the species may occur in the region and "could intermittently occur in unmanaged portions of the solar facility site or [transmission line] corridor." As such, it was determined that the Project could result in direct and indirect impacts to American badger; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-11 (**Desert Kit Fox and American Badger Relocation) and MM-BIO-13 (Compensation for Impacts to Native Vegetation). Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to American badger habitat, and to comply with the DRECP, implemented in 2016.

***Desert Kit Fox***

Desert kit fox is a California Protected Fur-Bearing Mammal. Desert kit fox has a high potential to occur within the CSA. It was not observed during any site surveys; however, suitable habitat and at least 88 burrows that appeared to have been dug by a canid species were observed within the CSA during Project-specific surveys. Of these 74 burrows/dens, 10 burrows/dens were noted to contain desert kit fox sign (i.e., scat, tracks, freshly dug dirt) (Appendix C). If present on the Project site during construction, O&M, or decommissioning, potential direct impacts to desert kit fox could include mortality or injury resulting from vehicle collision, entrapment within trenches or construction materials, and habitat loss (Figure 3.5-9, Project Impacts to Burrow Resources). Potential indirect impacts to desert kit fox if present could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence affecting behavior. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to desert kit fox, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), and APM-BIO-6 (Den Collapse).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to desert kit fox: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to desert kit fox, including mortality or injury, on the private land portions of the CSA during construction, O&M, and/or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs

have been identified to further reduce direct and indirect impacts to desert kit fox. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species that can degrade habitat. **MM-BIO-11** (Desert Kit Fox and American Badger Relocation) would require pre-construction surveys and passive relocation, if necessary. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, some of which is suitable for desert kit fox. With implementation of the APMs as supplemented by the MMs, the impact of the Project on desert kit fox on private lands would be **less than significant with mitigation**.

2017 Palo Verde Mesa Solar Project EIR stated that desert kit fox was not detected during survey efforts in support of the Project; however, potential desert kit fox burrow complexes were distributed throughout the solar array site and within the transmission line corridor. As such, it was determined that the Project could result in direct and indirect impacts to desert kit fox; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-11 (**Desert Kit Fox and American Badger Relocation) and MM-BIO-13 (Compensation for Impacts to Native Vegetation). Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to desert kit fox habitat, and to comply with the DRECP, implemented in 2016.

***Mojave Fringe-Toed Lizard***

The Mojave fringe-toed lizard is a BLM Sensitive Species and a California Species of Special Concern. Potential Mojave fringe-toed lizard habitat and occurrence only occur on BLM-administered lands along the Project transmission line route. This species was incidentally observed in the southern portion of the existing transmission line route during Mojave desert tortoise surveys along the transmission line route in 2024.

If present on the Project site during construction, O&M, or decommissioning, potential direct impacts to Mojave fringe-toed lizard could include mechanical crushing of individuals and eggs by vehicles and construction equipment, mortality or injury resulting from vehicle collision, entrapment within trenches or construction materials, and habitat loss. Potential indirect impacts to Mojave fringe-toed lizards could include disruption of natural behaviors and movements, noise and vibration from construction equipment, spread of invasive weeds degrading habitat value, and increased human presence.

The Applicant has committed to implementing APMs that would reduce the potential impacts to Mojave fringe-toed lizard, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address

potential impacts to Mojave fringe-toed lizard: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-DUNE-1-3 (Dune and Sand Transport CMAs), LUPA-BIO-DUNE-4-5 (Mojave Fringe-Toed Lizard CMAs), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

**No potential impact** to Mojave fringe-toed lizard habitat or individuals would occur on the private land portions of the Project site; therefore, no MMs are required for this species.

The 2017 Palo Verde Mesa Solar Project EIR stated that Mojave fringe-toed lizard is known to occur along the transmission line corridors of the project site. As such, it was determined that the Project could result in direct and indirect impacts to Mojave fringe-toed lizard; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the Project has been updated to include conformance with the DRECP via implementation of applicable DRECP CMAs on BLM lands, including CMAs specific to Mojave Fringe-toed lizard conservation.

***Burro Deer***

Burro deer is a California Protected Game Species and a DRECP Focus Species. This species has a high potential to occur within the CSA. This species was not observed during the survey efforts for the Project; however, suitable foraging habitat occurs within the CSA. If present on the Project site during construction, O&M, or decommissioning, potential direct impacts to burro deer could include mortality or injury resulting from vehicle collision, entrapment within trenches or construction materials, and habitat loss. Potential indirect impacts to burro deer could include noise from construction equipment, spread of invasive species that degrade habitat value, and increased human presence affecting behavior. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing APMs that would reduce potential impacts to burro deer, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to burro deer: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

The potential effects of the Project on burro deer would not result in a substantial adverse effect on this wide-ranging game species, and impacts would be **less than significant** without mitigation. Further, the APMs listed above and the implementation of MMs for other resources would further reduce the potential effects on this species, including **MM-BIO-1** (Biological Monitoring), **MM-BIO-2** (Worker Environmental Awareness Program), **MM-BIO-3** (Minimization of Impacts to Native Vegetation), **MM-BIO-4 (**Minimization of Impacts to Wildlife), and **MM-BIO-5** (Integrated Weed Management Plan).

The 2017 Palo Verde Mesa Solar Project EIR did not analyze potential project impacts to burro deer.

### *Monarch Butterfly*

Monarch butterfly is proposed for federal listing. While the species has not been observed and is not expected to overwinter in the CSA, the species has the potential to migrate through the CSA, and milkweed species, a host and nectar plant for Monarch, has been recorded in the CSA. The loss of milkweed species from construction, operation and maintenance, or decommissioning of the Project has the potential to result in impacts to habitat potentially used by Monarch.

The Applicant committed to implementing APMs that would reduce the potential impacts to milkweed, including APM-BIO-2 (Equipment inspection for weed species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM administered lands, the Project would implement the APMs and conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to milkweed: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-3 (Resource Setbacks), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-RIPWET-1 (Riparian and Wetland Setbacks Except for Minor Incursions), LUPA-BIO-SVF-1 (Special Vegetation Feature Mapping), LUPA-BIO-VEG-1, -3, -5, and -6 (General Vegetation Management) and LUPA-BIO-SVF-6 (Microphyll Woodland Avoidance Except for Minor Incursions).

Although the APMs would lessen the potential impacts, the Project could result in significant impact to milkweed on the private land portions of the Project area during construction, operation and maintenance, or decommissioning absent implementation of MMs (see Section 7). **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species. **MM-BIO-6** would require vegetation resources management to minimize construction effects on vegetation communities and would require the Applicant to include milkweed species in revegetation efforts. With implementation of the APMs as supplemented by the MMs, the impact of the Project on milkweed (and Monarch butterfly if present or migrating through the area) on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR did not analyze potential project impacts to monarch butterfly.

### *Nesting and Migratory Birds*

Suitable nesting habitat for birds protected by the MBTA occurs on the Project site and along the transmission line route. Removal of vegetation suitable for nesting has the potential to directly impact nesting birds, and noise during Project construction activities has the potential to impact nesting birds through decreased reproductive success or abandonment of an area used for nesting if conducted during the nesting season (i.e., January 15 through September 15). If nesting birds are present during Project construction, O&M, or decommissioning, the Project has the potential to impact these protected

resources. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

During operation of the Project, the solar panels and transmission line may present a collision or electrocution risk to bird species. The causes for bird collisions with solar panels at utility-scale photovoltaic solar facilities are not known and are being studied. Due to the reflective and polarization properties of solar panels, it has been hypothesized that solar panels can attract birds that mistake the panels for bodies of water, potentially leading to increased collision-related and other risks. Research on this topic is ongoing; however, recent studies suggest that site-specific factors are important, such as species and habitat variability, time of day and seasonal variability, and background bird mortality, and solar facilities are unlikely to provide cues if a lake is present to all aquatic birds at all times (Diehl et al. 2024; Kosciuch et al. 2021). In addition to the potential collision risk associated with the solar panels, birds and bats may collide with overhead lines.

A review of fatality studies from 10 utility-scale photovoltaic solar facilities in California and Nevada found that the most common fatalities were of songbirds (55%) and doves/pigeons (17%), with the most highly represented species being mourning dove (*Zenaida macroura*), horned lark (*Eremophila alpestris*), house finch (*Haemorhous mexicanus*), and western meadowlark (*Sturnella neglecta*) (Kosciuch et al. 2020). Water-associated bird species and water-obligate bird species represented 6.3% and 7.8% of the total fatalities detected, respectively. In terms of average annual fatalities, an average fatality rate of 1.38 birds per megawatt per year was estimated across the seven studied facilities in the Mojave and Sonoran Desert regions, with average rates ranging from 0.08 to 2.99 birds per megawatt per year (Kosciuch et al. 2020). Applying the estimated annual fatality rate for the desert region from this study to the proposed Project would suggest that the proposed 500-megawatt Project would have the potential to result in an average of 692 bird fatalities per year due to solar panel collision. The Project would use an existing transmission line and would not result in appreciable additional collision or electrocution risk for birds and bats related to overhead lines.

The Applicant has committed to implementing APMs including APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), and APM-BIO-5 (Pre-Construction Nesting Bird Surveys) that would reduce potential impacts to nesting and migratory birds.

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to nesting and migratory birds: LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-16-17 (Activity-Specific Bird and Bat CMAs), and LUPA-BIO-COMP-2 (Bird and Bat Mortality Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to nesting and migratory birds on the private land portions of the Project site during construction, O&M, and decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to nesting and migratory birds. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-7** (Minimization of Impacts to Birds and Bats) would require preparation and implementation of a Bird

and Bat Conservation Strategy and pre-construction nesting bird surveys. With implementation of the APMs as supplemented by the MMs, the impact of the Project on nesting and migratory birds on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR stated that The removal of vegetation associated with the limited grading or light grubbing may result in direct impact to nests, eggs, nestlings, and recently fledged young that cannot safely avoid equipment. As such, it was determined that the Project could result in direct and indirect impacts to nesting bird species; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-5** and **MM-BIO-13**. Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to nesting bird habitat, and to comply with the DRECP, implemented in 2016.

### Candidate, Sensitive, Special-Status, and California Desert Native Plants Act Plant Species

There are temporary direct impacts to special-status plants from the implementation of the proposed project. The proposed project would result in temporary impacts to 6 individuals of Harwood's milk-vetch and 15 individuals of Abrams' spurge. Additionally, although not observed during the project-specific protocol-level surveys, Harwood's eriastrum has a high potential to occur and suitable habitat is present along the transmission line south of I-10. Harwood's milk-vetch and Abrams' spurge are neither BLM-sensitive species nor DRECP focus plants. Therefore, temporary impacts to Harwood's milk-vetch and Abrams' spurge on BLM-administered lands would not result in significant impacts to these species. However, Harwood's eriastrum is a BLM sensitive species and impacts, should the species occur, would occur on BLM-administered lands; therefore, the proposed project would result in potentially significant impacts to this species. Therefore, **MM-BIO-14** would be implemented and would reduce effects to Harwood's eriastrum to less than significant (Figure 3.5-6, Project Impacts to Special-Status Plant Species).

Potential indirect impacts to special-status plant species resulting from construction activities would include the following: inadvertent spillover impacts, including unintentional clearing, trampling, or grading outside of the Project footprint; generation of fugitive dust; changes in hydrology resulting from construction, including sedimentation and erosion; release of chemical pollutants; and invasive plant species infestation. These potential construction-related indirect impacts to special-status plant species would be potentially significant absent mitigation. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

With respect to impacts to CDNPA plants, impacts were calculated to individuals. There would be temporary impacts to 71 Wiggins' cholla, 23 branched pencil cholla, 34 California barrel cactus, 6 octotillo, 1 catclaw acacia, 35 ironwood, and 15 blue palo verde. There would be permanent impacts to 1 branched pencil cholla, 1 Wiggin's cholla, 248 blue palo verde, and 5 honey mesquite.

Indirect impacts to CDNPA plants would be the same as those cited for special-status plants.

The Applicant has committed to implementing APMs that would reduce the potential impacts to special-status plants and CDNPA plants, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through

BLM environmental review and Project approval, including the following CMAs that would address potential impacts to special-status plants and CDNPA plants: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-3 (Resource Setbacks), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-RIPWET-1 (Riparian and Wetland Setbacks Except for Minor Incursions), LUPA-BIO-SVF-1 (Special Vegetation Feature Mapping), LUPA-BIO-VEG-1, -3, -5, and -6 (General Vegetation Management), LUPA-BIO-SVF-6 (Microphyll Woodland Avoidance Except for Minor Incursions), and LUPA-BIO-PLANT-1-2 (Plant CMAs).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to special-status plants and CDNPA plants on the private land portions of the Project site during construction, O&M, and/or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to special-status plants. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures, including those for riparian vegetation and sensitive natural communities. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species. **MM-BIO-6** (Vegetation Resources Management) would require vegetation resources management to minimize construction effects on vegetation communities and would require the Applicant to submit an application and applicable fees paid to the County of Riverside for removal of protected native desert plants. If relocation is proposed, a relocation plan would be prepared, including detailed specifications on the transplant location and watering schedule as determined by the qualified desert native plant expert. **MM-BIO-14** would require pre-construction surveys for Harwood's eriastrum and if found, avoidance and minimization would be applied. If avoidance is not feasible, mitigation, including off-site compensation, salvage, and/or horticultural propagation and off-site introduction would be implemented. With implementation of the APMs as supplemented by the MMs, the impact of the Project on special-status plants and CDNPA plants on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR stated that special-status plant species have potential to occur within the project site and could be impacted if present. However, it was determined that these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-3** and **MM-BIO-6**. Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to special-status plant species habitat, and to comply with the DRECP, implemented in 2016.

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

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. Existing wildlife movement in the vicinity of the Project site is affected by existing solar projects, the large agricultural zone of the Palo Verde Valley, the City of Blythe, Blythe Airport, and I-10. Nearly half of the Project's solar and BESS site is characterized by disturbed and developed land cover, predominantly fallow and agricultural lands. The fallow and agricultural nature of the Project site may limit use of the site by native terrestrial wildlife species; however, there are little to no restrictions to movement through the site and into the surrounding areas. There are no established native or resident or migratory wildlife corridors or known native wildlife nursery sites on the Project site.

The Project would result in solar development along the western edge of the McCoy Wash CDLN linkage area on private lands; however, the eastern portion of the McCoy Wash CDLN linkage area is outside of the Project site, and the Project would not impact the continued function of this linkage to provide for potential wildlife movement along the McCoy Wash. The Project would not result in solar or BESS development on CDLN linkage areas on BLM-administered lands. The Project Phase 2 transmission line route traverses the Mule–McCoy CDLN linkage area on BLM-administered lands; however, with the exception of the installation of several new transmission line towers at the Colorado River Substation, the Phase 2 transmission line route through linkage areas on BLM-administered lands would use the existing transmission line and would not result in impacts to wildlife movement through this linkage.

Construction activities could dissuade wildlife from approaching construction areas due to noise, disturbance, and human presence. The Phase 2 transmission line would use an existing transmission line, with the exception of several new towers; therefore, the Phase 2 transmission line component that occurs on BLM-administered lands would have a minimal effect on terrestrial wildlife movement and a minimal increase in collision hazard for birds. Wildlife nursery sites, such as bird nests or suitable breeding habitat for other species, may be impacted during Project construction if they occur on the Project site or transmission line alignment. See Impact Threshold a and Impact Threshold b for an analysis of the Project's effects to federal and state-listed and special-status species. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing APMs that would reduce the potential impacts to wildlife movement, including APM-BIO-3 (Worker Environmental Awareness Program) and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to wildlife movement: LUPA-BIO-2 (Designated Biologist), LUPA-BIO-5 (Worker Education), LUPA-BIO-6 (Subsidized Predators Standards), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-12 (Noise), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to wildlife movement and/or wildlife nursery sites if they occur on the private land portions of the Project site during construction, O&M, or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to the movement

of any native wildlife species or with established native migratory wildlife corridors or impede the use of native wildlife nursery sites. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-4** (Minimization of Impacts to Wildlife) would require implementation of measures to minimize impacts to wildlife on the Project site. **MM-BIO-7** (Minimization of Impacts to Birds and Bats) would require development and implementation of a Bird and Bat Conservation Strategy and nesting bird protection. **MM-BIO-8** (Burrowing Owl Protection) would require implementation of a burrowing owl pre-construction survey, as well as avoidance and protection measures. **MM-BIO-9** (Desert Tortoise Protection) would require implementation of multiple measures to protect desert tortoises, including qualified desert tortoise biologists, monitoring of Project activities within desert tortoise habitat, specifications related to handling and stopping work, worker training, pre-construction surveys, exclusion fencing, avoidance, and notifications for dead or injured tortoises. **MM-BIO-11** (Desert Kit Fox and American Badger Relocation) would require pre-construction surveys for dens and active den avoidance during the natal season. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would provide habitat compensation for impacts to native vegetation, which would provide additional wildlife movement opportunities within the compensation lands. With implementation of the APMs as supplemented by the MMs, the impact of the Project on wildlife movement or use of nursery sites on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR stated that impacts to wildlife corridors would be less than significant and that no mitigation would be required.

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

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. Table 3.5-4 summarizes the permanent and temporary impacts to vegetation communities on the Project site, transmission line, and buffer/other survey areas within the CSA Figure 3.5-13, Project Impacts to Vegetation Communities, depicts the permanent and temporary impacts to the vegetation communities within the CSA.

**Table 3.5-4. Impacts to Vegetation Communities and Land Cover Types in the Combined Study Area**

| Vegetation Community or Land Cover Type | Floristic Alliance | Association | Ranking[1] | Permanent Impact Acreage[2,3] | | | Temporary Impact Acreage[2,3] | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Project Site | Phase 2 Transmission Line | Total | Project Site | Phase 2 Transmission Line | Total |
| **Grass herb Dominated** | | | | | | | | | |
| Big galleta shrub–steppe | *Pleuraphis rigida* alliance | *Pleuraphis rigida* | G3/S2 | -- | -- | -- | -- | 4.0 | 4.0 |
| | | *Grass and Herb Subtotal* | | -- | -- | -- | -- | 4.0 | 4.0 |
| **Scrub** | | | | | | | | | |
| Rigid spineflower–hairy desert sunflower desert pavement[3] | *Chorizanthe rigida–Geraea canescens* desert pavement alliance | *Chorizanthe rigida–Geraea canescens* | G4/SNR | 33.4 | 0.0 | 33.4 | -- | 9.1 | 9.1 |
| Creosote bush scrub | *Larrea tridentata* alliance | *Larrea tridentata* | G5/S5 | 356.2 | -- | 356.2 | 4.2 | 15.1 | 19.2 |
| | | *Larrea tridentata*/wash | G5/S5 | 12.3 | 0.0 | 12.3 | 7.4 | 0.9 | 8.3 |
| | | *Larrea tridentata–Pleuraphis rigida*[3] | G4/S3 | | 0.0 | 0.0 | -- | 18.5 | 18.5 |
| | | *Larrea tridentata–Atriplex polycarpa* | G5/S5 | 6.9 | -- | 6.9 | -- | 0.0 | 0.0 |
| Creosote bush–white bursage scrub | *Larrea tridentata–Ambrosia dumosa* | *Larrea tridentata–Ambrosia dumosa/Pleuraphis rigida* | G4/S3 | 2.4 | -- | 2.4 | -- | -- | -- |
| | | *Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa* | G5/S5 | | 0.0 | 0.0 | -- | 1.3 | 1.3 |
| | | *Larrea tridentata–Ambrosia dumosa* | G5/S5 | 261.4 | -- | 261.4 | -- | 1.4 | 1.4 |
| | | *Larrea tridentata–Ambrosia dumosa–Olneya tesota* | G5/S5 | -- | -- | -- | -- | 0.2 | 0.2 |
| Creosote bush–brittle bush scrub | *Larrea tridentata–Encelia farinosa* alliance | *Larrea tridentata–Encelia farinosa–Ambrosia dumosa* | G5/S4 | -- | -- | -- | -- | 0.0 | 0.0 |
| | | *Larrea tridentata–Encelia farinosa* | G5/S5 | 60.6 | -- | 60.6 | -- | -- | -- |
| | | *Ambrosia dumosa* | Sensitive | 46.1 | -- | 46.1 | -- | -- | -- |

**Table 3.5-4. Impacts to Vegetation Communities and Land Cover Types in the Combined Study Area**

| Vegetation Community or Land Cover Type | Floristic Alliance | Association | Ranking[1] | Permanent Impact Acreage[2,3] | | | Temporary Impact Acreage[2,3] | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Project Site | Phase 2 Transmission Line | Total | Project Site | Phase 2 Transmission Line | Total |
| | | | *Scrub Subtotal* | *779.4* | *0.0* | *779.4* | *11.6* | *46.5* | *58.1* |
| **Riparian** | | | | | | | | | |
| Blue palo verde–ironwood woodland[3] | *Parkinsonia florida–Olneya tesota* | *Olneya tesota* | Sensitive | -- | 0.0 | 0.0 | 0.3 | 3.1 | 3.4 |
| | | *Olneya tesota / Larrea tridentata - Encelia farinosa* | Sensitive | -- | -- | -- | -- | 0.4 | 0.4 |
| | | *Parkinsonia florida* | Sensitive | 12.6 | -- | 12.6 | -- | 0.4 | 0.4 |
| | | *Parkinsonia florida–Olneya tesota* | Sensitive | -- | -- | -- | -- | 0.4 | 0.4 |
| Arrow weed thickets | *Pluchea sericea* | *N/A* | G4/S3 | 0.6 | -- | 0.6 | -- | -- | -- |
| Tamarisk thickets | *Tamarix spp.* | *Tamarix* spp. | GNA/SNA | 2.4 | -- | 2.4 | -- | -- | -- |
| | | | *Riparian Subtotal* | *15.7* | *0.0* | *15.7* | *0.3* | *4.3* | *4.6* |
| **Unvegetated** | | | | | | | | | |
| Barren | N/A | N/A | N/A | *214.2* | -- | *214.2* | -- | -- | -- |
| Abandoned orchard | N/A | N/A | N/A | *310.4* | -- | *310.4* | -- | -- | -- |
| | | | *Unvegetated Subtotal* | *524.7* | -- | *524.7* | -- | -- | -- |
| **Disturbed/Developed** | | | | | | | | | |
| Disturbed habitat | N/A | N/A | N/A | 71.9 | 0.0 | 71.9 | -- | 17.9 | 17.9 |
| Fallow | N/A | N/A | N/A | 1554.0 | -- | 1554.0 | -- | -- | -- |
| Open water | N/A | N/A | N/A | 0.5 | -- | 0.5 | -- | -- | -- |
| Ornamental plantings | N/A | N/A | N/A | 5.3 | -- | 5.3 | -- | -- | -- |
| Urban/developed | N/A | N/A | N/A | 0.0 | 0.0 | 0.0 | -- | 0.1 | 0.1 |
| | | | *Disturbed and Developed Subtotal* | *1,631.6* | *0.0* | *1,631.6* | -- | *18.0* | *18.0* |
| | | | **Grand Total[2]** | **2,951.3** | **0.0** | **2,951.3** | **11.9** | **72.7** | **84.6** |

**Notes:** — = no impacts.

[1] The conservation status of a vegetation community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = global, N = national, and S = subnational). The numbers have the following meaning (NatureServe 2022):
1 = critically imperiled
2 = imperiled
3 = vulnerable to extirpation or extinction
4 = apparently secure
5 = demonstrably widespread, abundant, and secure
N/A = not applicable
GNR = unranked, global rank not yet assessed
SNR = unranked, subnational rank not yet assessed
Sensitive = no specific ranking at the association level, but considered sensitive by the California Department of Fish and Wildlife (CDFW 2023).
[2] Totals may not sum due to rounding.
[3] "0.0" means there is less than 0.05 acres.

The Project was designed to largely avoid riparian vegetation communities (i.e., blue palo verde–ironwood woodland) within the solar and BESS site. Within the solar and BESS site on BLM-administered lands, blue palo verde–ironwood woodland alliance and its associations would be avoided with greater than a 200-foot-wide buffer consistent with DRECP setback requirements (CMA LUPA-BIO-RIPWET-1). Within the solar and BESS site on private lands, riparian vegetation communities would be avoided within the McCoy Wash. Within a tributary to the McCoy Wash on private lands, a majority of the blue palo verde–ironwood woodlands alliance would be avoided. Approximately 12.6 acres of the blue palo verde–ironwood woodlands alliance would be permanently impacted, and 4.6 acres would be temporarily impacted by Project construction, O&M, and decommissioning activities.

The following sensitive vegetation communities per CDFW (2023) would be impacted by project implementation. Approximately 46.1 acres of the white bursage (*Ambrosia dumosa*) association would be permanently impacted. Approximately 33.4 acres of permanent impacts and 9.1 acres of temporary impacts would occur to the rigid spineflower–hairy desert sunflower (*Chorizanthe rigida - Geraea canescens*) desert pavement association. Approximately 4.0 acres of temporary impacts would occur to the big galleta (*Pleuraphis rigida*) association. Less than 0.01 acres of permanent impacts and 18.5 acres of temporary impacts would occur to the creosote bush scrub-big galleta (*Larrea tridentata - Pleuraphis rigida*). Finally, 0.6 acres of the arrow weed thickets (*Pluchea sericea*) would be permanently impacted.

Within BLM-administered lands, there would less than 0.01 acres of permanent impacts to rigid spineflower–hairy desert sunflower desert pavement (i.e., desert pavement) along the Phase 2 transmission line corridor and 9.0 acres of temporary impacts to rigid spineflower–hairy desert sunflower desert pavement along the transmission line corridor. With BLM-administered lands, 202.4 acres of rigid spineflower–hairy desert sunflower desert pavement occurs. The total impacts, including both permanent and temporary, to rigid spineflower–hairy desert sunflower desert pavement represent 4.5% of the total rigid spineflower–hairy desert sunflower desert pavement on BLM-administered lands. LUPA-SW-6 states that the disturbance of desert pavement must be limited and if the impacts are greater than 10%, BLM would determine the significance of this impact. Because the impacts to desert pavement would be less than 10%, the Project is consistent with CMA LUPA-SW-9.

Within BLM-administered lands, there would be less than 0.01 acres of permanent impacts and 3.4 acres of temporary impacts to dune and sand resources along the transmission line route. The Project would comply with LUPA-BIO-DUNE-1-3 (Dune and Sand Transport CMAs).

Within the Solar and BESS site on private lands, the Project has the potential to impact up to an estimated 10.9 acres of biological soil crusts in scrub vegetation, no more than 20.4 acres of biological soil crusts in riparian vegetation, and up to an estimated 14.4 acres biological soil crusts in disturbed and barren land covers. Due to the low coverage and acreage of lands with biological soil crusts on private lands, the Project is not expected to result in a significant effect on wind and water erosion from the loss of biological soil crusts.

The transmission line corridor on BLM administered lands is estimated to support 20.7 acres of biological soil crusts. Biological soil crusts in microphyll woodlands (a riparian vegetation type) within the Project site on BLM administered lands would be avoided consistent with CMA LUPA-RIPWET-1, LUPA-BIO-13, and LUPA-BIO-SVF-6. Impacts to biological soil crusts within the transmission line corridor on BLM administered lands would be minimized by utilizing the existing transmission structures owned, operated, and maintained by Arlington Solar LLC for the Arlington Solar Energy Project. In conformance with LUPA-SW-10 (Sensitive Soils), the estimated impacts to biological soil crusts in scrub vegetation and disturbed

and barren land covers is not considered to affect a substantial acreage of these sensitive soils and would not result in an adverse effect on wind and water erosion.

Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Applicant has committed to implementing APMs that would reduce the potential impacts to riparian vegetation and other sensitive natural communities, including APM-BIO-2 (Equipment Inspection for Weed Species), APM-BIO-3 (Worker Environmental Awareness Program), and APM-BIO-4 (Construction Monitoring).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to riparian vegetation and other sensitive natural communities, including dune and sand resources: LUPA-BIO-1 (Habitat Assessment), LUPA-BIO-2 (Designated Biologist), LUPA-BIO-3 (Resource Setbacks), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-9 (Water and Wetland Dependent Species Resources), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-RIPWET-1 (Riparian and Wetland Setbacks Except for Minor Incursions), LUPA-BIO-SVF-1 (Special Vegetation Feature Mapping), LUPA-BIO-SVF-6 (Microphyll Woodland Avoidance Except for Minor Incursions), LUPA-BIO-VEG-1-3, 5-6 (General Vegetation Management), LUPA-BIO-COMP-1 (Biological Resources Compensation), LUPA-SW-9 (Desert Pavement Mapping and Impact Minimization), LUPA-SW-10 (Sensitive Soils), and LUPA-BIO-DUNE-1-3 (Dune and Sand Transport CMAs).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to riparian vegetation and other sensitive natural communities on the private land portions of the Project site during construction, O&M, and/or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to riparian habitat and other sensitive communities. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures, including those for riparian vegetation and sensitive natural communities. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) would require implementation of measures to minimize disturbance to native vegetation during activities on the Project site. **MM-BIO-5** (Integrated Weed Management Plan) would require preparation and implementation of a weed management plan that would minimize and prevent the introduction and spread of invasive weed species. **MM-BIO-6** (Vegetation Resources Management) would require vegetation resources management to minimize construction effects on vegetation communities. **MM-BIO-13** (Compensation for Impacts to Native Vegetation) would require habitat compensation for final impact acreages to sensitive native vegetation on private lands. With implementation of the APMs as supplemented by the MMs, the impact of the Project on riparian vegetation and other sensitive natural communities on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR states that there were 22.8 acres of Desert Riparian Woodland Wash (analogous to the blue palo verde–ironwood woodland) within the transmission line 500-foot survey buffer that could be impacted by the project. The 2017 Palo Verde Mesa Solar Project EIR did not identify any potential impacts to other sensitive vegetation communities observed on site. It was determined that impacts to Desert Riparian Woodland Wash would be less than significant with mitigation

incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-3**, **MM-BIO-5**, **MM-BIO-6**, and **MM-BIO-13** (Compensation for Impacts to Native Vegetation). Additionally, the Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to sensitive vegetation via compensatory mitigation, and to comply with the DRECP, implemented in 2016.

***Threshold f: 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 INCORPORATED*. Table 3.5-5 summarizes the permanent and temporary impacts to jurisdictional aquatic resources, and Figure 3.5-5, ~~Project Impacts to Aquatic Resources~~ Aquatic Resources Delineation, depicts these impacts.

As outlined above, the Project has been designed to minimize impacts to riparian vegetation communities, including blue palo verde–ironwood woodland and arrow weed thickets, both of which are considered jurisdictional waters. Within the solar and BESS sites on private lands, jurisdictional waters associated with McCoy Wash would be entirely avoided. Additionally, Project design avoids the majority of jurisdictional waters within a tributary to McCoy Wash. Through deliberate planning and design, the Project would avoid permanent impacts to 94% of CDFW and/or CDFW/RWQCB jurisdictional aquatic resources, significantly reducing potential impacts to these sensitive areas.

**Table 3.5-5. Impacts to Jurisdictional Aquatic Resources**

| Jurisdiction | Type | Permanent | Temporary | Total | Avoidance |
|---|---|---|---|---|---|
| CDFW | Non-wetland waters/streambed | 0.2 | 0.1 | 0.3 | 30.9 |
| | Riparian | 11.5 | 3.8 | 15.4 | 98.8 |
| | *CDFW Total* | *11.7* | *3.9* | *15.7* | *145.1* |
| CDFW/RWQCB | Non-wetland waters/streambed | 1.5 | 2.7 | 4.2 | 125.7 |
| | *CDFW/RWQCB Total* | *1.5* | *2.7* | *4.2* | *125.7* |
| | **Grand Total** | **13.2** | **6.7** | **19.8** | **275.0** |

**Notes:** CDFW = California Department of Fish and Wildlife; RWQCB = Regional water Quality Control Board.
Totals may not sum due to rounding.

The aquatic resources within the Project impact footprint are subject to state jurisdiction under RWQCB and CDFW. There are no USACE jurisdictional aquatic features with the CSA.

Jurisdictional waters within the CSA would be directly impacted by site preparation and construction activities. Post-construction, water and sediment within the CSA would continue to be conveyed downslope across the site via sheet flow or within existing channels. However, surface flow patterns, velocities, and sediment loads may be altered by Project features, including solar panel foundations and piles, access roads, fencing, the BESS, the substation yard, the O&M building, and other infrastructure.

Potential significant indirect impacts to jurisdictional waters from Project activities include the following: flow disruptions due to the installation of Project facilities or components; increased siltation and fluvial transport of silts or pollutants; altered flow patterns that could lead to erosion or disrupt natural sediment transport to downstream habitat; construction-related (short-term) indirect impacts such as inadvertent spillover impacts outside of the construction footprint; chemical spills; dust accumulation, which may impede photosynthesis; and invasive plant species infestation. Potential long-term indirect impacts are addressed under Section 3.5.3 Impact Analysis, Environmental Impacts.

The Project design may include flow diversions at security fencing and require detention basins to manage runoff; however, no substantial alteration of existing surface hydrology is anticipated. The Project also aims to maintain natural drainage patterns to the maximum extent feasible. Additionally, preserving vegetation beneath the solar panels is expected to help mitigate erosion and manage increased runoff.

The Applicant has committed to implementing several APMs that would reduce the potential impacts to wetlands, including APM-BIO-2 (Equipment Clean of Soil and Debris), APM-BIO-3 (Worker Environmental Awareness Program), APM-BIO-4 (Construction Monitoring), APM-WAT-1 (Preparation of a Stormwater Pollution Prevention Plan), and APM-AIR-1 (Fugitive Dust Control Plan).

On BLM-administered lands, the Applicant would implement the APMs listed above and the Project would conform with applicable DRECP CMAs designed to protect biological resources as determined through BLM environmental review and Project approval, including the following CMAs that would address potential impacts to wetlands: LUPA-BIO-2 (Designated Biologist), LUPA-BIO-3 (Resource Setbacks), LUPA-BIO-5 (Worker Education), LUPA-BIO-7 (Restoration of Areas Disturbed by Construction), LUPA-BIO-8 (General Closure and Decommissioning Standards), LUPA-BIO-10 (Standard Practices for Weed Management), LUPA-BIO-13 (General Siting and Design), LUPA-BIO-14-15 (General Standard Practices), LUPA-BIO-SVF-6 (Microphyll Woodland Avoidance Except for Minor Incursions), and LUPA-BIO-COMP-1 (Biological Resources Compensation).

Although the APMs would lessen the potential impacts, the Project could result in significant impacts to jurisdictional aquatic resources if they occur on the private land portions of the Project site during construction, O&M, and/or decommissioning absent implementation of MMs (see Section 3.5.4). The following MMs have been identified to further reduce direct and indirect impacts to jurisdictional waters of the state. **MM-BIO-1** (Biological Monitoring) would require a Designated Biologist, Approved Biologist(s), and Biological Monitor(s) to implement and oversee compliance measures. **MM-BIO-2** (Worker Environmental Awareness Program) would require training for all personnel on the Project site. **MM-BIO-3** (Minimization of Impacts to Native Vegetation) requires all construction areas to be confined to the fenced/flagged authorized work areas. **MM-BIO-5** (Integrated Weed Management Plan) would require the Applicant to prepare and implement an Integrated Weed Management Plan to minimize or prevent noxious, non-native, and invasive weeds from infesting the site or spreading into surrounding habitat. **MM-BIO-12** (Stream Protection and Compensation) would require compensatory mitigation and stream protection BMPs, such as prohibiting pollutants from entering state-jurisdictional waters. With implementation of the APMs as supplemented by the MMs, the impact of the Project on jurisdictional waters of the state on private lands would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR states that there are several washes, including the McCoy wash, that terminate in or passing through the project site. As such, it was determined that the Project could result in direct and indirect impacts to aquatic resources; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-1** through **MM-BIO-3, MM-BIO-5**. Additionally, the

Project includes conformance with the DRECP via implementation of applicable DRECP CMAs. These mitigation measures were modified from the original Palo Verde Mesa Solar Project EIR mitigation measures to more accurately reflect the latest survey data generated as part of Project-specific focused surveys, to account for potential impacts to sensitive vegetation via compensatory mitigation, and to comply with the DRECP, implemented in 2016.

***Threshold g: 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 INCORPORATED*. County policies applicable to biological resources are identified in Section 3.5.1, Regulatory Framework. These policies direct permanent preservation of important open space lands and compliance with the Multipurpose Open Space Element of the General Plan to reduce adverse effects to floodways and native riparian habitat, preserve multi-species habitat through implementation of County policies, and protect the Colorado River watershed and habitat through implementation of County policies. The County also adopted Ordinance 559, which regulates the removal of trees above 5,000 feet in elevation. However, the Project is located at elevations between 300 feet to 500 feet, and the ordinance is not applicable. The Project, including the APMs and MMs, is consistent with and would not conflict the County's overall conservation objectives. The Project would impact biological resources addressed by General Plan policies, as described under Impact Threshold b through Impact Threshold f. Without mitigation, these impacts could result in significant impacts to biological resources. **MM-BIO-1** through **MM-BIO-13** would ensure consistency with local policies. Therefore, the impact of the Project on conflicts with local biological resource policies and ordinances would be **less than significant with mitigation**.

The 2017 Palo Verde Mesa Solar Project EIR states that while the project does not conflict with any local policies or ordinances, the project would impact resources protected by the Riverside County General Plan; however, these impacts would be less than significant with mitigation incorporated (County of Riverside 2016). While the significance conclusion is the same, the mitigation measures identified for the Project have been updated to include additional avoidance and mitigation measures including **MM-BIO-6** (Vegetation Resource Management) and **MM-BIO-13** (Compensatory Mitigation for Impacts to Native Vegetation).

## Cumulative Impacts

**Geographic Scope**. Cumulative impacts to biological resources include the Project's impacts and those likely to occur because of other existing, proposed, and reasonably foreseeable projects. Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, list existing and reasonably foreseeable projects in the region that could contribute to biological resource impacts. The geographic area for evaluation of potential impacts to biological resources includes 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 Project.

**Cumulative Impacts Analysis**. Existing projects in the Project region have undergone environmental review and were approved by federal, state, or local agencies. During that review, the agencies reviewed applicable policies and ensured that the projects complied with or required a LUPA or conditional use permit. Because a large amount of land within the geographic scope of the cumulative impacts area is managed by BLM, BLM reviews the projects to ensure that they are consistent with the applicable BLM policies, including the DRECP, which specifically identifies land (including the Project site) as likely suitable for solar development. On BLM-administered lands, the DRECP identifies the federal lands in and around

the Project site as a Development Focused Area, where renewable energy development should be concentrated. Development Focused Areas were designated by BLM in coordination with USFWS, the California Energy Commission, and CDFW. With avoidance through Project design, compliance with the DRECP, and compliance with **MM-BIO-1** through **MM-BIO-13**, the Project's contribution to cumulative impacts would not be considerable. The Project's cumulative impacts to policies and ordinances would be less than significant. Therefore, the Project is not expected to result in a cumulatively considerable incremental contribution related to any relevant policies or local ordinances.

As discussed under Thresholds (b) through (g), without mitigation, the Project could affect endangered, threatened, or special-status plant and wildlife species; wildlife movement; riparian habitat and sensitive vegetation communities; and jurisdictional aquatic resources. Cumulative impacts to the resources are discussed below.

**Special-Status Plants.** No direct impacts to special-status plants are proposed. The Project could indirectly affect special-status plants identified above. The past, present, and future projects would have similar or greater impacts to special-status plants, which could result in a cumulatively significant impact to the loss of regional special-status plants. The Project's contribution would not be considerable because the Project avoids impacting special-status plants, and because compliance with APMs, CMAs on BLM land, and MMs would reduce the impacts so that residual effects would be minimal. Special-status plants could be cumulatively affected by the Project and proposed projects in the region. With implementation of APMs, CMAs on BLM land, and MMs, in combination with the lower level of conservation concern for species that are not listed as threatened, endangered, or sensitive, the Project's incremental contribution to cumulative impacts to other special-status plants would not be considerable. Accordingly, the Project's incremental contribution to the cumulative impacts to special-status plants caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Native Birds, including Special-Status Passerine Birds.** Migratory birds are expected to occur throughout the area during construction, O&M, and decommissioning of the Project. The Project would contribute to direct and indirect impacts to migratory birds, including habitat loss and fragmentation; construction impacts to nesting birds; and an increase in noise and lighting, avian predators, and collisions and electrocutions. In combination with past, present, and foreseeable future projects, the cumulative impact is significant. The Project could have a cumulatively considerable contribution to the cumulative impact on special-status and migratory bird populations.

The Project's impacts would be mitigated to the extent feasible through pre-construction surveys, avoidance of active nests, preparation and implementation of a Bird and Bat Conservation Strategy, and mitigation applied through adaptive management, depending on monitoring results, as described in **MM-BIO-7** (Minimization of Impacts to Birds and Bats). Natural habitat loss would be minimized and offset through APMs, CMAs, and MMs. The incremental contribution of the Project to the cumulative impacts to native bird habitat and nesting success would not be considerable because any incidental take would be minimized, and specified native habitat loss would be offset.

Regarding potential collisions from the solar facilities and linear facilities, **MM-BIO-7** would require development and implementation of a Bird and Bat Conservation Strategy that would assess risk, avoid and minimize adverse impacts, provide monitoring and reporting, provide a framework for adaptive management, and provide design guidelines consistent with the Avian Power Line Interaction Committee. With incorporation of relevant APMs, CMAs, and MMs, the Project's incremental contribution to the cumulative impacts to native birds, including special-status passerine birds, caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Mojave Desert Tortoise.** Project-specific surveys of the site and transmission line route did not result in observations of live individuals or active desert tortoise sign, and the Project is not located in areas of moderate or high probability of occupancy; therefore, the Project is not expected to result in a substantial impact on the local desert tortoise population. The past, present, and future projects would have similar or greater impacts to desert tortoise, which could result in a cumulatively significant impact to the species. The Project's compliance with APMs, CMAs, and MMs would offset specified native habitat loss, prevent or minimize injury and mortality, and require pre-construction surveys to exclude species from work sites. The incremental contribution of the Project to the cumulative impacts to this species would not be considerable because any incidental take would be minimized, and native habitat loss would be offset. Accordingly, the Project's incremental contribution to the cumulative impacts to Mojave desert tortoise caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Burrowing Owl.** Potential impacts of the Project to burrowing owls include habitat loss or degradation; injury or mortality if burrowing owls are present in a work area, particularly during the nesting season; and mortality or injury from collision with Project facilities, as described above for native birds. Other cumulative projects in the vicinity include several transmission lines and solar energy projects with similar habitat for burrowing owl as the Project. In combination with past, present, and foreseeable future projects, the cumulative impact on burrowing owl populations and habitat is significant. The incremental contribution of the Project to the cumulative impact to burrowing owls, including habitat loss, construction-related mortality, and collision mortality, would not be considerable with implementation of various MMs and other measures. In addition, native habitat loss would be offset, no take of individuals is expected during construction, and the prospect of potential collision as described above for native birds is insubstantial. Accordingly, the Project's incremental contribution to the cumulative impact to burrowing owls caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Loggerhead Shrike and LeConte's Thrasher**. Loggerhead shrike was observed on the Project site and has a high potential to nest in the CSA. LeConte's thrasher has a moderate potential to nest within the CSA. Potential impacts of the Project to these birds include habitat loss or degradation; injury or mortality if these species are present in a work area, particularly during nesting season; and mortality or injury from collision with Project facilities, as described above for native birds. Other cumulative projects in the vicinity include several transmission lines and solar energy projects with similar habitat for these species as the Project. In combination with past, present, and foreseeable future projects, the cumulative impact on these species and their habitat is significant. The incremental contribution of the Project to the cumulative impact to loggerhead shrike and LeConte's thrasher, including habitat loss, construction-related mortality, and collision mortality, would not be considerable with implementation of various MMs and other measures. In addition, native habitat loss would be offset, no take of individuals is expected during construction, and the prospect of potential collision as described above for native birds is insubstantial. Accordingly, the Project's incremental contribution to the cumulative impact to loggerhead shrike and LeConte's thrasher caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Mojave Fringe-Toed Lizard.** Mojave fringe-toed lizard was incidentally observed along the Project's transmission line route south of I-10 where there is sand/dune habitat present, and it has a high potential to occur along the transmission line corridor south of I-10. Other cumulative projects in the vicinity include several transmission lines and solar energy projects with similar habitat for these species as the Project. In combination with past, present, and foreseeable future projects, the cumulative impact on this species and their habitat is significant. Compliance with MMs would offset specified native habitat loss, prevent

or minimize injury and mortality, and require pre-construction surveys to exclude species from work sites. The incremental contribution of the Project to the cumulative impact to this species would not be considerable because any incidental take would be minimized, and native habitat loss would be offset. Accordingly, the Project's incremental contribution to the cumulative impact to Mojave fringe-toed lizard caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Burro Deer.** Burro deer has a high potential to occur within the CSA. This species was not observed during the survey efforts for the Project; however, suitable foraging habitat occurs within the CSA. In combination with past, present, and foreseeable future projects, the cumulative impact on this species and their habitat is significant. Compliance with MMs would offset specified native habitat loss, prevent or minimize injury and mortality, and require pre-construction surveys to exclude species from work sites. The incremental contribution of the Project to the cumulative impact to this species would not be considerable because any incidental take would be minimized, and native habitat loss would be offset. Accordingly, the Project's incremental contribution to the cumulative impact to burro deer caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Monarch Butterfly.** Monarch butterfly was not documented in and is not expected to overwinter in the CSA. Milkweed, a host and nectar plant species used by monarch butterfly, occurs in the CSA, and Monarch butterfly may migrate through or use habitat within the CSA. Thus, in combination with projects in the region, the cumulative impact on Monarch butterfly is significant. Compliance with APMs, CMAs, and MMs would avoid, minimize, and offset the loss of host and nectar plant species potentially used by the species. The incremental contribution of the Project to the cumulative impacts to this species would not be considerable because any impact would be minimized, and native habitat resources would be offset. Accordingly, the Project's incremental contribution to the cumulative impact to Monarch butterfly caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Special-Status Raptors.** No special-status raptors (except burrowing owl, discussed above) are expected to nest on the Project site. However, the site provides suitable seasonal or year-round foraging habitat for several raptor species. Several raptors are likely to forage infrequently on the solar 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 Project. In combination with cumulative projects in the region, the cumulative impact on raptor habitat is significant. However, the incremental contribution of the Project to the cumulative impact to special-status raptors, including habitat and collision mortality, would not be considerable because the Project site generally provides low-quality habitat, the loss of specified native habitat would be offset by protecting compensation lands off site, and the prospect of potential collisions is insubstantial as described above for native birds. Accordingly, the Project's incremental contribution to the cumulative impact to special-status raptors caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Desert Kit Fox and American Badger.** Desert kit fox has a high potential to occur and American badger has a moderate likelihood of occurrence on the Project site. Both species could use native habitats wherever prey animals may be present. Thus, in combination with projects in the region, the cumulative impact on desert kit fox and American badger is significant. Compliance with APMs, CMAs, and MMs would offset specified native habitat loss for both species, prevent or minimize wildlife injury and mortality, and require pre-construction surveys to exclude both species from work sites. The incremental contribution of the Project to the cumulative impacts to these species would not be considerable because any incidental take would be minimized, and native habitat loss would be offset. Accordingly, the Project's

incremental contribution to the cumulative impact to desert kit fox and American badger caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Wildlife Movement.** Wildlife movement has the potential to occur along habitat linkages in the McCoy Wash linkage area that occurs partially within the eastern edge of the Project site and along the Mule–McCoy linkage area that the Phase 2 transmission line route crosses. Construction and operations could dissuade wildlife from using the Project site, but the Phase 2 transmission line would use an existing transmission line and would have a minimal impact on wildlife movement. In combination with other projects in the region, the cumulative impact on wildlife movement is significant. The incremental contribution of the Project to the cumulative impact to wildlife movement, including habitat linkage functionality and wildlife behavior modification, would not be considerable with implementation of various MMs and other measures. Accordingly, the Project's incremental contribution to the cumulative impact to wildlife movement caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Vegetation and Habitat.** Construction-related impacts of the Project are site-specific and would temporarily increase noise, dust, and other habitat disturbances. Upon completion of construction, longer-term land use conversion would contribute to reduced habitat availability and increased habitat fragmentation. In the context of the number of past, present, and future projects, many of which are large solar projects, the effects of the Project would incrementally contribute to the cumulative loss of vegetation and habitat resulting in a significant cumulative impact. The minimal loss of natural habitats that would result from the Project would be offset by protecting compensation lands off site and by the areas conserved under the DRECP. Under the DRECP, Areas of Critical Environmental Concern and California Desert National Conservation Lands were protected as part of the overall goal of the DRECP to "advance federal and state natural resource conservation goals" (BLM 2015). The Project would compensate for impacts to blue palo verde–ironwood woodlands, white bursage, and rigid spineflower–hairy desert sunflower desert pavement, all of which are sensitive vegetation communities. Compliance with **MM-BIO-13** requires compensation of native vegetation along with implementation of APMs, CMAs, and MMs, the cumulative contribution to impacts to vegetation and habitat from the Project would not be considerable. Accordingly, the Project's incremental contribution to the cumulative vegetation and habitat impacts caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

**Sensitive Habitat and Jurisdictional Waters of the State.** The Project would minimally affect desert dry wash woodland (i.e., riparian habitat) and would also minimally affect unvegetated ephemeral dry wash (i.e., non-wetland waters/streambed), which meets criteria as jurisdictional waters of the state. Many of the cumulative projects in the Project region would have qualitatively similar impacts to desert dry wash woodland and unvegetated ephemeral dry wash due to the nature of the area and the large washes that cross it. Therefore, the Project's impacts to sensitive habitats, combined with the effects of past, present, and reasonably foreseeable prospective projects, could result in a cumulatively significant impact to sensitive habitat. The effects of the Project would contribute incrementally to the cumulative impacts to sensitive habitat and jurisdictional waters of the state, but this incremental contribution would not be considerable because the Project has been designed to avoid sensitive habitat or avoid the desert dry wash woodland except for minor incursions. In addition, compliance with the DRECP CMAs and MMs would reduce impacts so that residual effects would be minimal. **MM-BIO-13** requires compensatory mitigation for impacts to native vegetation communities and streams, and requires obtaining permits from CDFW and RWQCB prior to ground-disturbing activities in jurisdictional waters of the state, including streams. Accordingly, the Project's incremental contribution to the cumulative impacts caused by other past, present, and probable future projects would not be cumulatively considerable or significant.

## 3.5.4 Applicant Proposed Measures, Conservation and Management Actions, and Mitigation Measures

### Applicant Proposed Measures

The following APMs are measures the Applicant has committed to implementing to avoid and minimize the effects of the Project on biological resources for the entire Project on BLM-administered lands and private lands.

**APM-BIO-1** The Applicant will conduct pre-construction surveys for desert tortoise. This includes a BLM Approved Biologist(s) walking 10-meter transects of the entire Project site in accordance with the latest U.S. Fish and Wildlife Service survey protocols for desert tortoise. This will provide 100% coverage of the Project site.

**APM-BIO-2** All construction equipment brought to the site will be cleaned and inspected daily to ensure any soil or debris that may spread invasive or exotic weed species has been removed.

**APM-BIO-3** Worker Environmental Awareness Program (WEAP). The Applicant or the construction contractor will implement a WEAP to educate on-site workers about sensitive environmental issues associated with the Project. The program will be administered to all on-site construction personnel, including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP will be implemented during site mobilization, ground disturbance, grading, construction, operation, and decommissioning.

**APM-BIO-4** Construction Monitoring. A BLM Approved Biologist will conduct construction monitoring during all construction activity types to ensure that construction activities are always contained within the staked and flagged construction areas. The construction monitor will have the authority to stop work and report directly to the Applicant's Environmental Manager or construction contractor to ensure compliance with the Applicant Proposed Measures and Mitigation Measures. The construction monitor will provide the Applicant's Environmental Manager with weekly updates and quarterly monitoring reports. After construction has been completed, the construction monitor will provide the Applicant's Environmental Manager with a final monitoring report. The Applicant's Environmental Manager will provide BLM and the County of Riverside (County) with weekly status updates on the status of construction and monitoring efforts, and will provide BLM and the County with copies of the quarterly monitoring reports and the final monitoring report. The County will be responsible for ensuring that construction monitoring is conducted during all construction activities.

**APM-BIO-5** If construction-related activities are to occur during the bird breeding season (January 15 through September 15), a BLM-qualified biologist will conduct a nesting bird survey prior to the start of any site-disturbing work. If an occupied nest is located within the work area or within a 300-foot buffer surrounding the work area, work will be avoided until the nest fails naturally or the nestlings fledge on their own. Dependent on species and disturbance tolerance, a Biological Monitor may monitor and actively buffer the nest during

construction-related activities. The results of the survey will be submitted to the County of Riverside and BLM.

**APM-BIO-6** Den Collapse. In the event that desert kit fox dens are found during the pre-construction surveys or during construction and in compliance with California Department of Fish and Wildlife approved guidance for desert kit fox on other nearby similar projects, a hazing program will be implemented by a BLM Approved Biologist to entirely rule out the potential for kit fox to be using the den(s) and allow for excavation and collapse. The hazing program will consist of plugging all den entrances nightly with light paper filled trash bags, in addition to the use of wildlife cameras. Wildlife cameras will be set up first for 3 consecutive days to determine if kit fox are currently using a burrow. If no activities are recorded, then the den entrances will be plugged with sandbags to adequately prevent kit fox from re-entering the den. The dens and cameras will be checked first thing each morning for another 3 consecutive days. If no activity is observed and the bags are observed in place each morning from the prior night's hazing process, the den entrances will be plugged with sandbags and/or excavated and collapsed to prevent kit fox use. If kit fox activities are recorded and it is within the kit fox breeding season (December through September), then the cameras will be left in place and an adequate buffer (500 feet) will be established until no activity is observed for 3 consecutive days. The BLM Approved Biologist will document the hazing program within the weekly status updates required under APM-BIO-4.

**APM-VR-1** Lighting Control. Consistent with safety and security considerations, the Applicant will 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 night-time sky, except for required Federal Aviation Administration aircraft safety lighting (which will be an on-demand, audio-visual warning system that is triggered by radar technology); (d) illumination of the Project and its immediate vicinity are minimized; (e) skyglow caused by Project lighting is avoided; and (f) the lighting complies with County of Riverside policies and ordinances. All permanent light sources will be below 2,500 Kelvin color temperature (warm white) and have cutoff angles not to exceed 45 degrees of nadir.

**APM-WAT-1** The Applicant will prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will evaluate potential for erosion and sedimentation to occur on site and downstream because of construction, as well as potential for construction-related releases of fuels, oils, solvents, concrete wash-out, greases, paints, and other potential water quality pollutants to become entrained in stormwater, or otherwise result in the degradation of surface water or groundwater quality. The Applicant will implement specific measures to minimize potential effects on water quality. These measures may include, but would not be limited to, installation of temporary settling basins, stabilization of disturbed soils, replanting vegetation after disturbance, limitations on construction during wet periods, installation of temporary erosion-control devices (fiber rolls, staked straw bales, detention basins, check dams, geofabric, dikes, and temporary revegetation), covering stockpiled loose material during rain events, equipment maintenance to prevent leaks, application of erosion protection to cut and fill slopes, and other best management practices. Sediment will be retained on site by sediment basins, traps, or other measures. No disturbed surfaces will be left without erosion control measures in place during the

rainy season. Spill kits to absorb potential hazardous spills will be on hand during construction to minimize soil contamination and eventual groundwater contamination.

### CMA Mitigation Measure

The following list of DRECP CMAs related to biological resources have been identified as potentially applicable to the Project on BLM-administered lands, and the Project's conformance with these potentially applicable biological resource CMAs would be determined by BLM. The full text of each CMA is provided in the Project Plan of Development and the DRECP (BLM 2016).

| | |
|---|---|
| **LUPA-BIO-1** | Habitat Assessment |
| **LUPA-BIO-2** | Designated Biologist |
| **LUPA-BIO-3** | Resource Setbacks |
| **LUPA-BIO-4** | Seasonal Restrictions |
| **LUPA-BIO-5** | Worker Education |
| **LUPA-BIO-6** | Subsidized Predators Standards |
| **LUPA-BIO-7** | Restoration of Areas Disturbed by Construction |
| **LUPA-BIO-8** | General Closure and Decommissioning Standards |
| **LUPA-BIO-9** | Water and Wetland Dependent Species Resources |
| **LUPA-BIO-10** | Standard Practices for Weed Management |
| **LUPA-BIO-11** | Nuisance Animals and Invasive Species |
| **LUPA-BIO-12** | Noise |
| **LUPA-BIO-13** | General Siting and Design |
| **LUPA-BIO-14-15** | General Standard Practices |
| **LUPA-BIO-16-17** | Activity-Specific Bird and Bat CMAs |
| **LUPA-BIO-RIPWET-1** | Riparian and Wetland Setbacks Except for Minor Incursions |
| **LUPA-BIO-DUNE-1-3** | Dune and Sand Transport CMAs |
| **LUPA-BIO-DUNE-4-5** | Mojave Fringe-Toed Lizard CMAs |
| **LUPA-BIO-PLANT-1-2** | Plant Species CMAs |
| **LUPA-BIO-SVF-1** | Special Vegetation Feature Mapping |
| **LUPA-BIO-SVF-6** | Microphyll Woodland Avoidance Except for Minor Incursions |
| **LUPA-BIO-VEG-1-3, 5-6** | General Vegetation Management |
| **LUPA-BIO-IFS-2-9** | Desert Tortoise CMAs |
| **LUPA-BIO-IFS-12-14** | Burrowing Owl CMAs |

**LUPA-BIO-COMP-1** Biological Resources Compensation

**LUPA-BIO-COMP-2** Bird and Bat Mortality Compensation

**LUPA-SW-9** Desert Pavement Mapping and Impact Minimization

**LUPA-SW-10** Sensitive Soils

## Mitigation Measures

The following MMs would be implemented by the Project Applicant.

**MM-BIO-1** **Biological Monitoring.** The Applicant shall assign at least one Designated Biologist (i.e., agency-approved Qualified Biologist) who shall be approved by the lead agencies (U.S. Bureau of Land Management [BLM] and County of Riverside) and relevant permitting agencies (e.g., California Department of Fish and Wildlife, U.S. Fish and Wildlife Service [USFWS], and Regional Water Quality Control Board, as applicable). The Designated Biologist shall serve as the primary point of contact regarding biological resource compliance. The Designated Biologist shall have demonstrated expertise with the biological resources within the Project area, as well as hold a Memorandum of Understanding with the County of Riverside. Designated Biologist duties shall vary during construction, operation, maintenance, and future decommissioning of the Project. Additionally, Authorized Biologist(s) and Biological Monitor(s) trained and supervised by the Designated Biologist may be necessary to fulfill compliance with Mitigation Measures and permit conditions. Clear definitions of Authorized and Designated Biologists are outlined below. In general, the duties of the Designated Biologist shall include the following:

- Communicate with representatives of lead and permitting agencies, as appropriate.
- Conduct or oversee Worker Environmental Awareness Program.
- Conduct or oversee pre-construction surveys, inspection, and monitoring duties as defined in all Mitigation Measures.
- Halt any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources.
- Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions.
- During construction, prepare and submit monthly compliance reports and other reporting requirements.

***Definitions of Roles***

**Lead Agency–Approved Designated Biologist/Qualified Biologist**: A biologist who the lead agency has reviewed and determined has the skills and experience necessary to effectively survey and monitor for the biological resources that may be present on the Project site. The lead agency–approved Qualified Biologist shall be required to halt Project activities to protect resources, if necessary. The Applicant shall assign at least one lead agency–approved Qualified Biologist as a Designated Biologist. Lead agency–approved Qualified Biologist(s) may also serve as Biological Monitor(s).

**Authorized Biologist**: A biologist who has been approved based on a combination of qualifications and experience by the BLM and USFWS to handle listed species, or species proposed to be listed for movement purposes or to otherwise avoid harm and impacts to the species. An Authorized Biologist can fulfill the survey and monitoring duties similar to the lead agency–approved Qualified Biologist. The lead agency shall complete an initial review of the Authorized Biologists and determine if they have appropriate qualifications and experience to handle desert tortoises. Then lead agency shall submit those credentials to USFWS for review and approval at least 30 days prior to the need for the biologist to perform those activities in the field. USFWS shall provide approvals based on appropriate qualifications and experience to avoid and minimize adverse effects to the species.

**MM-BIO-2** **Worker Environmental Awareness Program (WEAP).** The Applicant shall conduct an education program for all persons employed or otherwise working in the Project area before performing any work on the Project site. The WEAP shall consist of a presentation from the Designated Biologist or Biological Monitor(s) that includes a discussion of the biology and general behavior of special-status species, including information about distribution and habitat, sensitivity of the special-status species to human activities, legal protections, recovery efforts, and penalties for violations. All construction crews and contractors shall be required to participate in WEAP training prior to starting work on the Project. The Applicant shall prepare and distribute a fact sheet handout containing this information for workers. WEAP training materials shall be provided in English and Spanish. Upon completion of the WEAP, employees shall sign a form stating that they attended the WEAP training and understand all protection measures. At a minimum, the WEAP shall do the following:

- Be developed by or in consultation with the Designated 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.
- Include a review of Mitigation Measures and permit requirements.
- Include a review of the special-status species and other sensitive resources that may occur in the Project area, as well as the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources.
- Include desert tortoise–specific training that includes a detailed description; distribution; general behavior; sensitivity to human activities; regulatory status, including prohibitions and penalties incurred for violations; mandatory conservation measures; and procedures if a desert tortoise is observed on site.
- Provide an explanation of the function of flagging that designates authorized work areas and specify the prohibition of construction activities.
- Discuss general environmental and safety protocols, such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures.
- Discuss the federal, state, and local regulatory setting (e.g., Endangered Species Acts, Bald and Golden Eagle Protection Act, and Migratory Bird Treaty Act) and the consequences of non-compliance.

- Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the Project site and surrounding areas.
- Provide contact information for the Designated Biologist and instructions for notification of any vehicle/wildlife collisions or dead or injured wildlife species encountered during Project-related activities.
- Include a training acknowledgment form to be signed by each worker indicating that they received training and will abide by the guidelines. A record of all personnel trained shall be maintained throughout the construction period. Along with their signature, each worker shall receive a sticker for their hard hat indicating they received the training.

**MM-BIO-3** **Minimization of Impacts to Native Vegetation.** The Applicant shall undertake the following measures during construction and decommissioning to avoid or minimize impacts to natural, or native, vegetation:

- Prior to ground-disturbing activities, work areas (including, but not limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils) shall be delineated with construction fencing (e.g., the common orange vinyl material) or staking to clearly identify the limits of work. No paint or permanent discoloring agents shall be applied to rocks or vegetation to indicate surveyor construction activity limits or for any other purpose. Fencing/staking shall remain in place for the duration of construction.
- All disturbances, access roads, staging areas, vehicles, and equipment shall be confined to the fenced/flagged authorized work areas.
- To the greatest extent practicable, construction activities shall minimize disturbance to soil and native vegetation.
- Best management practices shall be used where applicable for prevention and control of soil erosion and to minimize the introduction and spread of invasive plant species.
- Hazardous materials, including motor oil, fuel, antifreeze, hydraulic fluid, and grease, shall be contained, and spills or leaks shall be promptly corrected and cleaned up according to applicable regulations. Any such spills or leaks that occur shall be reported to the U.S. Bureau of Land Management and County of Riverside.
- Vehicles and equipment shall be properly maintained to prevent spills and leaks, and refueling shall not be conducted outside of the authorized work areas or within 100 feet of any sensitive resource (e.g., riparian areas).
- Upon completion of construction activities, 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 and plastic containers.

**MM-BIO-4** **Minimization of Impacts to Wildlife.** The Applicant shall undertake the following measures, overseen by the Designated Biologist, during construction and decommissioning to avoid or minimize impacts to wildlife:

- **Wildlife Avoidance**. Project activities shall avoid interference with wildlife (including ground-dwelling species, birds, and bats) by allowing animals to escape from a work site prior to disturbance.
- **Sensitive Biological Resources.** Sensitive biological resource areas near all work activities shall be clearly communicated and marked (e.g., flagged) in the field. Avoidance buffers shall be established and maintained by the Designated Biologist.
- **Minimize Traffic Impacts.** The Applicant shall specify and enforce maximum vehicle speed limits to minimize risk of wildlife collisions and fugitive dust. Vehicles shall not exceed a speed limit of 15 miles per hour (mph) throughout the Project site on unpaved roads. To the extent possible, night-time construction-related activity shall be minimized, but if work must be conducted at night, the speed limit shall be 10 mph. Dust suppression shall occur during construction activities as needed.
- **Minimize Lighting Impacts.** Night lighting, when in use, shall be designed, installed, and maintained to prevent side casting of light toward surrounding wildlife habitat. New light sources shall be minimized, and lighting shall be designed to limit the lighted area to the minimum necessary (e.g., using downcast lights).
- **Avoid Use of Toxic Substances.** Use of chemicals, fuels, lubricants, or other toxic substances shall comply with all local, state, and federal regulations to minimize the possibility of contamination of habitat or primary or secondary poisoning of predators. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation. Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be nontoxic to wildlife and plants.
- **Minimize Noise and Vibration Impacts.** The Applicant shall conform to noise requirements specified in the noise analysis of the Environmental Impact Report to minimize noise to off-site habitats.
- **Water.** Potable and non-potable water sources, such as tanks, ponds, and pipes, shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks. Water sources (e.g., hydrants, tanks) shall be checked periodically by Biological Monitors to ensure they do not create longstanding ponded areas, which could attract wildlife and wildlife predators.
- **Food and Trash**. No deliberate feeding of wildlife shall be allowed. Further, to avoid attracting wildlife, all food-related trash items, including wrappers, cans, bottles, and food scraps (organic waste) shall always be contained and properly disposed of in self-closing, sealable containers with lids that latch to prevent wind and wildlife (e.g., ravens and coyotes) from opening the containers. Particular attention shall be paid to "micro-trash" (including such small items as screws, nuts, washers, and nails; coins; rags; small electrical components; small pieces of plastic, glass, and wire; and any debris or trash that is colorful or shiny). All trash receptacles shall be regularly inspected, emptied, and removed from the Project area at a minimum of once a week to prevent spillage and to maintain sanitary conditions.

- **Firearms and Dogs.** All personnel and any other individuals associated with the Project shall be prohibited from bringing any firearms to the Project site, except those in the possession of authorized security personnel or local, state, or federal law enforcement officials. No pets shall be permitted on the Project site except dogs that may be used to aid in official and approved monitoring procedures/protocols or service dogs under Title II and Title III of the Americans with Disabilities Act.
- **Wildlife Entrapment.** All pipes, culverts, and similar structures stored or installed aboveground shall be inspected by the Designated Biologist or Biological Monitor(s) before the material is moved, buried, or capped. The Designated Biologist or Biological Monitor(s) shall inspect all open holes and trenches a minimum of once a day and just prior to backfilling. If open holes or trenches remain overnight, an escape ramp shall be created every 100 feet to allow wildlife to exit. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees. If any worker discovers an animal that has become trapped, the worker shall halt activities and notify the Designated Biologist or Biological Monitor immediately.
- **Dead or Injured Wildlife**. Dead or injured special-status wildlife species shall be reported to the lead agency and permitting agencies, as applicable, within 24 hours of detection. The Designated Biologist or Biological Monitor shall complete a Wildlife Incident Form and safely move the carcasses out of the road or work area and dispose of the animal. Disposal of any special-status species requires advance coordination with the County of Riverside, U.S. Bureau of Land Management, and U.S. Fish and Wildlife Service. If an animal is entrapped, the Designated Biologist or Biological Monitor shall free the animal if possible, or work with construction crews to free it, in compliance with safety requirements, or work with applicable agencies to resolve the situation. Injured wildlife shall be transported to an approved wildlife rehabilitation center (noted below). The Applicant shall be responsible for paying the cost of transportation and rehabilitation of injured wildlife.
  - Ramona Wildlife Shelter, 18740 Highland Valley Road, Ramona, California; 619.299.7012
  - El Paseo Animal Hospital in Palm Desert, California; 760.491.1008
- **Pest Control.** No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the Project site or in support of any Project activities. If rodent control must be conducted, the use shall be restricted to the interiors of buildings, and zinc phosphide shall be used because of the lower risk of poisoning burrowing mammals.
- **California Natural Diversity Database.** All observations of special-status species, alive or dead, shall be recorded and reported to the California Natural Diversity Database by the Biological Monitor or Authorized Biologist.

**MM-BIO-5** **Integrated Weed Management Plan.** The Applicant shall prepare and implement an Integrated Weed Management Plan to minimize and prevent noxious, non-native, and invasive weeds from infesting the site and spreading into surrounding habitat. The Integrated Weed Management Plan shall be approved by the U.S. Bureau of Land Management (BLM) for implementation on BLM-administered lands. If required, the

Integrated Weed Management Plan shall also be approved by the County of Riverside for implementation on private lands. The Integrated Weed Management Plan shall identify weed species occurring or potentially occurring in the Project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and timely implementation of manual or chemical (as appropriate) suppression and containment measures to control or eradicate invasive weeds. All construction vehicles (e.g., trucks, trailers, machinery) shall be washed (either by water or pressurized air) off site before entering the Project site to limit the spread of weeds. All wattles and bales shall be certified weed-free and shall be removed at the completion of activities. The Integrated Weed Management Plan shall include a reporting schedule to be implemented by the Designated Biologist. The Integrated Weed Management Plan shall identify herbicides proposed for use and include conditions to avoid application of herbicides in or around any environmentally sensitive areas. The Applicant shall avoid use of products containing the active ingredients 2,4-D, diquat, glyphosate, hexazinone, or triclopyr.

**MM-BIO-6** **Vegetation Resources Management.** The Applicant shall assign a vegetation specialist to oversee and implement salvage and transplantation of plant species protected pursuant to the California Desert Native Plants Act (CDNPA) and revegetation of milkweed species used as host and nectar sources for Monarch butterfly. Where the area occupied by a CDNPA species was delineated (versus a point count), additional census surveys shall be required to determine the exact number of CDNPA plants to be removed. On the private lands under the jurisdiction of the County of Riverside, the Applicant shall obtain a permit from the County of Riverside pursuant to the CDNPA for the purposes of salvage or removal of protected species during construction, if required. Salvage and transplantation activities pursuant to the CDNPA on private lands shall be conducted in concert with such activities on U.S. Bureau of Land Management (BLM)–administered lands under BLM policy. Revegetation of temporarily disturbed areas is not anticipated to occur on the private lands within the solar and battery energy storage system site; however, salvaged materials from the private lands portion of the Project site may be transplanted within BLM-administered lands along the transmission line route as part of revegetation efforts of temporarily disturbed areas, with BLM approval. Revegetation of the BLM administered lands along the transmission route shall include a seed mix including native milkweed species (e.g., *Asclepias subulata* and *Asclepias albicans*).

**MM-BIO-7** **Minimization of Impacts to Birds and Bats**. The Applicant shall undertake the following measures to avoid or minimize impacts to birds and bats.

- **Bird and Bat Conservation Strategy.** The Applicant shall prepare a Bird and Bat Conservation Strategy (BBCS) for review and approval by the applicable lead and permitting agencies. The BBCS shall include baseline data on the distribution of bird and bat species within the Project area, risk assessment, measures to avoid and minimize adverse impacts, a description of relevant monitoring and reporting, and a framework for adaptive management. The BBCS shall include design requirements consistent with the Avian Power Line Interaction Committee (APLIC) guidelines.
- **Nesting Bird Protection**. If vegetation removal or ground disturbance occurs during the nesting season (February 1 through August 31), pre-construction surveys for active nests shall be conducted by qualified biologists at the direction of the Designated Biologist. Nest surveys shall be completed no more than 3 days prior to

initiation of vegetation removal or ground disturbance, and shall be repeated every 2 weeks in areas of ongoing construction activity. If an active nest is found, an exclusion buffer shall be established and marked in the field by the Designated Biologist. The Project shall maintain a buffer adequate to avoid otherwise prohibited take, possession, or destruction of any bird, nest, or egg. Nesting bird management shall be described further in a Nesting Bird Management Plan or incorporated in the BBCS and submitted to the applicable lead and permitting agencies for review and approval.

**MM-BIO-8** **Burrowing Owl Protection.** The Applicant shall implement the following measures to avoid the impacts to and take of burrowing owl and to mitigate impacts to burrowing owl should they occur.

**Measures to Avoid Burrowing Owl Impact and Take**

The Applicant shall implement the following measures to avoid impacts to and take, as defined by California Fish & Game Code Section 86, of burrowing owl:

**Take Avoidance Pre-Construction Surveys.** A qualified avian biologist shall conduct a pre-construction take avoidance survey for burrowing owls no less than 14 days and no greater than 30 days prior to initiation of construction activities, including brushing, clearing, grubbing, and grading of the Project site, regardless of time of year. If construction activities have ceased for 30 days or more following the initial pre-construction survey or subsequent activities on the site would result in clearing or ground disturbance activities, a take avoidance survey shall be repeated prior to the activity. The pre-construction survey focused exclusively on detecting burrowing owls shall be conducted within Project construction or activity areas in accordance with the most current CDFW guidelines (CDFG 2012, or updated guidelines as they become available). If no burrowing owls are observed, a second survey shall be conducted within 24 hours prior to commencement of ground-disturbing activities to confirm absence. Burrowing owl surveys shall record potentially occupied burrows (i.e., suitable burrows with observed burrowing owls or with burrowing owl sign such as pellets, feathers, or white wash within the last three years) or presence of burrowing owls within the Project area and within 150 meter (500 feet) of the Project. Burrows that are suitable for burrowing owl use but are not determined to be potentially occupied are not subject to the Burrow Avoidance Measures described below, and may be collapsed under the supervision of the Designated Biologist/Authorized Biologist after confirming they are not occupied by other special-status species.

**Avoidance.** Should the pre-construction survey or subsequent surveys identify burrowing owl presence or potentially occupied burrows within the project site or activity area, the following measures shall be implemented to avoid impacts to and take of burrowing owl:

***Burrow Avoidance:*** If a potentially occupied burrowing owl burrow is detected within any Project disturbance area, or within a 150-meter buffer of the disturbance area, no-disturbance buffers shall be established based on the level of disturbance as directed in the 2012 CDFG Staff Report or in accordance with the most current CDFW

guidelines. If the 2012 CDFG Staff Report's initial recommended buffers cannot feasibly be maintained, the Applicant shall prepare and implement a Burrowing Owl Avoidance Plan describing required methods to avoid take of burrowing owl, whose measures may include but need not be limited to buffer reductions as determined by a Designated Biologist/Authorized Biologist based on site conditions, increased burrow monitoring, and/or the creation of artificial burrows. The Applicant shall comply with the plan to ensure that Project activities do not result in "take" (i.e., hunt, pursue, catch, capture, or kill or attempt to do so) of burrowing owl.

***Construction Monitoring:*** Monitoring of the site for new burrows shall be conducted for the period following the initial pre-construction survey or subsequent surveys until construction activities are completed. If burrowing owls begin using a burrow on the site at any time after the initial pre-construction survey or subsequent surveys, the procedures described above for Burrow Avoidance shall be implemented. During construction, best management practices shall be employed, as directed by the Designated Biologist/Authorized Biologist, to discourage burrowing owls from colonizing new portions of the site. Such measures include, but are not limited to ensuring that the ends of all large pipe and culverts are covered when they are not being worked on and covering rubble piles, dirt piles, ditches, and berms.

***Individual Burrowing Owl Avoidance:*** Burrowing owls associated with burrows shall be avoided through the Burrow Avoidance measures described above. Locations of observed burrowing owl individuals not associated with a burrow during the pre-construction survey, subsequent surveys, or during construction monitoring shall be avoided through the procedures described above for Burrow Avoidance. Construction activities shall not proceed in the location of the observed burrowing owl individual until monitoring determines that the burrowing owl is no longer present.

**Additional Measures to Mitigate Burrowing Owl Impacts**

The Applicant shall implement the following measures to mitigate unavoidable impacts to burrowing owl:

**CDFW Consultation.** If the Avoidance measures listed above under Measures to Avoid Burrowing Owl Impact and Take cannot be implemented or would not result in avoiding take of burrowing owl, the Applicant shall consult with CDFW and, if the species is a candidate, threatened or endangered species under CESA at such time, seek incidental take authorization from CDFW. Applicant shall implement all conditions of the Incidental Take Permit should it be issued.

**Compensatory Mitigation.** Compensatory mitigation shall be provided, as specified in the California Burrowing Owl Survey Consortium's 1993 Burrowing Owl Survey Protocol and Mitigation Guidelines (1993) or as determined through an Incidental Take Permit, if necessary, at the following compensatory mitigation

ratios: replacement of occupied habitat with occupied habitat (9.75 acres per potentially occupied burrow), replacement of occupied habitat with habitat contiguous to currently occupied habitat (13.0 acres per potentially occupied burrow), replacement of occupied habitat with suitable unoccupied habitat (19.5 acres per potentially occupied burrow). Compensatory mitigation shall be accomplished through one or more of the following actions:

Conservation Bank Credit Purchase: Purchase of conservation bank credits sufficient to meet the compensatory mitigation ratios defined above at a CDFW-approved conservation/mitigation bank with burrowing owl credits and a bank service area covering the Project site.

Permittee-Responsible Mitigation: Execute and fund the long-term protection and management of off-site habitat compensation lands sufficient to meet the compensatory mitigation ratios defined above. Applicant shall provide long-term protection of the habitat compensation lands through fee title acquisition, conservation easement, or both. A long-term habitat management plan shall be prepared for the habitat compensation lands, and a Property Analysis Record (PAR) or PAR-like analysis shall be prepared to estimate the long-term management costs for the lands. A non-wasting endowment shall be established to fund management of the lands in perpetuity, and a qualified entity shall hold the endowment and serve as long-term land manager for the lands.

**MM-BIO-9** **Desert Tortoise Protection.** No desert tortoise may be handled or relocated without authorization from the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS). The Applicant shall employ Authorized Biologists and Biological Monitors who are qualified desert tortoise biologist(s) for purposes of implementing the desert tortoise protection measures identified below. The Designated Biologist noted in MM-BIO-1 may also serve as a qualified desert tortoise biologist if they meet the following qualifications. The Authorized Biologist and Biological Monitor desert tortoise biologist qualifications shall be subject to review and approval by the applicable lead and permitting agencies. Minimum qualifications shall include prior approval by CDFW and USFWS as an authorized desert tortoise biologist and/or at least 2 years of experience on trend plots or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by CDFW and USFWS (e.g., Desert Tortoise Council tortoise training workshop) is required.

The Biological Monitor shall monitor Project activities within desert tortoise habitat, ensure proper implementation of protective measures, and report incidents of non-compliance in accordance with a Biological Opinion and/or permits. Monitors shall have sufficient desert tortoise training and field experience to detect the presence of desert tortoises through observations of animals and sign, including scat and burrows. A Biological Monitor is typically not authorized to handle desert tortoises, determine presence/absence of desert tortoises, or conduct clearance surveys.

The Authorized Biologist is approved to conduct activities that may result in “take” of desert tortoise, including locating tortoises and their sign, recording and reporting tortoise and sign observations in accordance with approved protocol, and ensuring that the effects of the Project on desert tortoise and its habitat are minimized in accordance

with a Biological Opinion or permit. For purposes of the federal Endangered Species Act, "take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An Authorized Biologist shall have thorough knowledge of desert tortoise behavior, natural history, and ecology, and demonstrate substantial field experience and training to successfully handle desert tortoises; excavate burrows to locate desert tortoises or eggs; relocate desert tortoises; reconstruct desert tortoise burrows; unearth and relocate desert tortoise eggs; and locate, identify, and record all forms of desert tortoise sign.

The Authorized Biologist(s) shall be responsible for overseeing compliance with desert tortoise protective measures, conducting pre-construction surveys for all work areas, monitoring for evidence of tortoises in construction areas, checking under vehicles and equipment, inspecting excavations and other potential entrapments, and ensuring worker compliance with all desert tortoise protection measures. Any incident that is considered by the Authorized Biologist(s) to be in non-compliance with desert tortoise protective measures shall be documented.

The Authorized Biologist(s) shall have the authority to halt any Project activity that is in violation of desert tortoise protective measures or that may result in take of a desert tortoise. The following incidents shall require immediate cessation of any Project activities: location of a desert tortoise within 100 feet (30 meters) during the non-active season and within 250 feet during the active season (September–October and April–May) of an active work area; imminent threat of injury or death to a desert tortoise; unauthorized handling of a desert tortoise, regardless of intent; and operation of construction equipment or vehicles outside of authorized work areas. Work activities may resume once the Designated Biologist or Authorized Biologist(s) determines that there is no threat to the desert tortoise and/or the tortoise has walked more than 100 feet (30 meters) away during the non-active season and at least a 250 feet away during the active season from the work area, and the tortoise shall be visually monitored so that if it returns to the work site, it shall not be injured or killed. The Applicant shall be responsible for implementing the following requirements, under direction of the Authorized Biologist(s):

- **Worker Training.** The Worker Environmental Awareness Program described in MM-BIO-2 shall incorporate desert tortoise–specific training.
- **Exclusion Fencing.** Prior to construction of the solar and battery energy storage system (BESS) site, it shall be fully enclosed by temporary or permanent desert tortoise exclusion fencing. All exclusion fencing shall adhere to the County approved desert tortoise exclusion fencing design that incorporates recommendations from the 2009 (or most current) USFWS design guidelines. To the extent feasible and permissible by County of Riverside flood control design guidelines, permanent exclusion fence shall be integrated with the site security fence for maximum durability. Temporary desert tortoise exclusion fencing may be installed along the linear facility routes within the approved right-of-way. Temporary fencing shall be removed after completion of construction. The qualified desert tortoise biologist(s) shall monitor the installation of all fencing. Once installed, exclusion fencing shall be inspected at least monthly until construction completion and following all rain events, and corrective action shall be taken if fence maintenance is needed. After an area is fenced and until desert tortoises are removed, the Designated Biologist shall be responsible for ensuring that desert tortoises are not being exposed to extreme

temperatures or predators as a result of their pacing the fence. Remedies may include the use of shelter sites placed along the fence, immediate translocation, removal to a secure holding area, or other means determined by the U.S. Bureau of Land Management (BLM), USFWS, and CDFW, as applicable. Exclusion fencing shall incorporate tortoise guards, or cattle guards, and/or gates at each road entry point. Gates shall always remain closed, except when vehicles are entering or leaving the Project site. If it is deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open if a qualified desert tortoise biologist is present to monitor potential tortoise activity.

- **Shade Structures.** Shade structures shall be installed every 1,000 feet (300 meters) along the exterior of the perimeter fence where tortoises may encounter newly installed fencing, or per the most current USFWS guidance. Shade structures shall be maintained for 2 years following completion of the perimeter fence.
- **Pre-Construction Surveys.** Pre-construction surveys shall be performed prior to ground disturbance to ensure no desert tortoises are present within the direct disturbance area. Pre-construction surveys shall be conducted in unfenced Project areas no more than 7 days prior to ground disturbance. Clearance surveys shall also be conducted after the solar and BESS site has been fully enclosed by temporary or permanent desert tortoise exclusion fencing.
- **Avoidance.** Any potentially occupied burrows shall be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If a live tortoise or an occupied tortoise burrow is identified in the work area, all Project activities that may result in take shall cease. The tortoise shall be allowed to leave on its own without handling or harassment.
- **Unfenced Work Areas**. If a tortoise is observed on or near the road accessing a work area, vehicles shall stop to allow the tortoise to move off the road on its own. The ground beneath vehicles parked outside of cleared areas within desert tortoise exclusion fencing shall be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle shall not be moved until the desert tortoise leaves on its own. Any work conducted in an area that is not fully enclosed by exclusion fencing must be monitored by a qualified desert tortoise biologist who shall stop work if a tortoise enters the work area. Work activities shall only proceed when the tortoise has moved away on its own and there is no threat of injury or death. Work sites with potential hazards to desert tortoises (e.g., auger holes, steep-sided depressions) shall be enclosed by a temporary exclusion fence and not left open overnight.
- **Dead or Injured Tortoises.** If a dead or injured desert tortoise is found within the Project area, the Applicant or Designated Biologist shall notify by phone and email USFWS, CDFW, and BLM within 24 hours of detection. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, possible cause of death or injury if known, and other pertinent information.

**MM-BIO-10** **Raven Management.** The Applicant shall provide funding to the Renewable Energy Action Team Account held by the National Fish and Wildlife Foundation to support the U.S. Fish and Wildlife Service's (USFWS) Regional Raven Management Program. The one-time fee shall be $105 per acre of direct impacts, and the fee shall be determined based on final

calculation of impacted acreage. The Applicant shall also implement the following requirements, under direction by the Designated Biologist, where appropriate:

- The Applicant shall incorporate raven management into the Bird and Bat Conservation Strategy (BBCS) (MM-BIO-8) to address activities that may occur during the pre-construction, construction, decommissioning, and operations and maintenance phases of the Project that may attract common ravens, a nuisance species that is a predator of desert tortoises and other sensitive species in the Project vicinity. The measures contained in the BBCS specific to raven management shall be designed to do the following:
  - 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 Worker Environmental Awareness Program described in MM-BIO-2 shall incorporate discussion of ravens and responsibilities to control subsidies.
- Raven food sources shall be reduced by managing waste. Trash and food items shall always be contained in closed containers.
- Raven food sources shall be reduced by managing surface disturbance and dead wildlife. The Designated Biologist or Biological Monitor(s) shall, to the extent authorized, relocate wildlife from harm's way during ground-disturbing activities to minimize incidental kill to the extent feasible. Vehicle traffic speeds shall adhere to posted limits and not exceed 15 miles per hour on all unpaved roads. If dead wildlife remains and roadkill are found, they shall be collected and disposed of (e.g., buried, when possible).
- Water availability shall be reduced. Excess water shall not be used for fugitive dust control, and standing water issues shall be corrected promptly. Water tanks shall be maintained in proper operating condition. Designated Biologist and Biological Monitors shall monitor raven activity during construction. All raven sightings/ encounters shall be documented in daily logs.
- All inactive raven nests (i.e., no eggs or nestlings present) shall be removed.
- The Designated Biologist shall notify the U.S. Bureau of Land Management (BLM), California Department of Fish and Wildlife (CDFW), and USFWS (Palm Springs Fish and Wildlife Office at 760.322.2070) of any active raven nests encountered within the Project area. Nests within 100 feet of active work areas shall be monitored weekly to identify any evidence of predation on desert tortoises, and results shall be reported to BLM, CDFW, and USFWS accordingly. Access shall be granted to National Fish and Wildlife Foundation contractors responsible for surveying and treating active raven nests. Treatment shall consist of flying to within 3 feet (1 meter) of a target nest with a ground-piloted aerial vehicle (i.e., drone) (U.S. made) outfitted with a remote fluid applicator. The fluid applicator system would apply a few milliliters of low-viscosity food-grade oil, which halts egg development due to oxygen deprivation.

- Contractors visiting the Project site on maintenance or compliance monitoring visits shall check for evidence of predation of desert tortoise (juvenile or hatchling desert tortoise carcasses). If carcasses are found, the contractors shall contact the Palm Springs Fish and Wildlife Office (760.322.2070) to report the matter.
- Adaptive management actions shall be implemented if ravens are found to roost or nest on Project infrastructure. These may include increased monitoring and reporting, refined strategies for refuse management, and design strategies and passive repellant methods.

**MM-BIO-11** **Desert Kit Fox and American Badger Relocation.** The Applicant shall implement the following measures to protect desert kit fox and American badger:

- Biological Monitors shall perform pre-construction surveys for kit fox/badger dens in the Project disturbance area and a 100-foot (30-meter) buffer beyond the Project disturbance area, where landowner access is permitted, within 30 days of initiation of construction activities.
- All potential desert kit fox/badger dens with signs of current or recent use (i.e., tracks, scat, fresh throw mounds) identified during pre-construction surveys shall be monitored for a minimum of 3 consecutive nights (between August 1 and January 14) or 5 consecutive nights (between January 15 and July 31) to determine occupancy status. Occupancy monitoring shall be performed using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance(s). Each den shall be classified as inactive or active following the evaluation period.
- If no tracks are observed in the tracking medium or no photos of the target species are captured after the monitoring period, the den shall be classified as inactive. Inactive dens in the direct path of disturbance may be excavated by hand and backfilled to reduce the likelihood of reuse by badgers or kit fox. An Authorized Biologist shall ensure that desert tortoises are not present prior to excavation of inactive desert kit fox dens. If a desert tortoise is present, the Authorized Biologist shall implement protective measures described in MM-BIO-9 (Desert Tortoise Protection). Dens not directly impacted by construction shall not be excavated.
- If an active den is found outside the natal season (August 1 through January 14), the den may be subject to passive relocation. Prior to any relocation of desert kit fox and American badger, the California Department of Fish and Wildlife (CDFW) must be notified of the active den and methods proposed for relocation. Relocation may occur by progressively blocking the den with natural materials (e.g., rocks, dirt, sticks, or vegetation) or artificial, non-injurious materials placed in front of the entrance for a minimum of 5 consecutive nights to discourage continued use. Additional deterrents, such as natural mixtures of aromatic organics (e.g., onions, garlic, and essential oils), transistor radios, and ultrasonic emitters, may be used. The use of one-way doors may be used. Installation of one-way doors shall take place in the afternoon while desert kit fox/badgers are inactive and deep within the den complex. After verification that passive relocation has been successful and the den has been unoccupied for 5 consecutive nights, the den may be fully excavated.
- If an active den is found during the natal season (January 15 through July 31), a 500-foot (150-meter) no-disturbance buffer shall be established. All active dens found

during the natal season shall be presumed natal and shall not be subject to passive relocation activities unless approval is obtained from CDFW.

- Buffers may be reduced, expanded, or temporarily modified to allow certain low-impact activities (e.g., vehicle access) to occur as determined feasible by the Designated Biologist without adversely affecting the den. All modifications to the size of exclusion buffers or allowance of certain Project activities within the exclusion buffer shall be documented by the Designated Biologist.
- Current guidelines from CDFW regarding minimizing transmission of canine distemper virus shall be followed.

**MM-BIO-12** **Stream Protection and Compensation**. Prior to ground-disturbing activities in waters potentially regulated by the state, the Applicant shall confer with the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB) and shall obtain appropriate authorization and permits, as required. The Applicant shall implement all conditions associated with regulatory agency agreements and authorizations, including compensatory mitigation, and, unless otherwise specified by CDFW and/or the RWQCB, shall implement the measures identified below to minimize and compensate for impacts to regulated waters:

- Construction crews shall minimize disturbance to wetlands, streambeds, and banks of any state-jurisdictional waters to the extent feasible.
- Vehicles and equipment shall not be operated in standing or flowing water.
- The Applicant shall prevent water containing mud, silt, or other pollutants from grading or other activities from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from entering ephemeral drainages.
- No petroleum products or other pollutants from the equipment shall be allowed to enter any state jurisdictional waters.
- No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction or associated activity shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into off-site state jurisdictional waters.
- Stationary equipment, such as motors, pumps, generators, and welders, shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Cleanup equipment, such as brooms, absorbent pads, and skimmers, shall always be on site. The cleanup of all spills shall begin immediately.
- All excess materials or debris shall be removed from the work area after completion of construction.
- Project impacts to state jurisdictional ephemeral washes (non-wetland waters) on private lands shall be compensated at a 1:1 ratio. An estimated 0.1 acres of Project

impacts to ephemeral washes on private lands at a 1:1 compensation ratio would require an estimated 0.1 acres of habitat compensation. The final required compensation acreage for ephemeral washes shall be based on the final calculations of impacts to these communities on private lands. It's important to note that mitigation ratios described herein may change during the regulatory permitting process.

- Project impacts to riparian vegetation shall be compensated according to MM-BIO-13.

**MM-BIO-13** **Compensation for Impacts to Native Vegetation**. The Applicant shall provide habitat compensation for the final impact acreages to sensitive native vegetation from the Project. An estimate of required compensation acreages for impacts occurring on private lands is provided below; however, final compensation shall be based on final calculation of impacted acreage. Habitat compensation for impacts to native vegetation on U.S. Bureau of Land Management (BLM)–administered lands shall be based on BLM's review of Project conformance with Conservation and Management Action LUPA-BIO-COMP-1. Habitat compensation for Project impacts on private lands shall be provided for impacts to the following native vegetation:

- **Riparian Vegetation** (Blue Palo Verde–Ironwood Woodland): Impacts to riparian communities (blue palo verde–ironwood woodland) on private lands shall be compensated at a 3:1 ratio. An estimate 12.6 acres of Project impacts to riparian communities on private lands at a 3:1 compensation ratio would require an estimated 37.8 acres of habitat compensation. The final required compensation acreage for riparian communities shall be based on the final calculations of impacts to these communities on private lands.
- **Other Sensitive Vegetation Communities:** Impacts to the white bursage association and rigid spineflower–hairy desert sunflower desert pavement association on private lands shall be compensated at a 1:1 ratio. An estimate of 46.1 acres of permanent impacts to the white bursage association and 33.4 acres of permanent impacts to rigid spineflower–hairy desert sunflower desert pavement, and 0.6 acres of permanent impacts to arrow weed thickets would require an estimate of 80.2 acres of habitat compensation. The final required compensation acreage for other sensitive communities shall be based on the final calculations of impacts to these communities on private lands.

No habitat compensation shall be required for impacts to common native vegetation communities, non-native vegetation, or other land cover types, such as disturbed habitat, fallow lands, agriculture, or urban/developed lands, on private lands.

The Applicant shall provide funding or bonding for the acquisition and conservation of compensation lands. Conservation instruments, associated documentation, and/or securities shall be submitted to the applicable agencies for review and approval prior to initiating ground disturbance, pursuant to the requirements of permits and authorizations issued by lead, responsible, and permitting agencies.

**MM-BIO-14** **Special-Status Plant Impact Avoidance and Minimization Measures**

**Pre-Construction Surveys**: Prior to ground-or vegetation-disturbing activities, focused protocol surveys for Harwood's eriastrum, which blooms March-June, shall be conducted

within suitable habitat. Suitable habitat for this species is within the vicinity of the Phase 2 transmission line south of I-10. Prior to conducting the focused protocol survey, a reference population check shall be conducted. Reference population checks involve locating known populations of special-status plant species during a time frame when they are known to be blooming or exhibit other phenological characteristics that allow for species identification. Observations of reference populations during peak phenology provide assurance to the lead agencies and resource agencies that these species would be identifiable if they are present in areas proposed for ground disturbance.

**Special-Status Plant Impact Avoidance and Minimization Measures.** The Applicant shall incorporate the following measures to avoid and minimize impacts to Harwood's Eriastrum:

1. ***Site Design Modifications***: Incorporate site design modifications to minimize impacts to Harwood's eriastrum along the Phase 2 transmission line including: (1) limiting the width of the work area; (2) adjusting the location of staging areas, lay downs, spur roads and poles or towers; and (3) driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank. These modifications shall be clearly depicted on the grading and construction plans.

2. ***Establish Environmentally Sensitive Areas (ESAs).*** Prior to the start of any ground- or vegetation-disturbing activities, a qualified designated biologist shall establish ESAs to protect avoided Harwood's eriastrum that occur outside of the project disturbance areas and within 20 feet of project disturbance areas. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. ESAs shall also be clearly identified (with signage and by mapping on site plans) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure.

3. ***Special-Status Plant Worker Environmental Awareness Program (WEAP).*** The WEAP (MM-BIO-2) shall include training components specific to protection of Harwood's eriastrum.

4. ***Avoid Harwood's Eriastrum Plant Occurrences.*** Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas shall be placed at least 100 feet from any ESAs.

5. ***Monitoring and Reporting Requirements.*** The designated biologist shall conduct weekly monitoring of the ESAs that protect Harwood's eriastrum occurrences during construction and decommissioning activities.

**Mitigation for Impacts to Harwood's Eriastrum.** If impacts to Harwood's eriastrum cannot be avoided, the Applicant shall mitigate impacts to Harwood's eriastrum through one or a combination of the following measures:

1. ***Off-site Compensation.*** The Applicant shall provide compensation lands consisting of occupied Harwood's eriastrum habitat at a 1:1 ratio for any occupied habitat affected by the Project. Occupied habitat shall be calculated in the Project area and on the compensation lands as including each occurrence. Off-site compensation shall be incorporated into the Projects' Habitat Compensation Plan for review and approval

by the County and the BLM. Compensatory mitigation required for MM-BIO-13 may be fulfilled by the compensatory mitigation lands acquired the measure to the extent that the mitigation lands also meet the requirements of this mitigation measure.

2. ***Salvage.*** The Applicants shall prepare and implement a Harwood's eriastrum Salvage and Relocation Plan to be reviewed and approved by the County and BLM prior to disturbance of any Harwood's eriastrum. The Applicants shall contract with biologists qualified to conduct this work and salvage all the topsoil of the identified occurrence of Harwood's eriastrum from the Project sites and transfer them to a suitable unoccupied off-site location. This would fulfill the mitigation requirement.

3. ***Horticultural Propagation and Off-Site Introduction***. If salvage and relocation is not believed to be feasible for Harwood's eriastrum, then the Applicants shall consult with a qualified entity to develop and implement an appropriate experimental seed amplification and relocation strategy.

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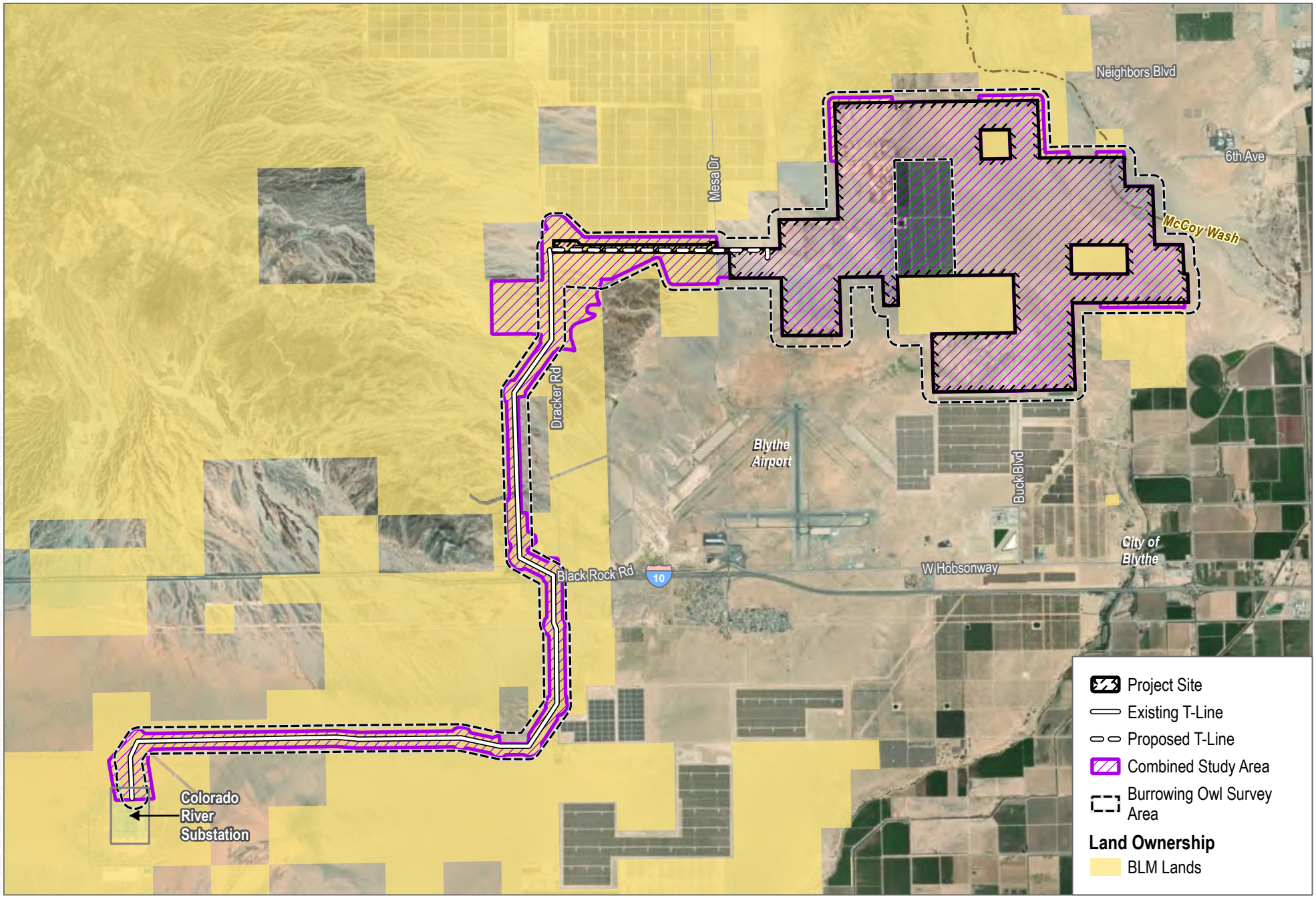
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SOURCE: Maxar 2023

DUDEK

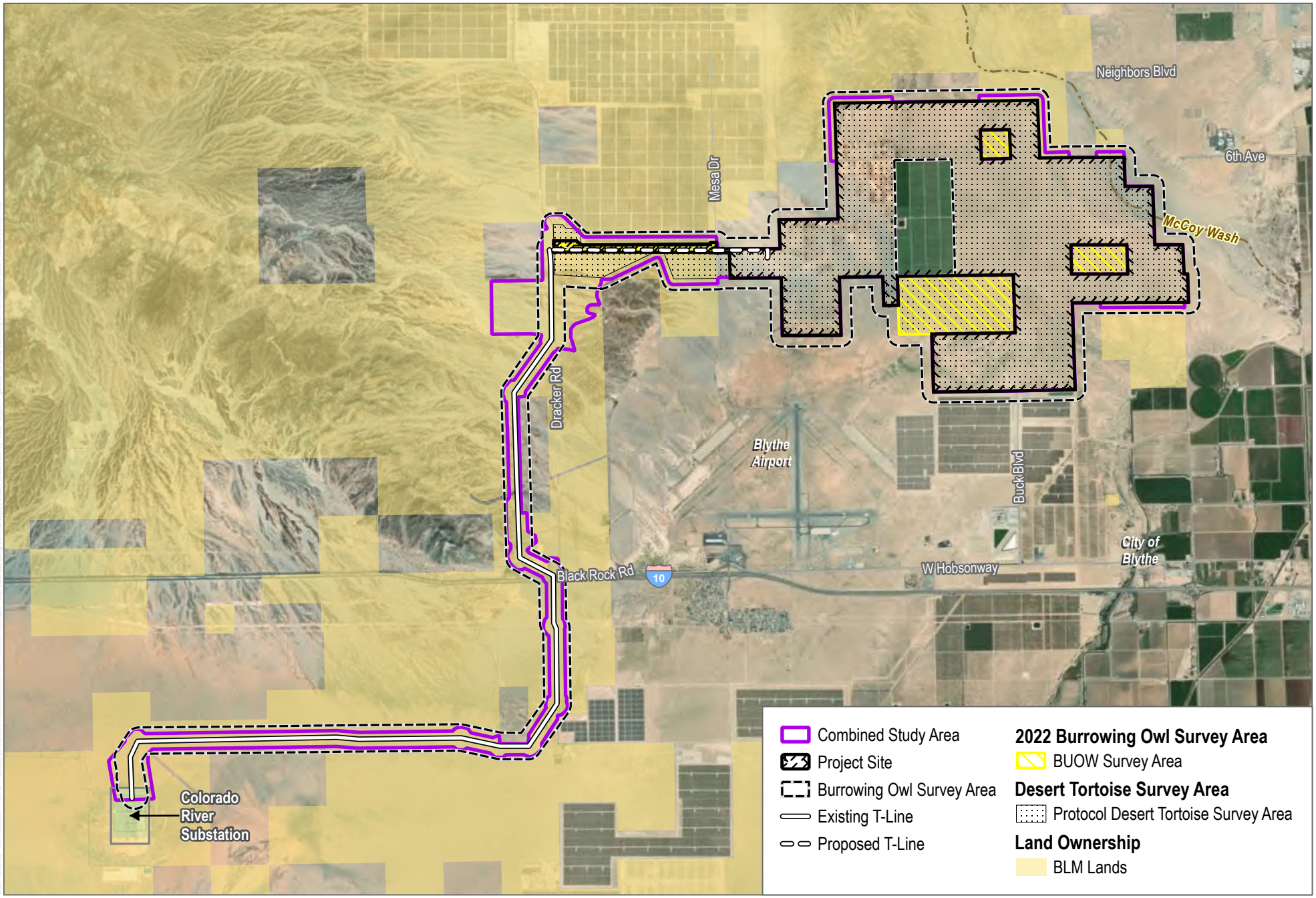
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**FIGURE 3.5-1A**

Biological Survey Areas

Grace Solar Energy Center

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SOURCE: Maxar 2023

**FIGURE 3.5-1B**

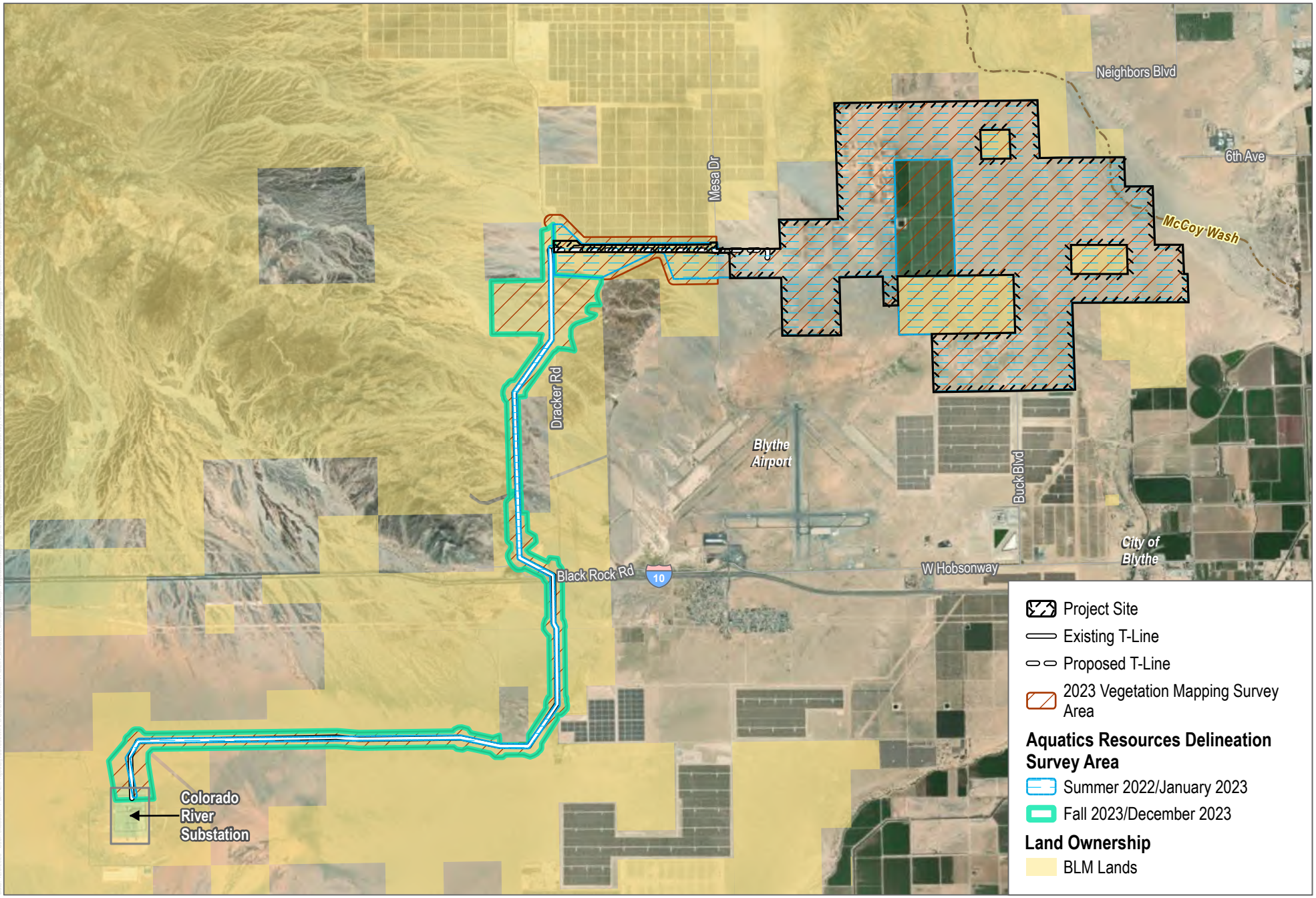
2022 Burrowing Owl and Mojave Desert Tortoise Survey Areas

Grace Solar Energy Center

DUDEK

0 0.5 1 Miles

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SOURCE: Maxar 2023

**FIGURE 3.5-1C**

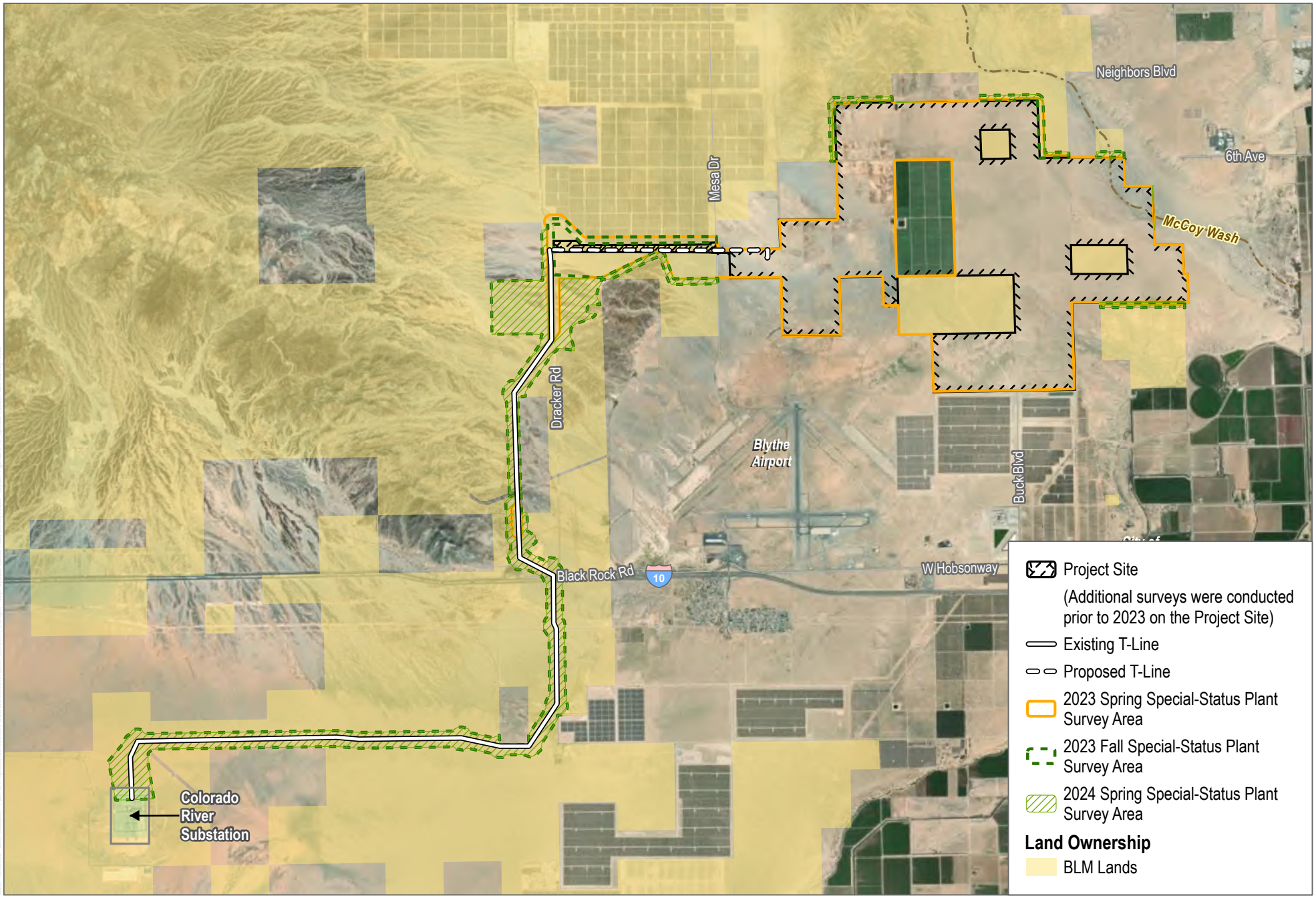
Vegetation Mapping and Aquatic Resources Delineation Survey Areas

Grace Solar Energy Center

DUDEK

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SOURCE: Maxar 2023

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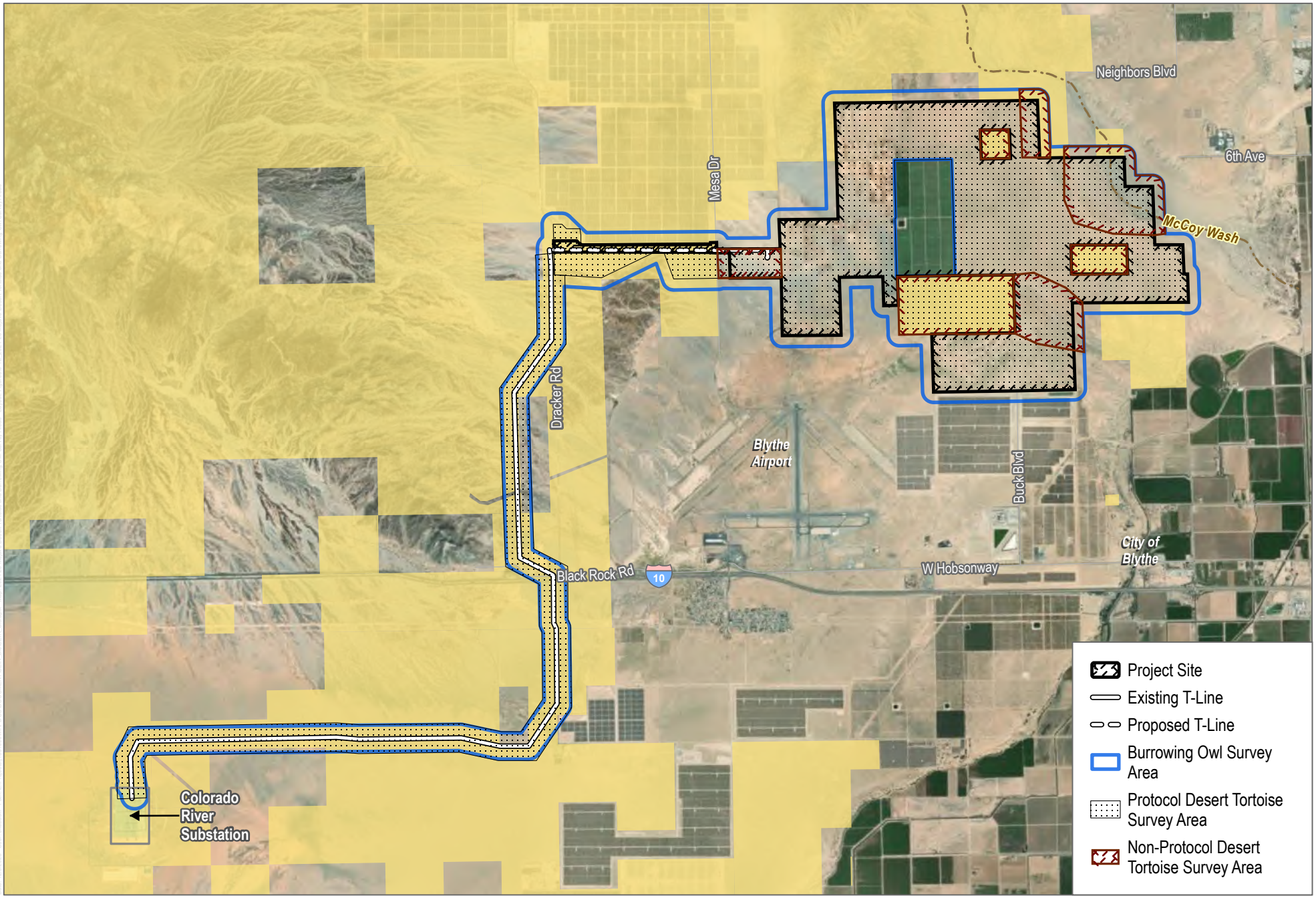
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**FIGURE 3.5-1D**

Special-Status Plant Survey Areas

Grace Solar Energy Center

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SOURCE: Maxar 2023

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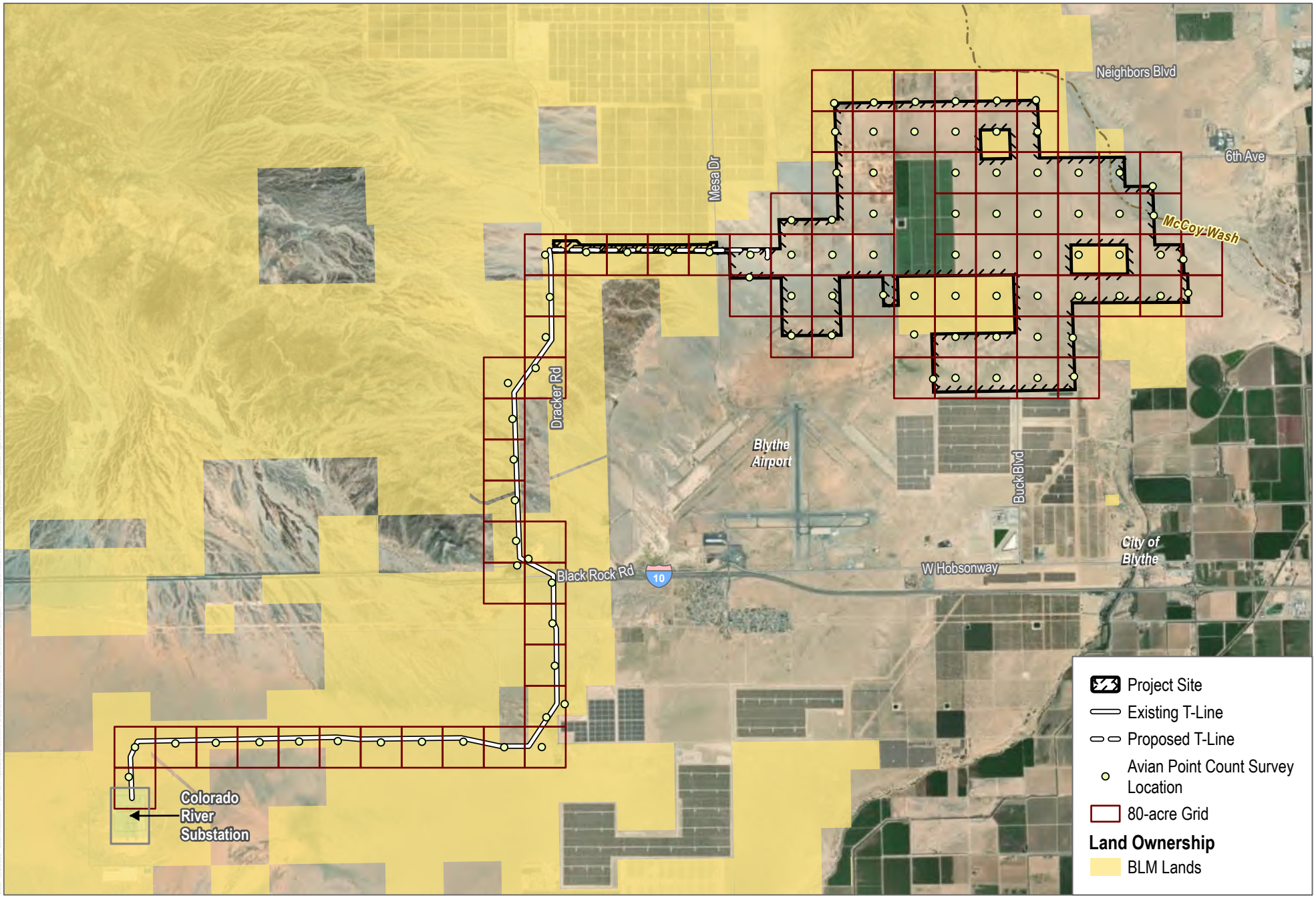
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**FIGURE 3.5-1E**

2024-25 Mojave Desert Tortoise and Burrowing Owl Survey Areas

Grace Solar Energy Center

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SOURCE: Maxar 2023

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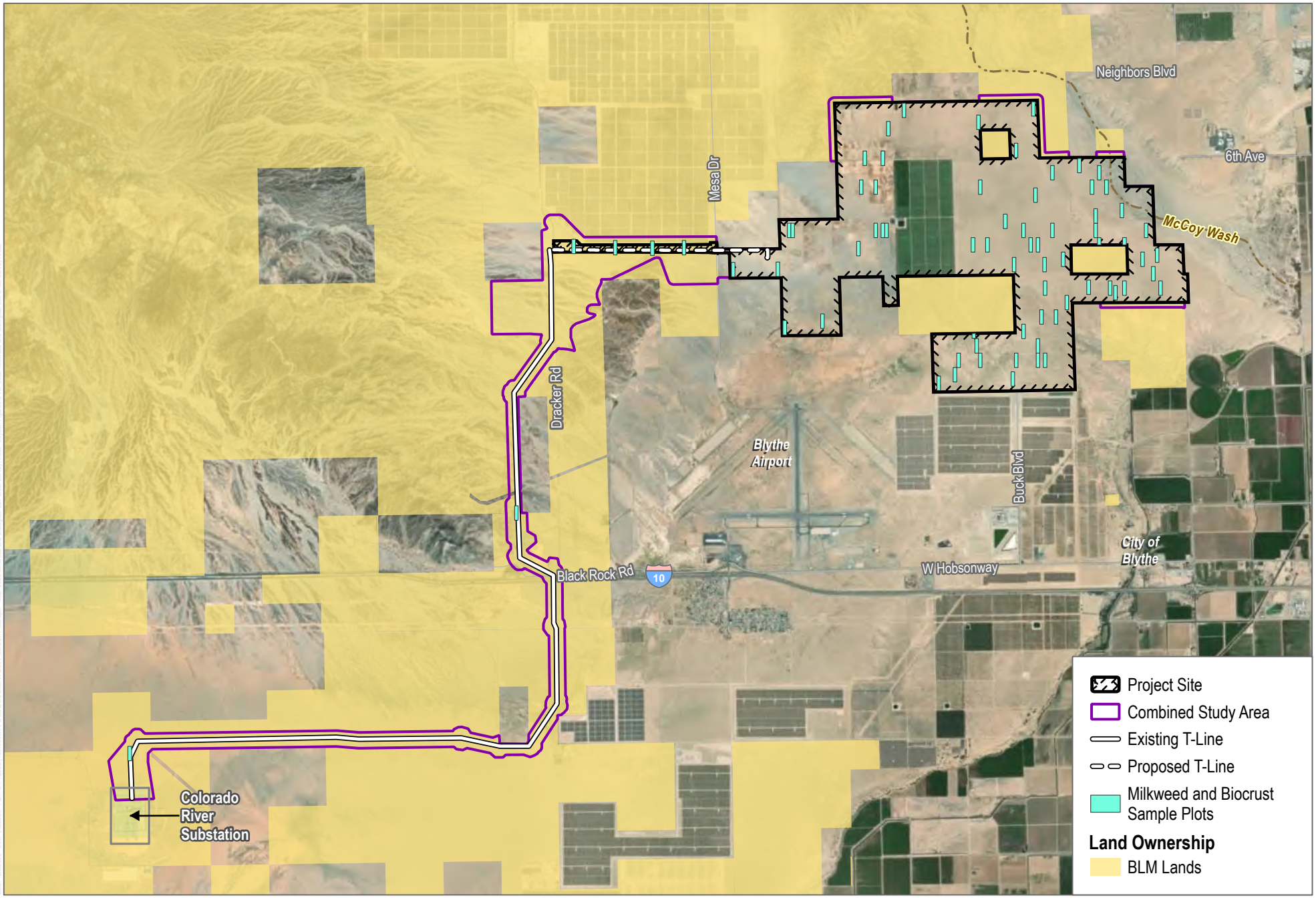
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**FIGURE 3.5-1F**

2025 Avian Point Count Survey Locations

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

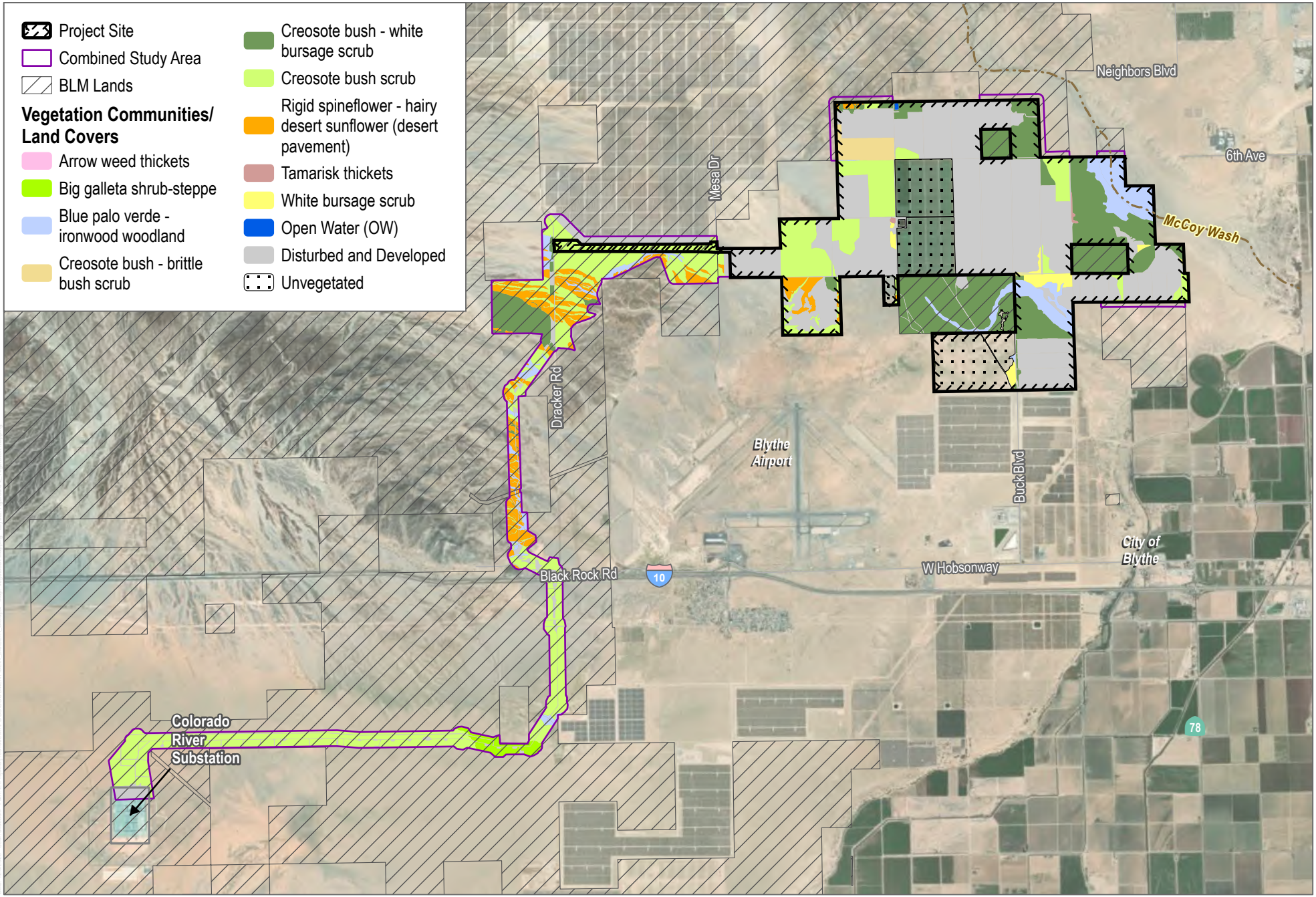
0 0.5 1 Miles

**FIGURE 3.5-1G**

2025 Milkweed and Biological Soil Crust Survey Areas

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

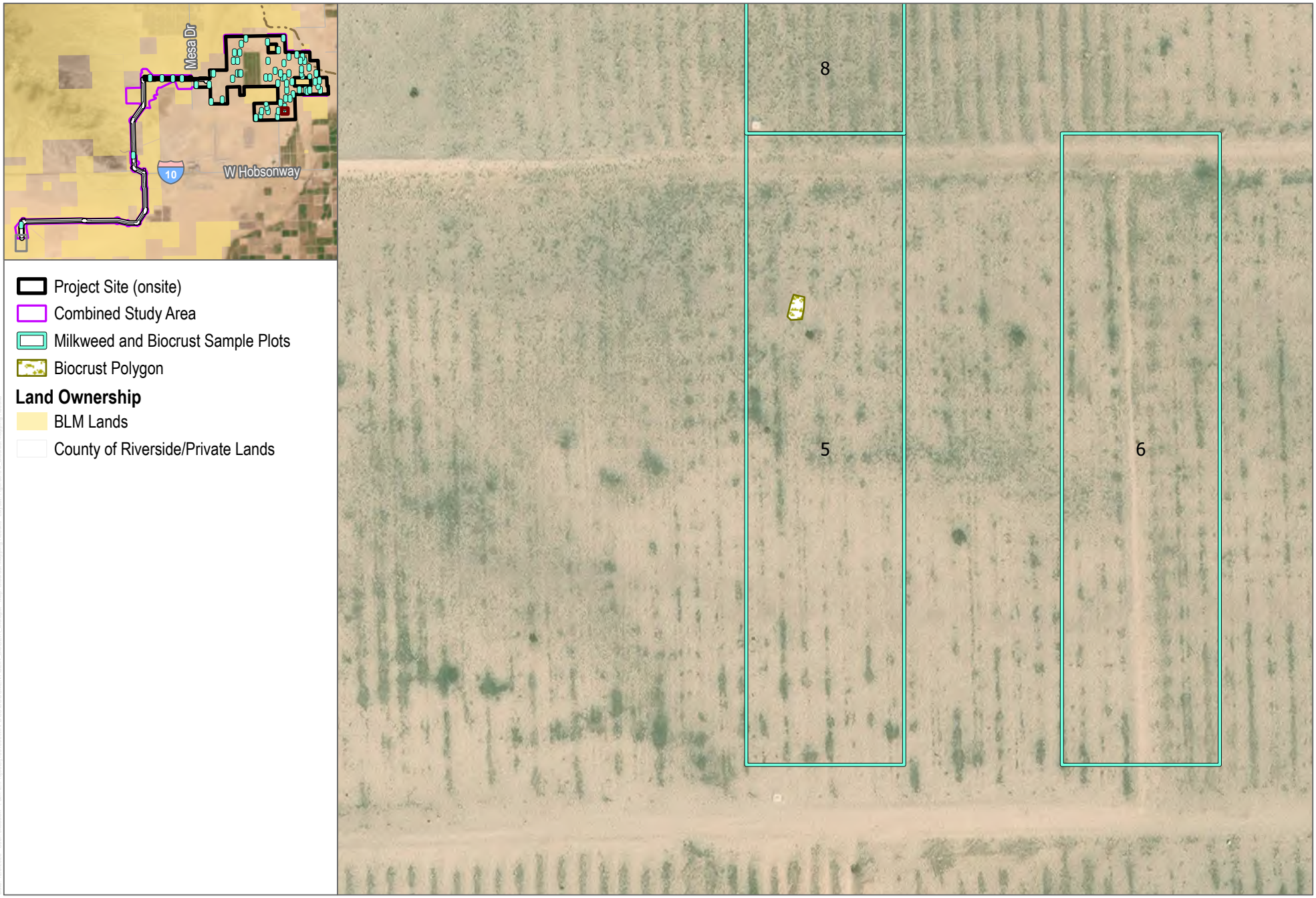
0 0.5 1 Miles

**FIGURE 3.5-2**

Vegetation Mapping

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

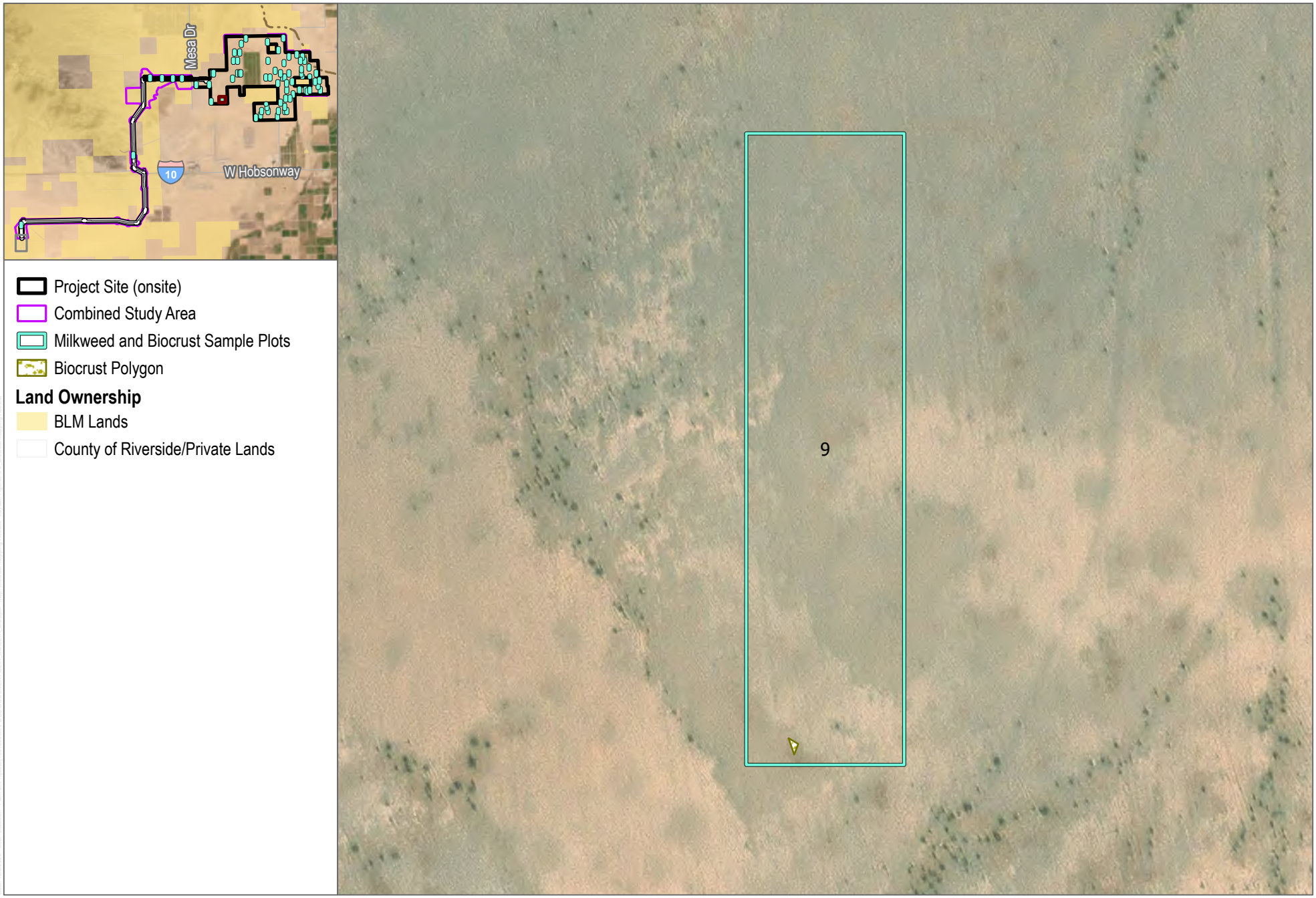
0 65 130 Feet

**FIGURE 3.5-3-1**

Biocrust Mapping Results - Sample Plot ID 5

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

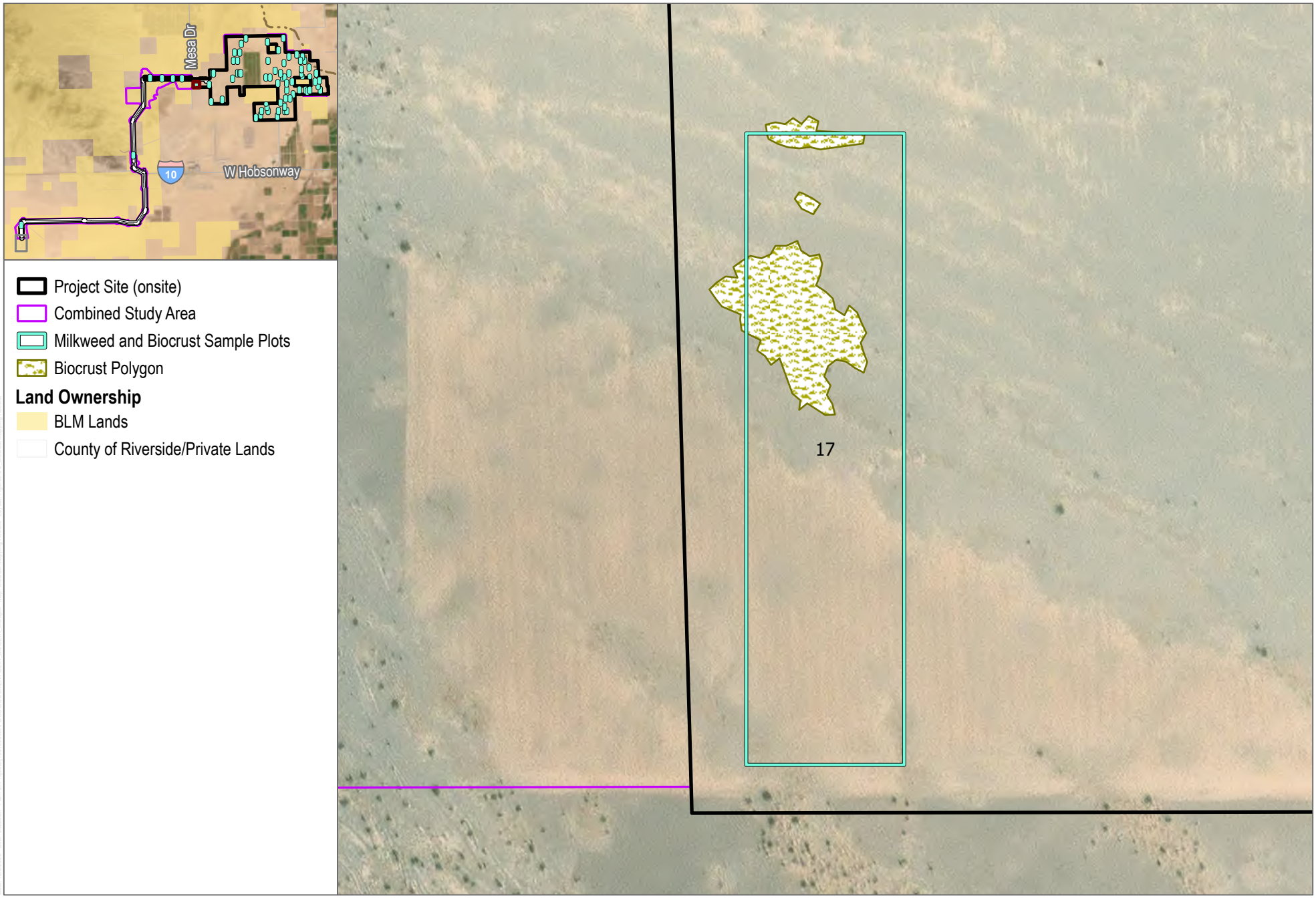
0 65 130 Feet

**FIGURE 3.5-3-2**

Biocrust Mapping Results - Sample Plot ID 9

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 65 130 Feet

**FIGURE 3.5-3-3**

Biocrust Mapping Results - Sample Plot ID 17

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 65 130 Feet

**FIGURE 3.5-3-4**

Biocrust Mapping Results - Sample Plot ID 33

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 65 130 Feet

**FIGURE 3.5-3-5**

Biocrust Mapping Results - Sample Plot ID 35

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

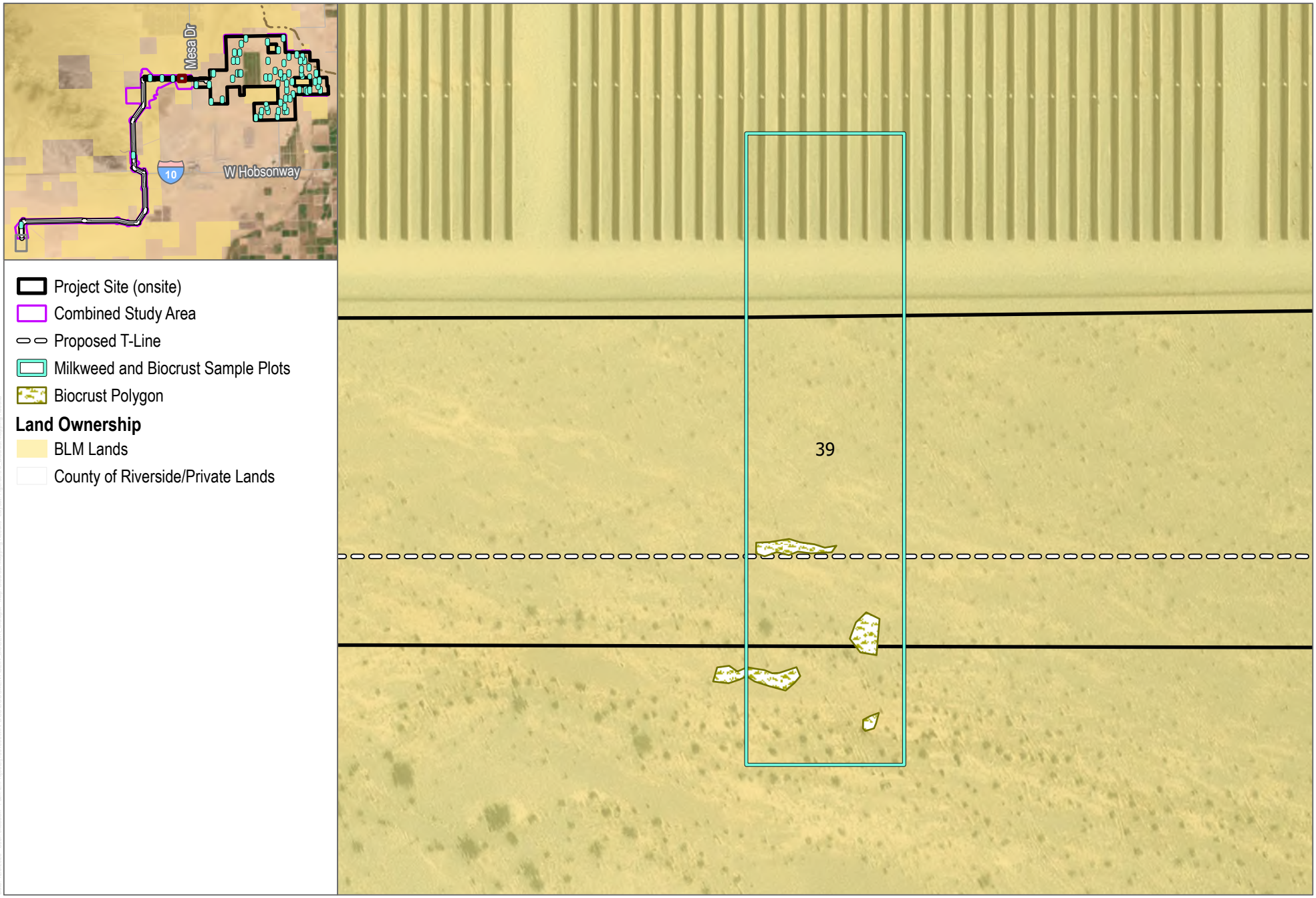
0 65 130 Feet

**FIGURE 3.5-3-6**

Biocrust Mapping Results - Sample Plot ID 36

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

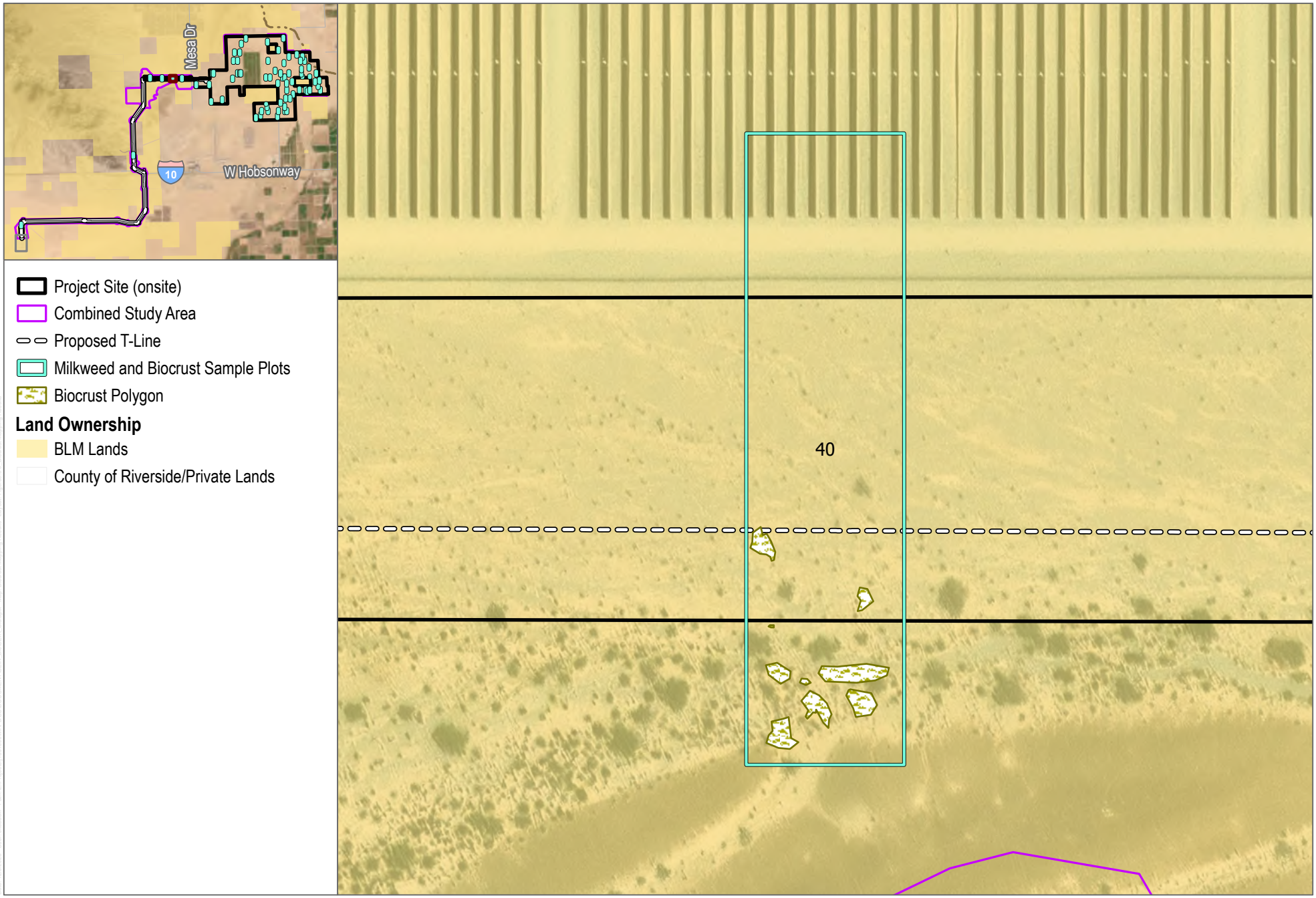
0 65 130 Feet

**FIGURE 3.5-3-7**

Biocrust Mapping Results - Sample Plot ID 39

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

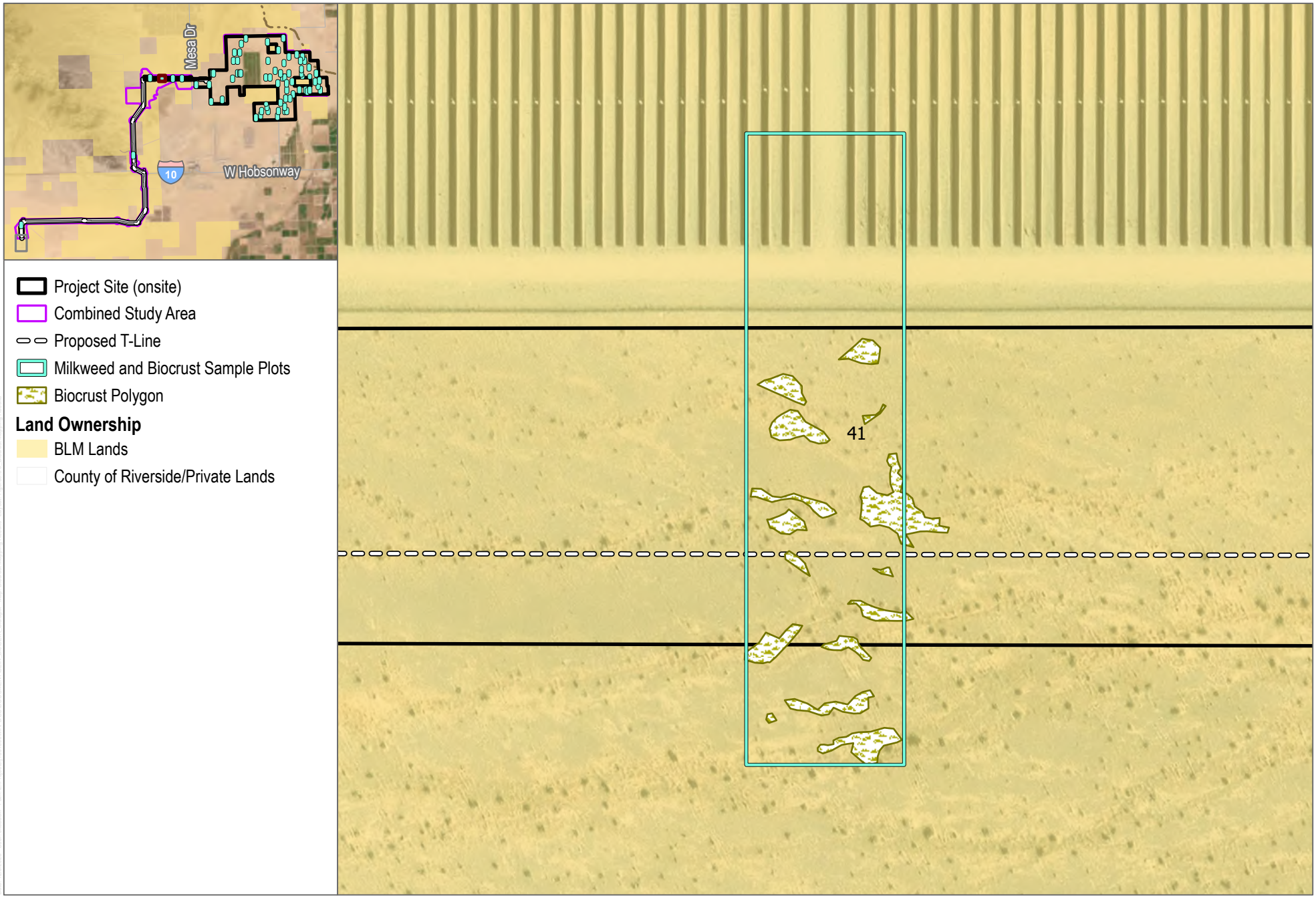
0 65 130 Feet

**FIGURE 3.5-3-8**

Biocrust Mapping Results - Sample Plot ID 40

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

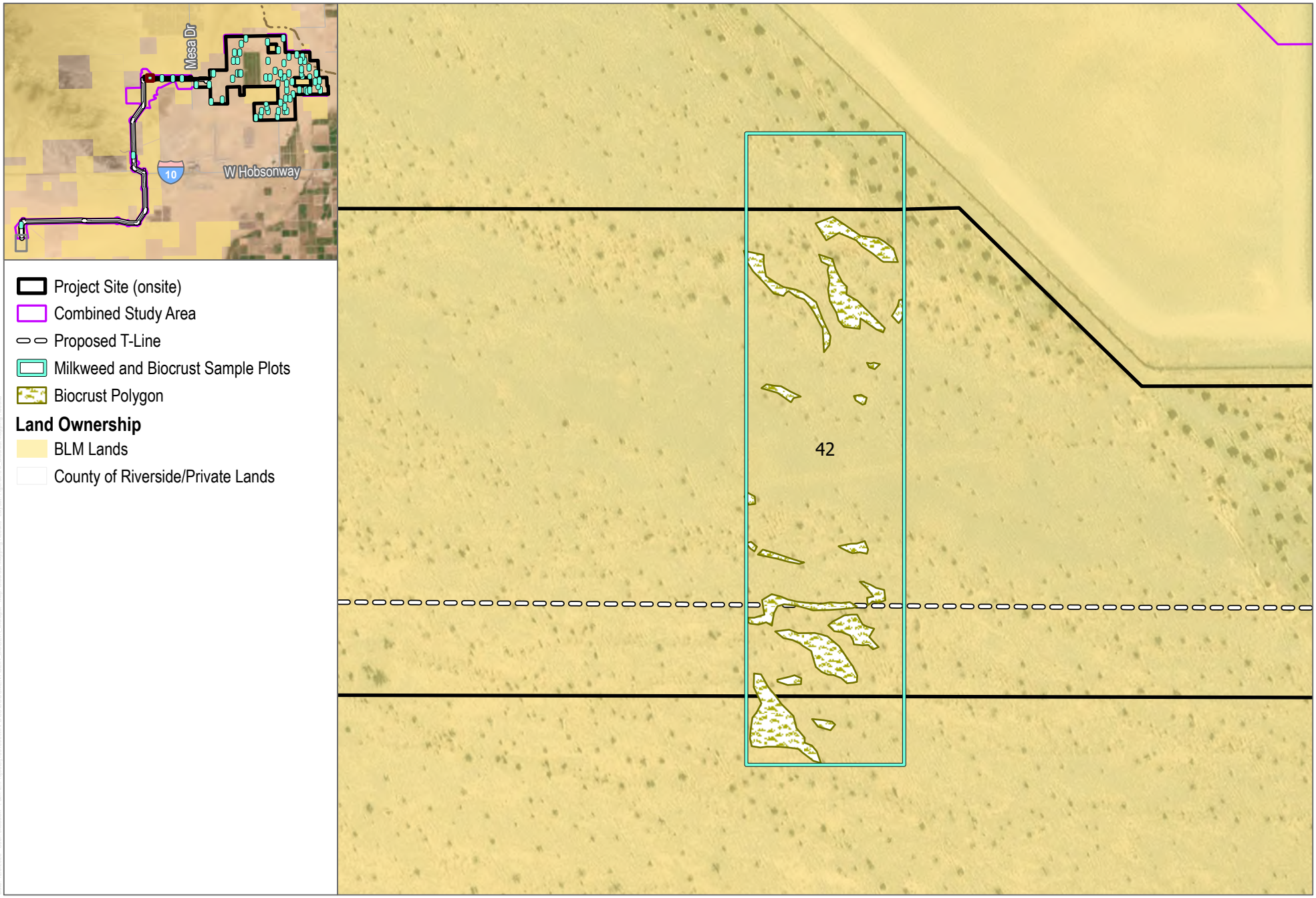
0 65 130 Feet

**FIGURE 3.5-3-9**

Biocrust Mapping Results - Sample Plot ID 41

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

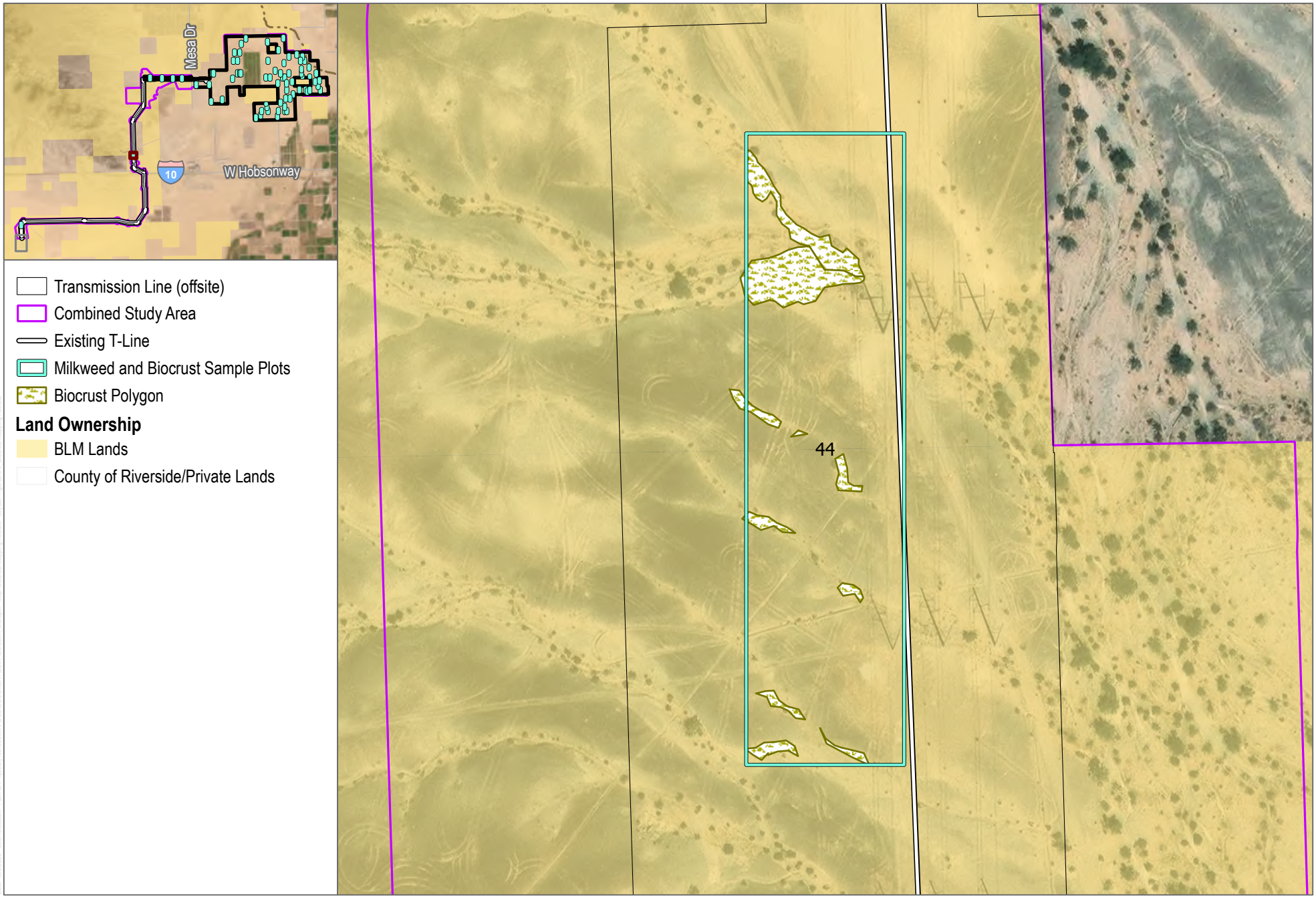
0 65 130 Feet

**FIGURE 3.5-3-10**

Biocrust Mapping Results - Sample Plot ID 42

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

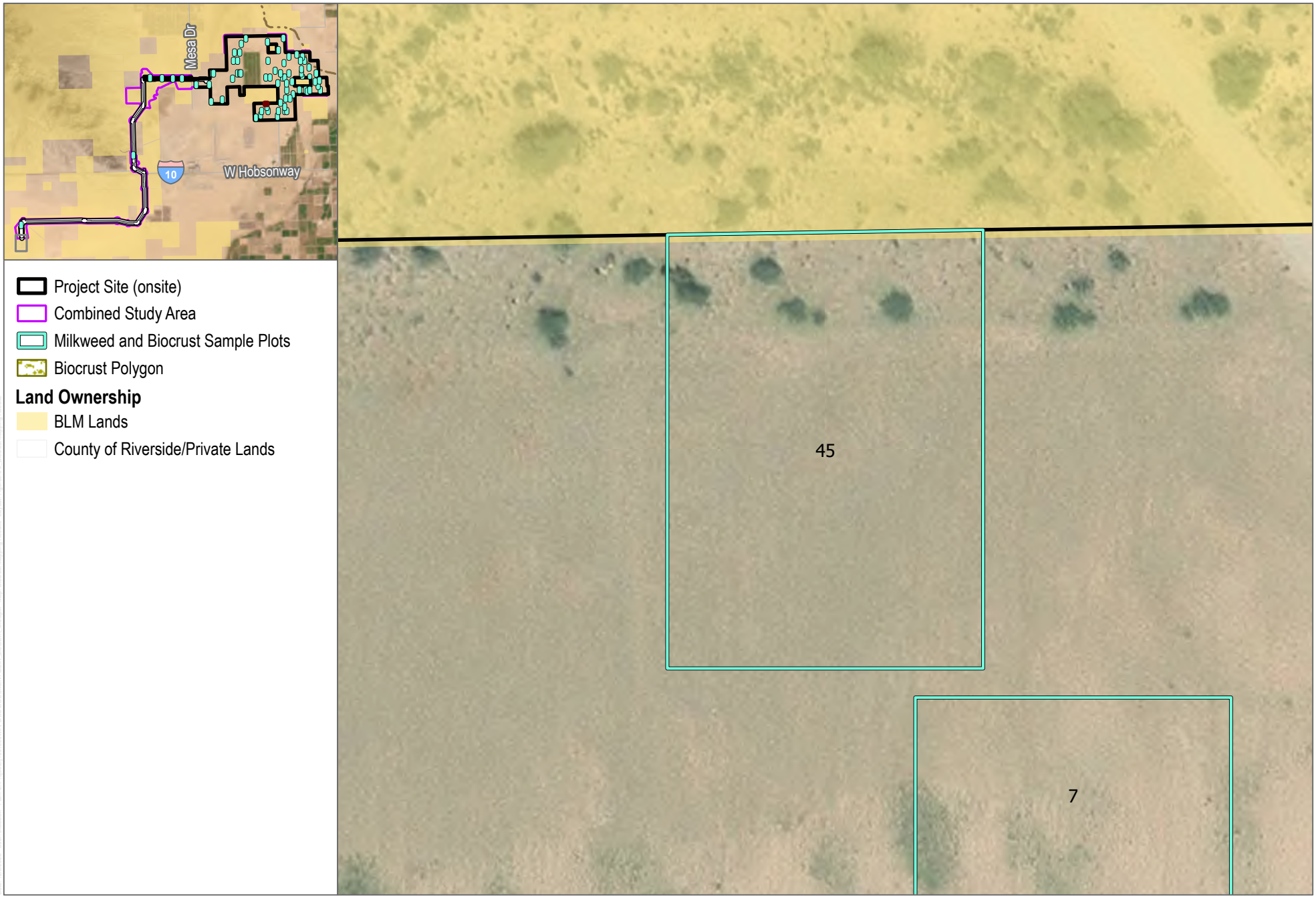
0 65 130 Feet

**FIGURE 3.5-3-11**

Biocrust Mapping Results - Sample Plot ID 44

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

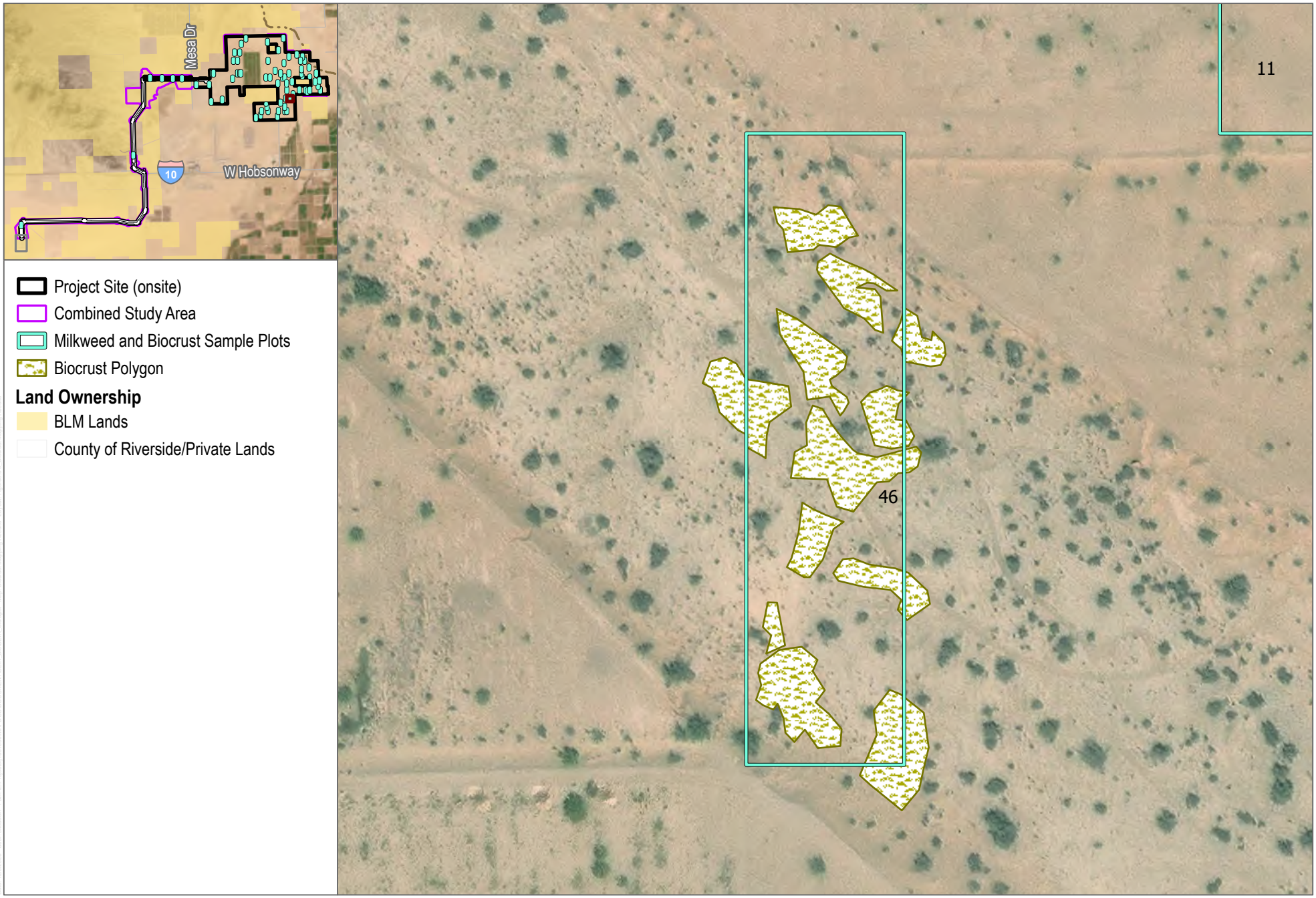
0 30 60 Feet

**FIGURE 3.5-3-12**

Biocrust Mapping Results - Sample Plot ID 45

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

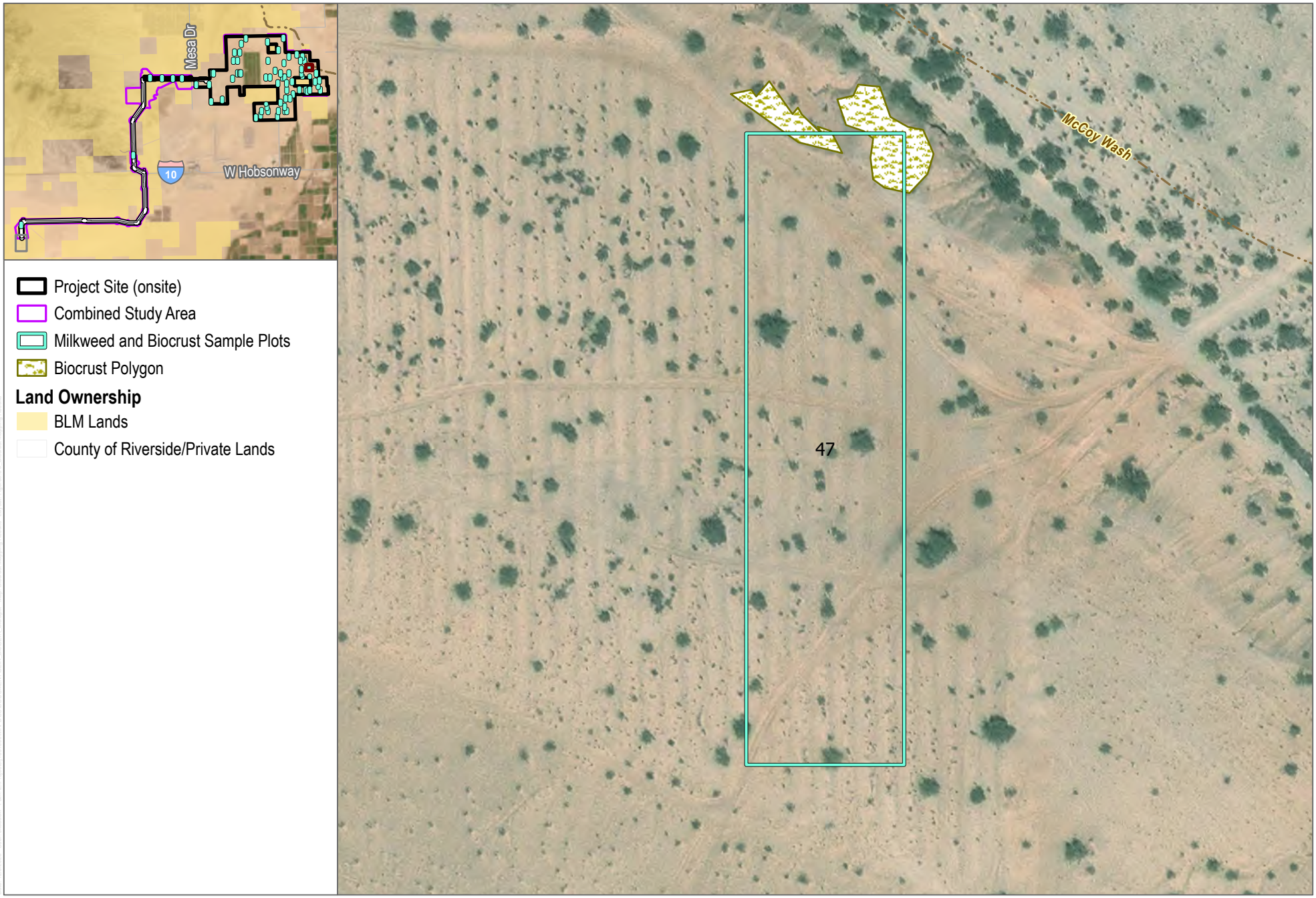
0 65 130 Feet

**FIGURE 3.5-3-13**

Biocrust Mapping Results - Sample Plot ID 46

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

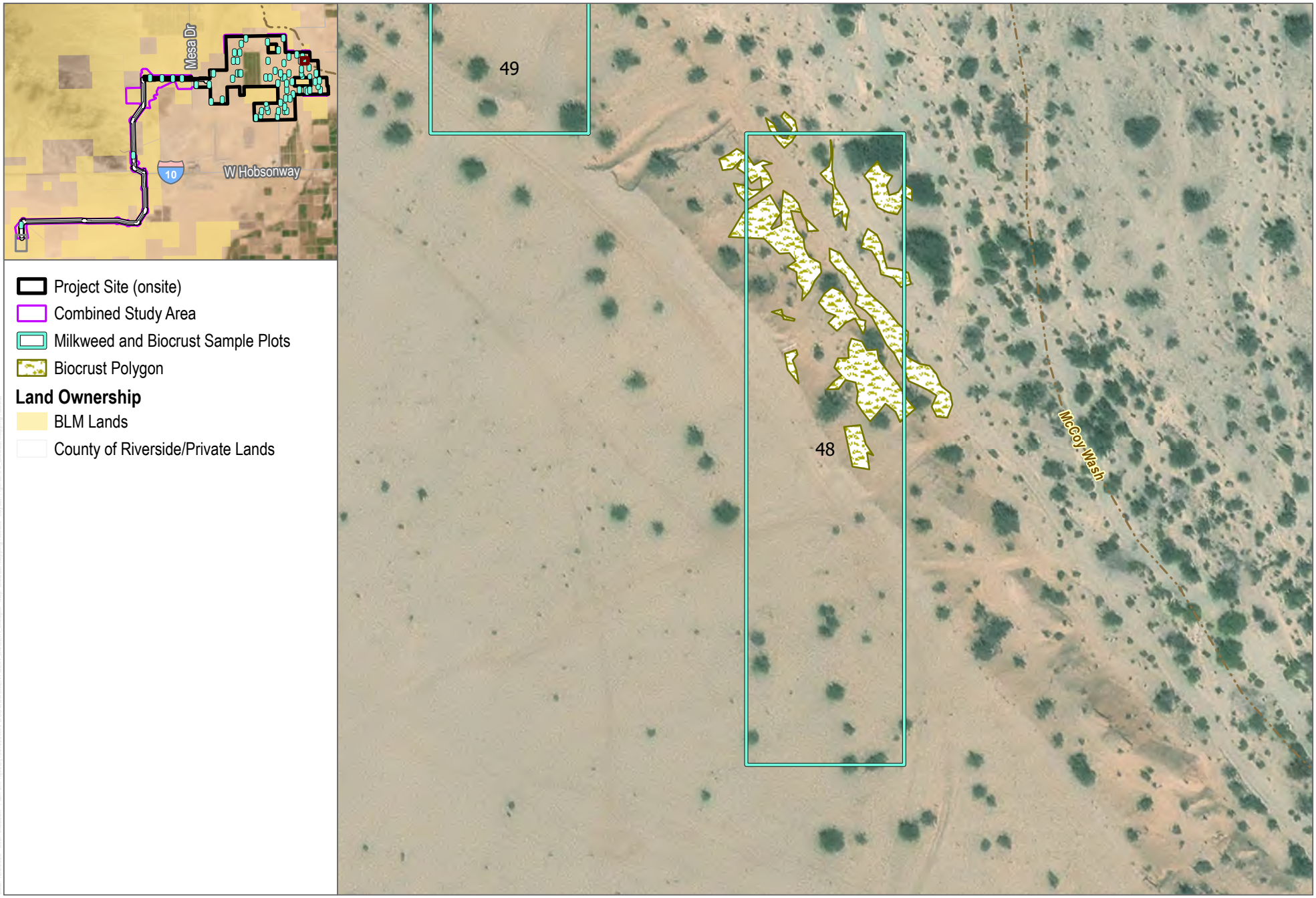
0 65 130 Feet

**FIGURE 3.5-3-14**

Biocrust Mapping Results - Sample Plot ID 47

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

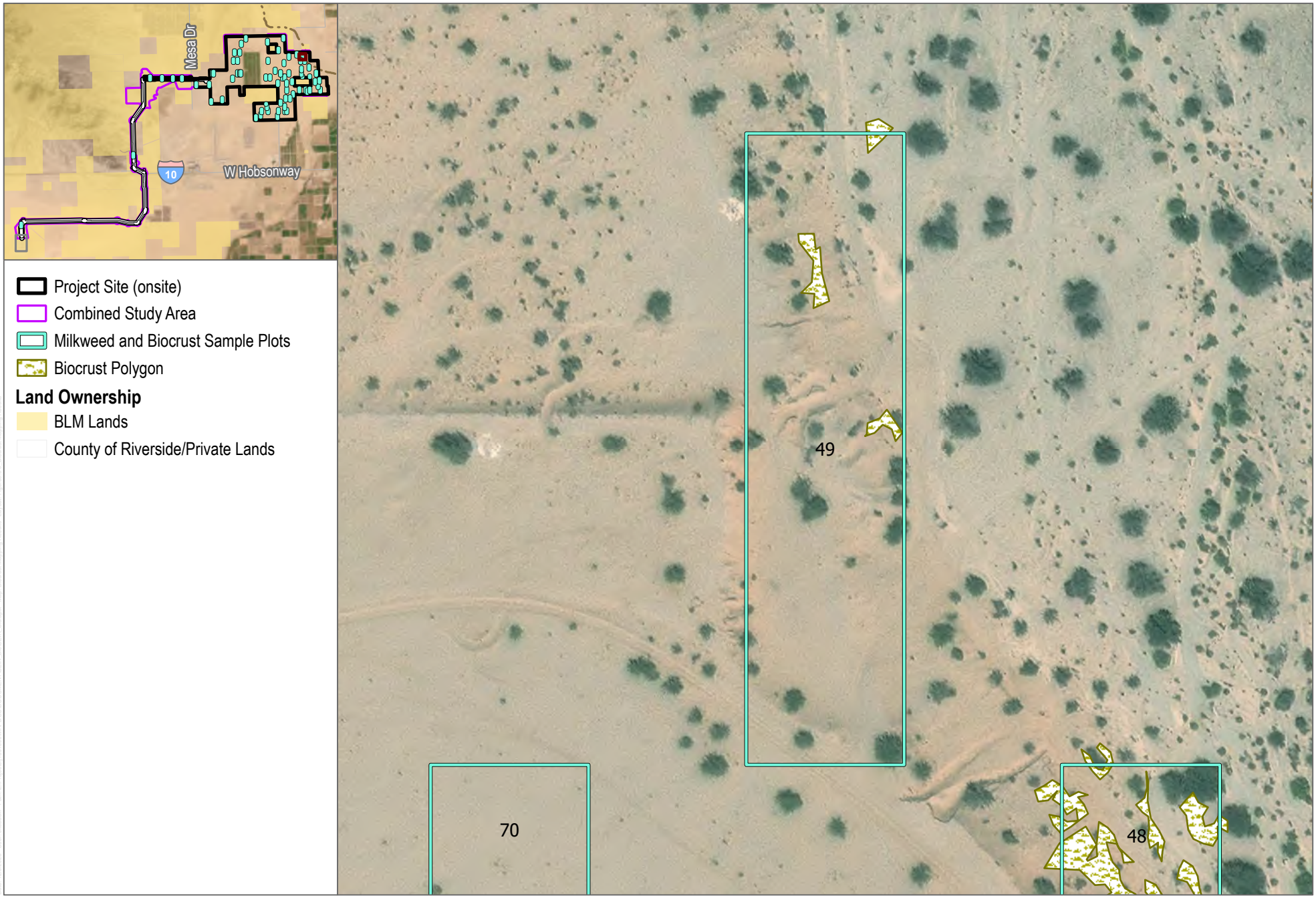
0 65 130 Feet

**FIGURE 3.5-3-15**

Biocrust Mapping Results - Sample Plot ID 48

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 65 130 Feet

**FIGURE 3.5-3-16**

Biocrust Mapping Results - Sample Plot ID 49

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 65 130 Feet

**FIGURE 3.5-3-17**

Biocrust Mapping Results - Sample Plot ID 54

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 30 60 Feet

**FIGURE 3.5-3-18**

Biocrust Mapping Results - Sample Plot ID 62

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 30 60 Feet

**FIGURE 3.5-3-19**

Biocrust Mapping Results - Sample Plot ID 63

Grace Solar Energy Center

INTENTIONALLY LEFT BLANK




SOURCE: Maxar 2023

DUDEK

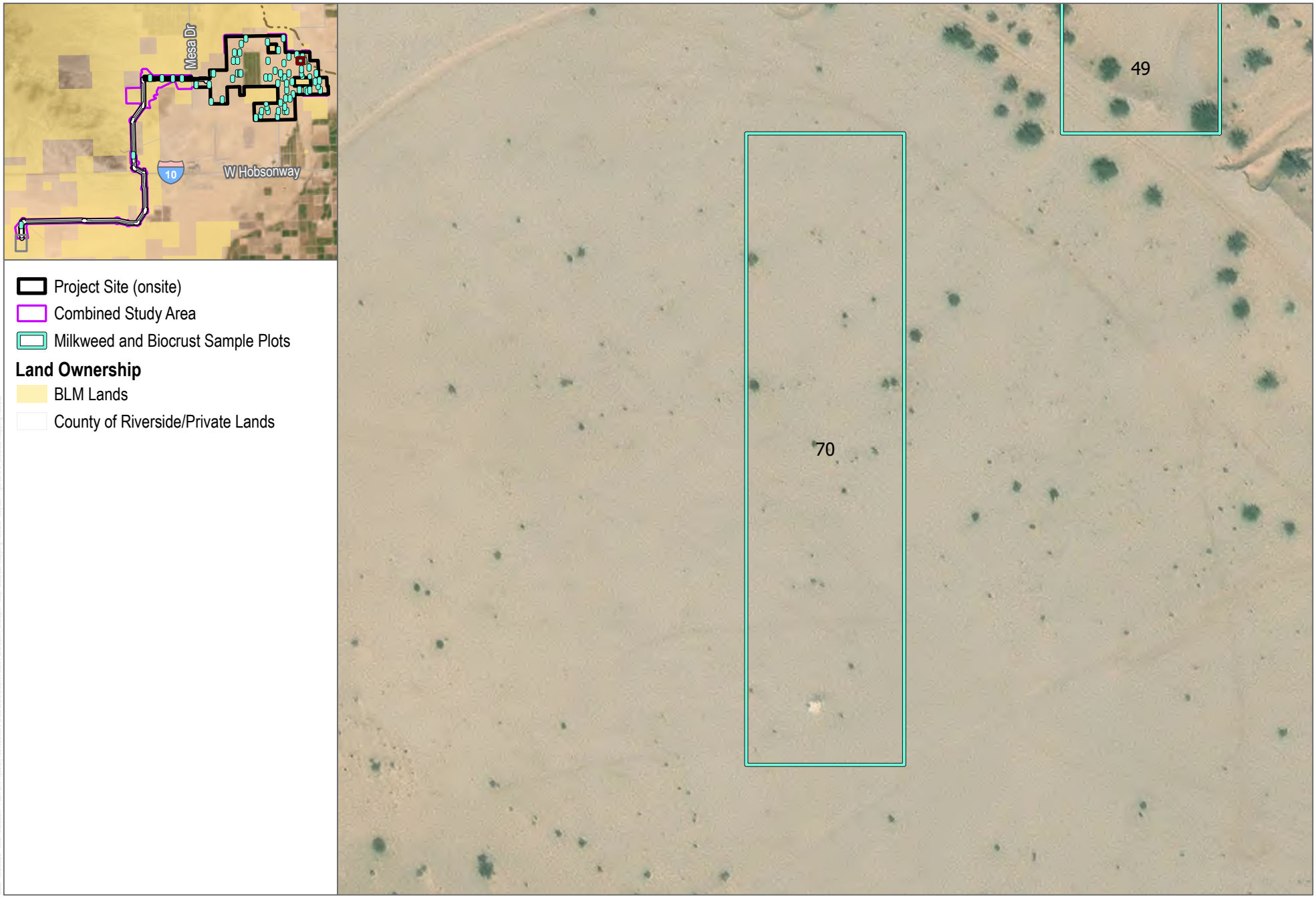
0 65 130 Feet

**FIGURE 3.5-3-20**

Biocrust Mapping Results - Sample Plot ID 65

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

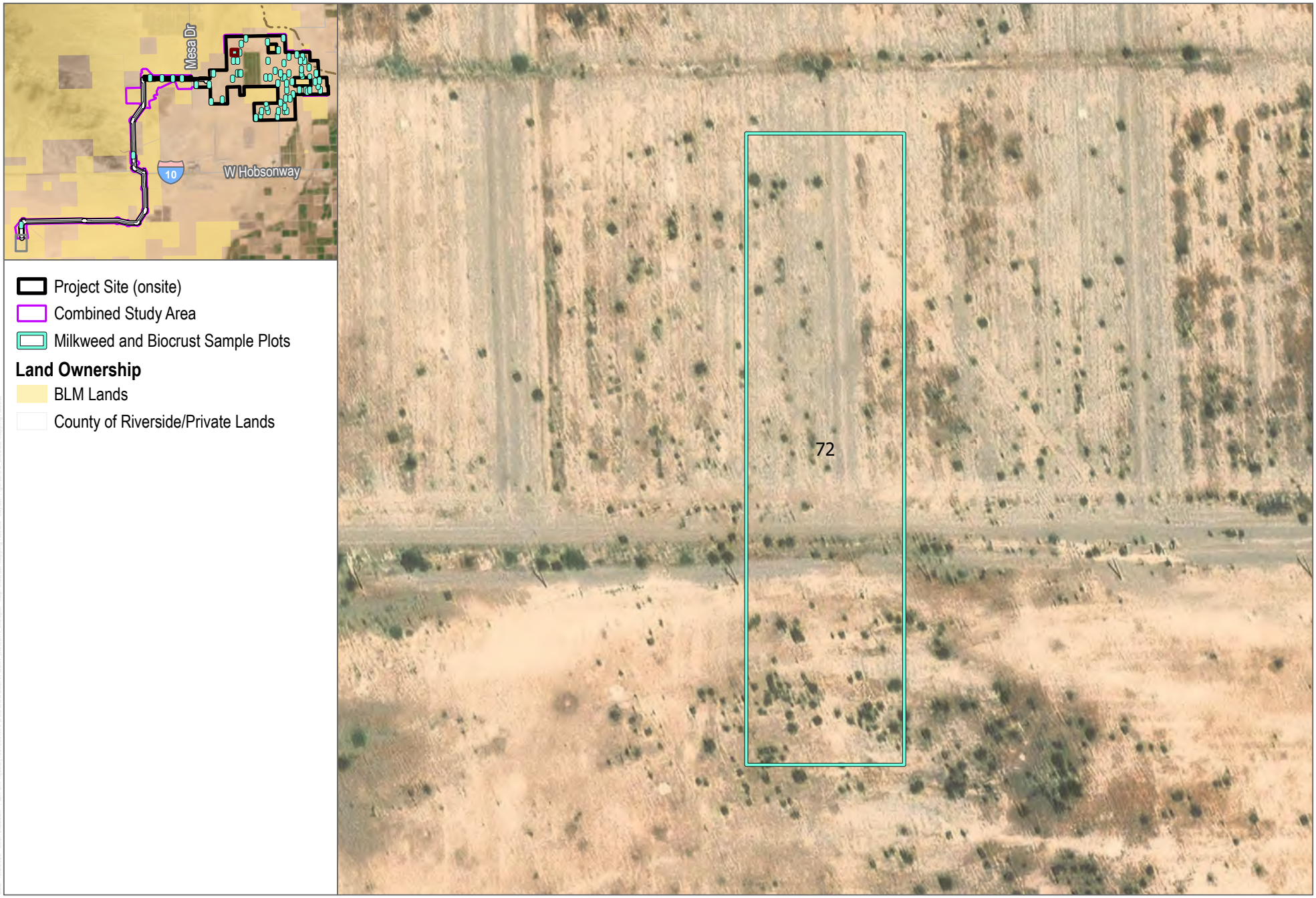
0 65 130 Feet

**FIGURE 3.5-3-21**

Biocrust Mapping Results - Sample Plot ID 70

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

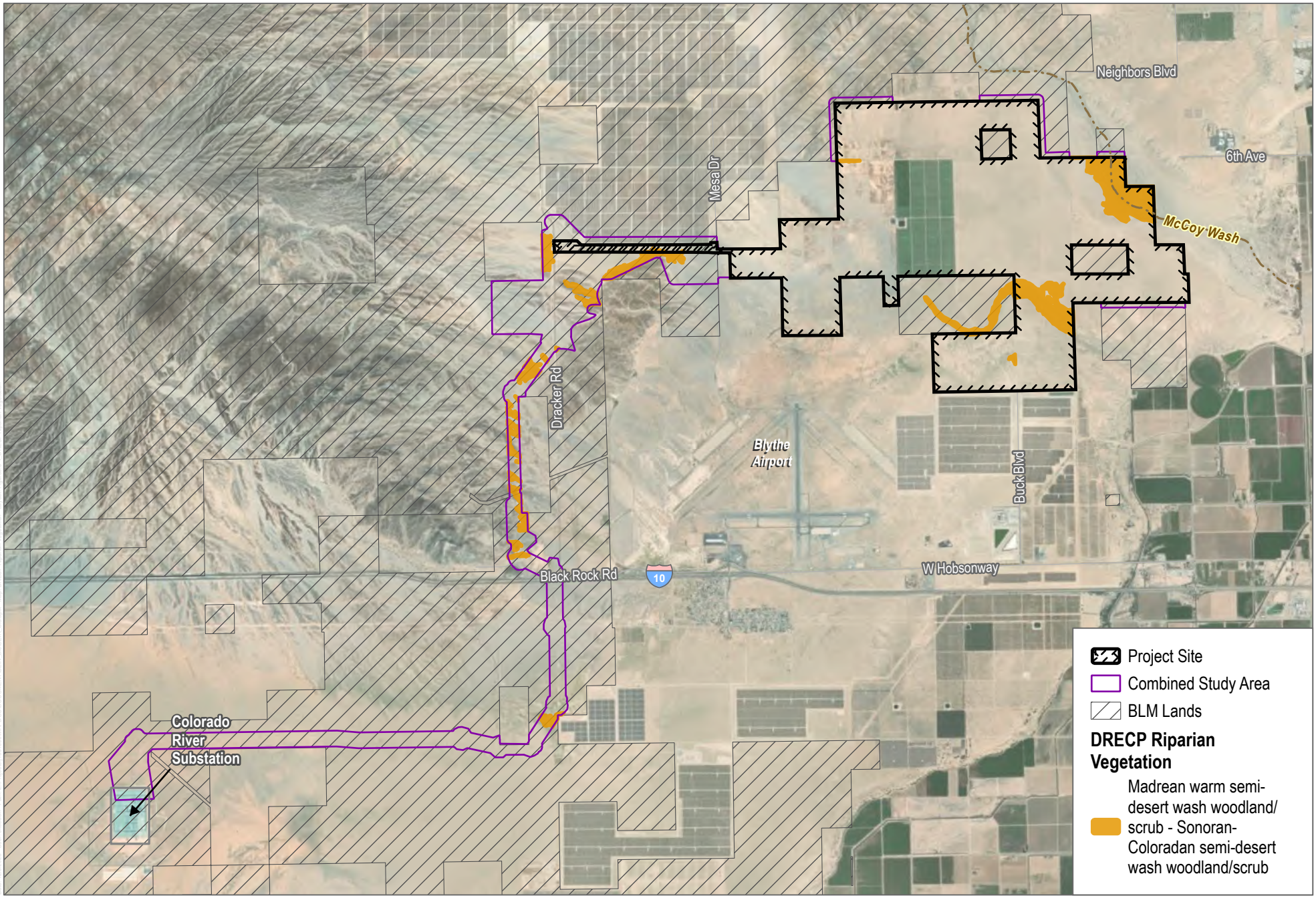
0 65 130 Feet

**FIGURE 3.5-3-22**

Biocrust Mapping Results - Sample Plot ID 72

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

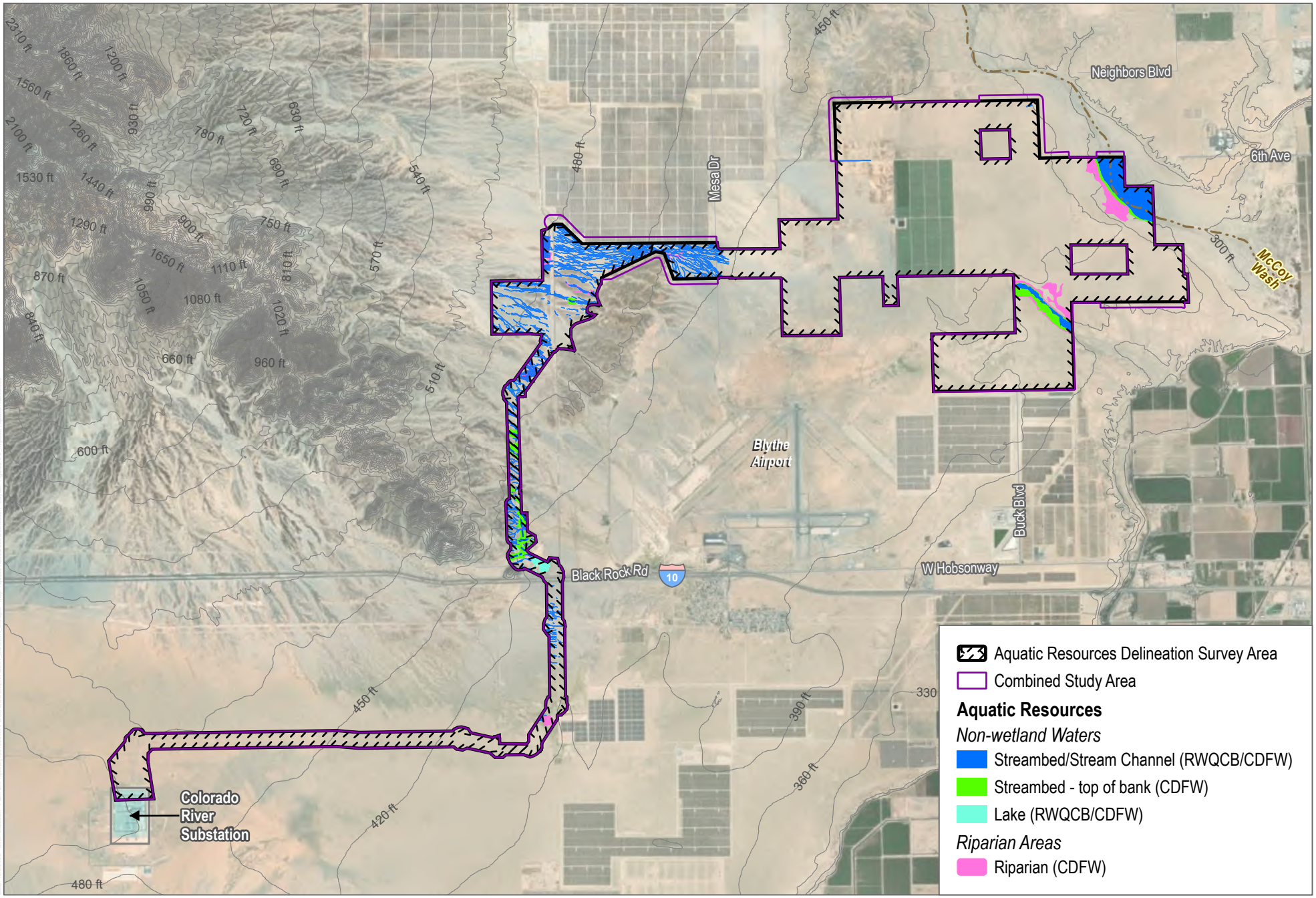
0 0.5 1 Miles

**FIGURE 3.5-4**

DRECP Riparian Vegetation

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

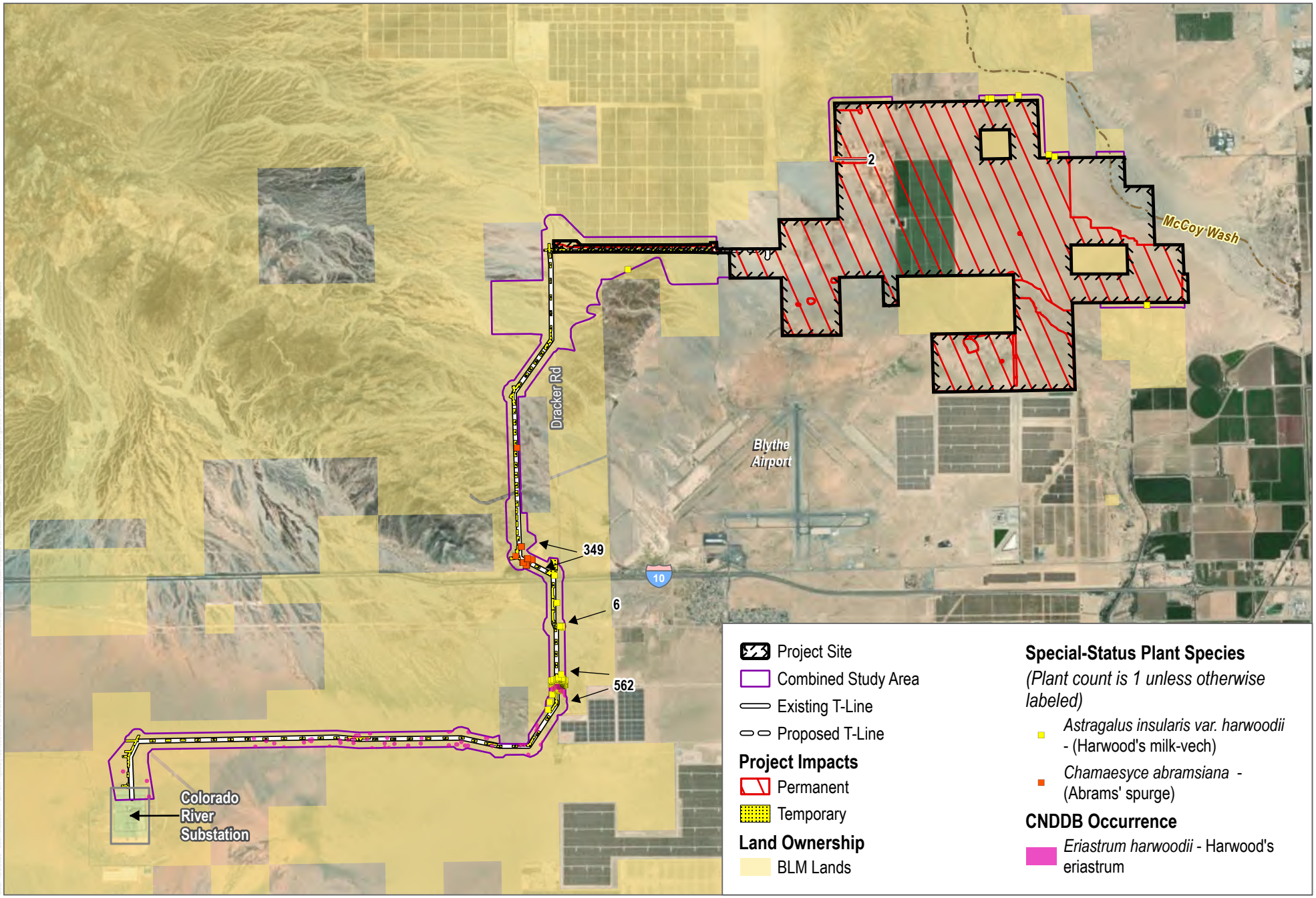
0 0.5 1 Miles

**FIGURE 3.5-5**

Aquatic Resources Delineation

Grace Solar Energy Center

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SOURCE: Maxar 2023; CNDDB 2024

DUDEK

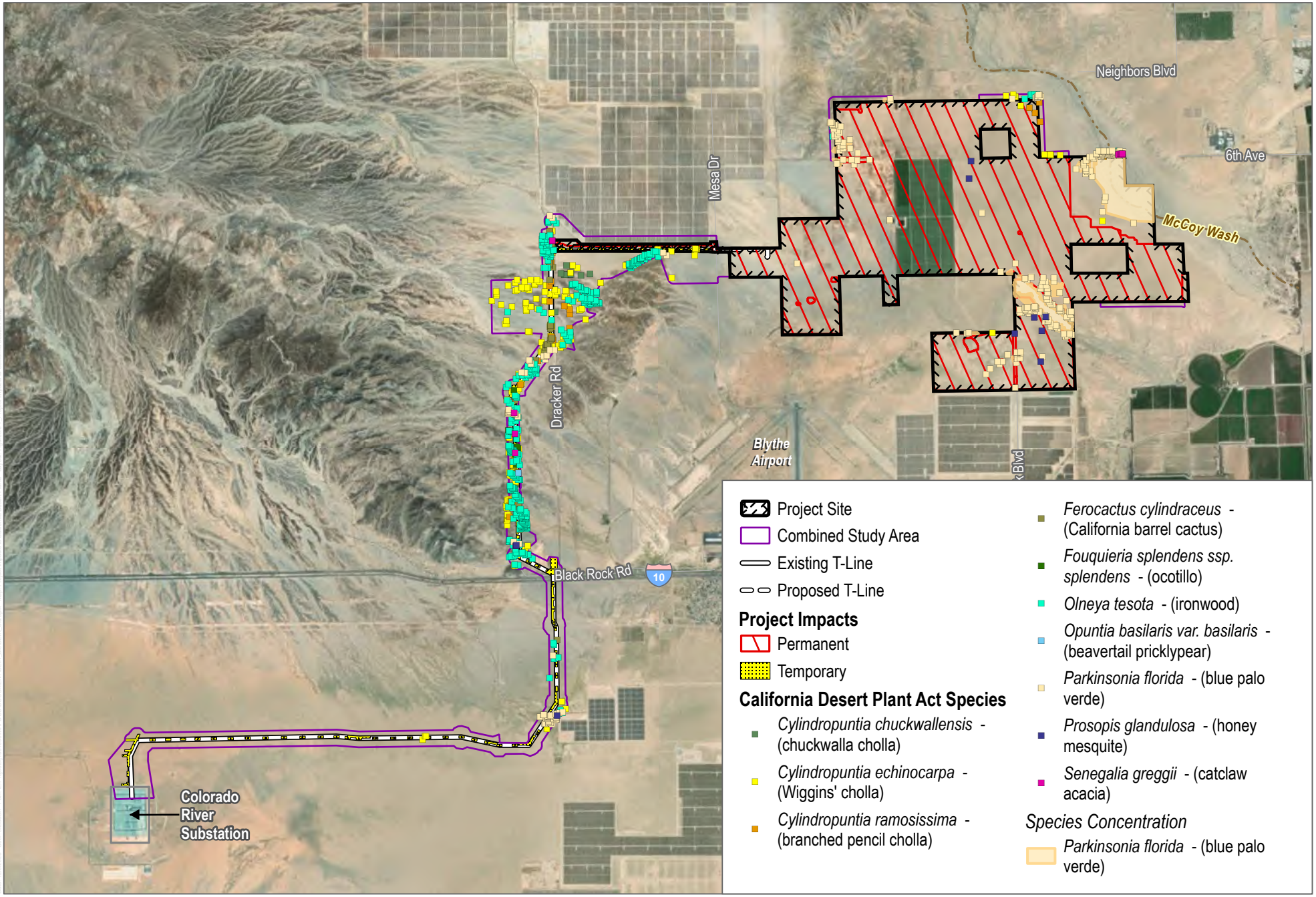
0 0.5 1 Miles

**FIGURE 3.5-6**

Project Impacts to Special-Status Plant Species

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

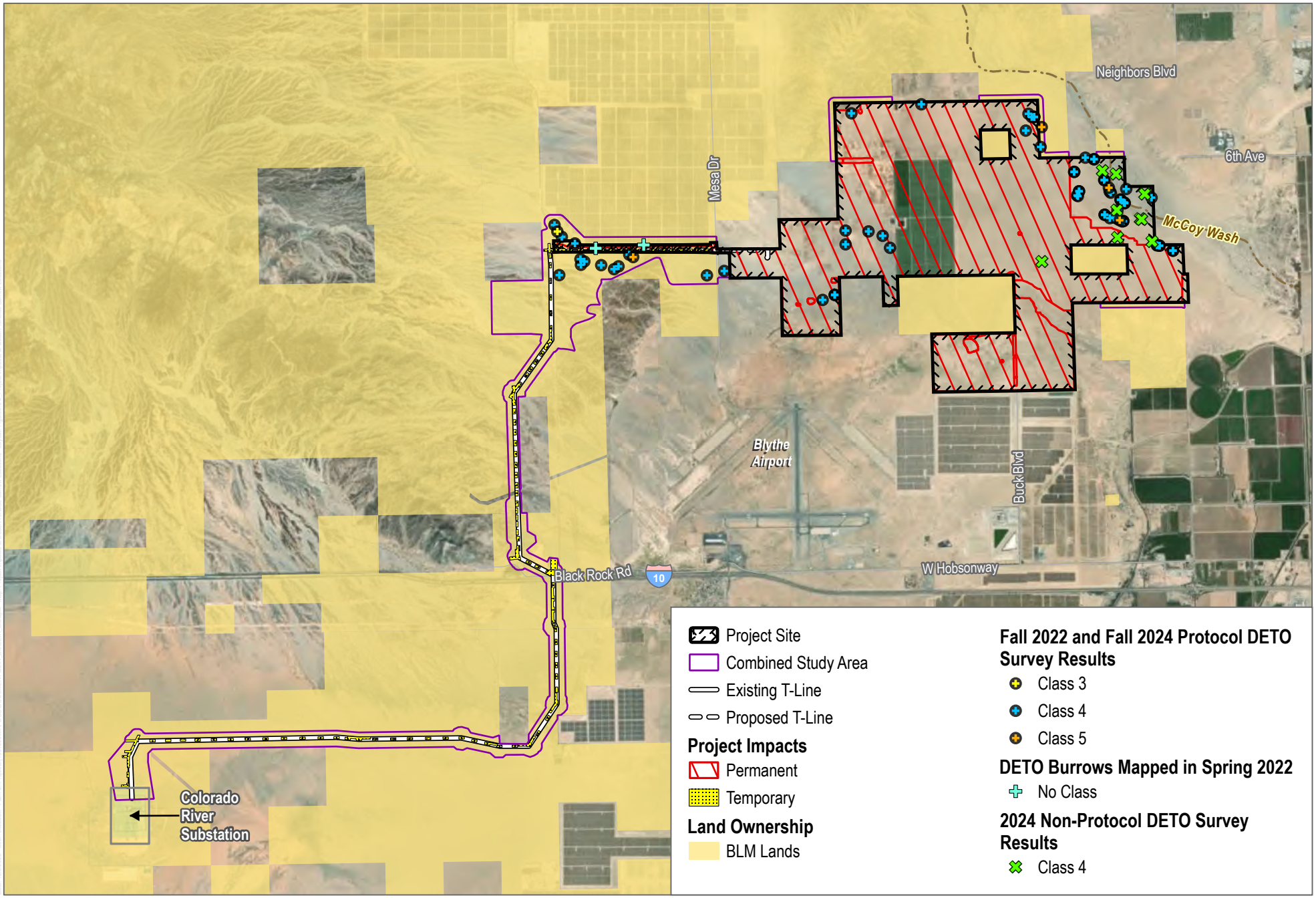
0 0.5 1 Miles

**FIGURE 3.5-7**

Project Impacts to California Desert Plants

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

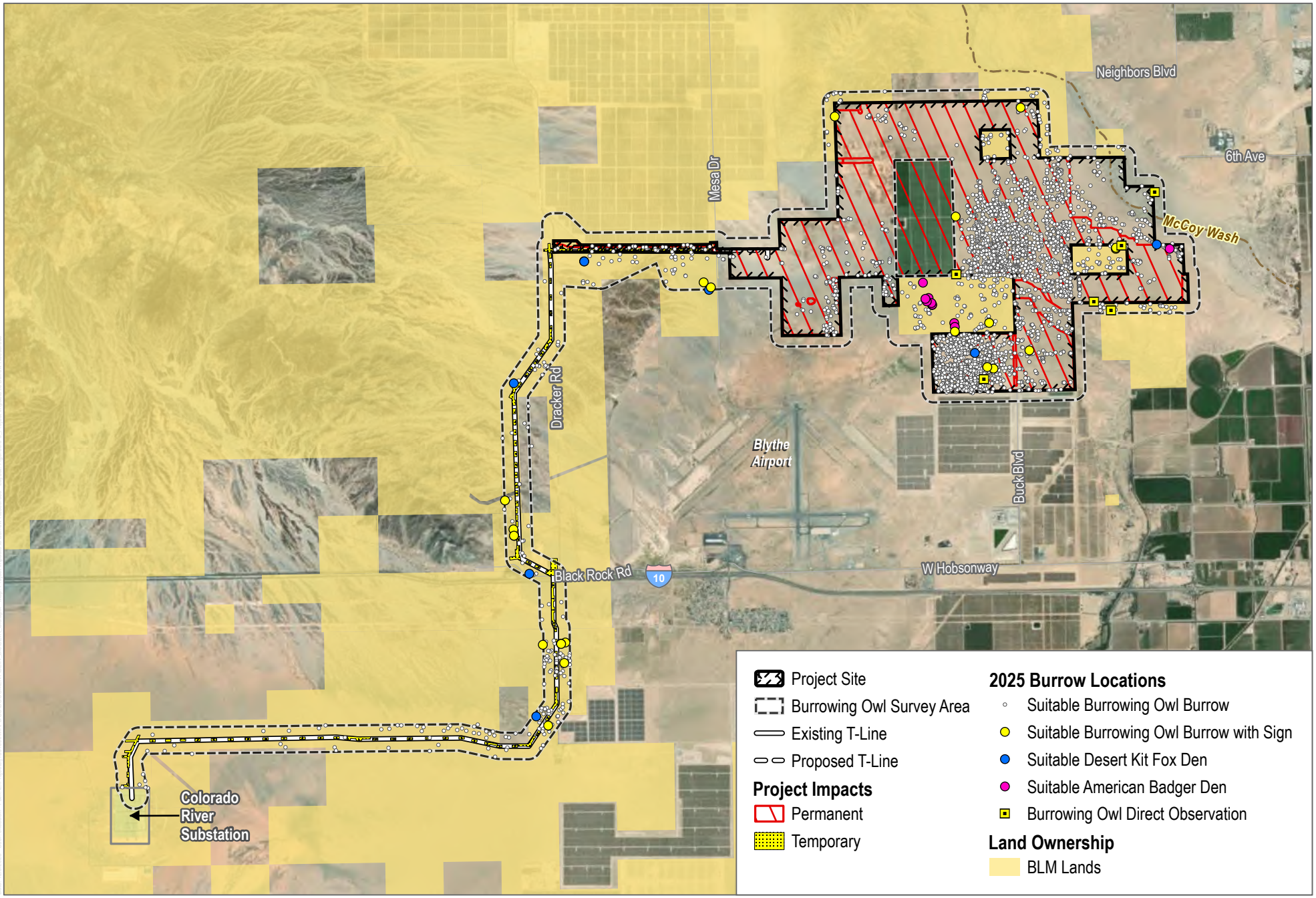
0 0.5 1 Miles

**FIGURE 3.5-8**

Project Impacts to Desert Tortoise Burrow Locations

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

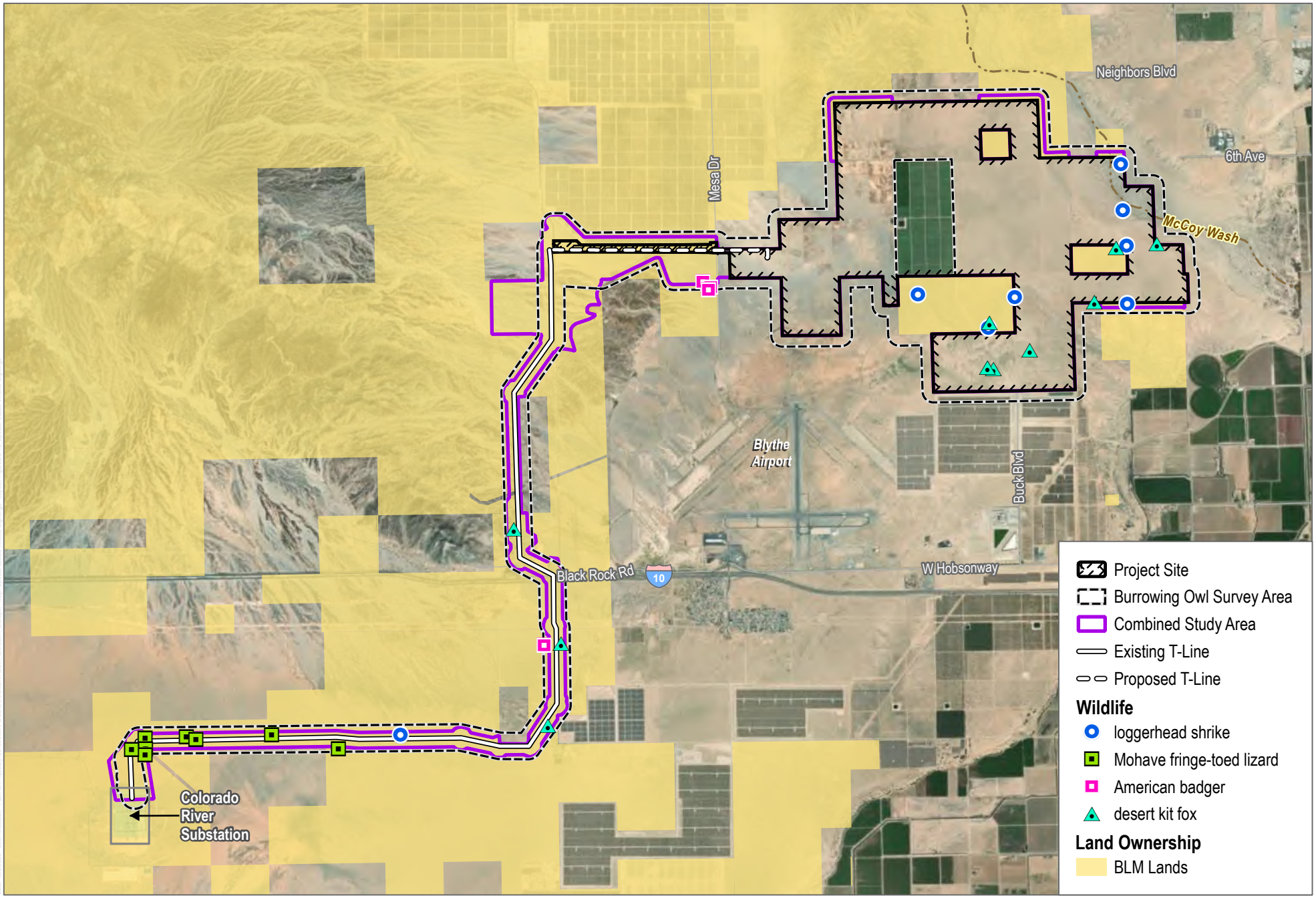
0 0.5 1 Miles

**FIGURE 3.5-9**

Project Impacts to Burrow Resources

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

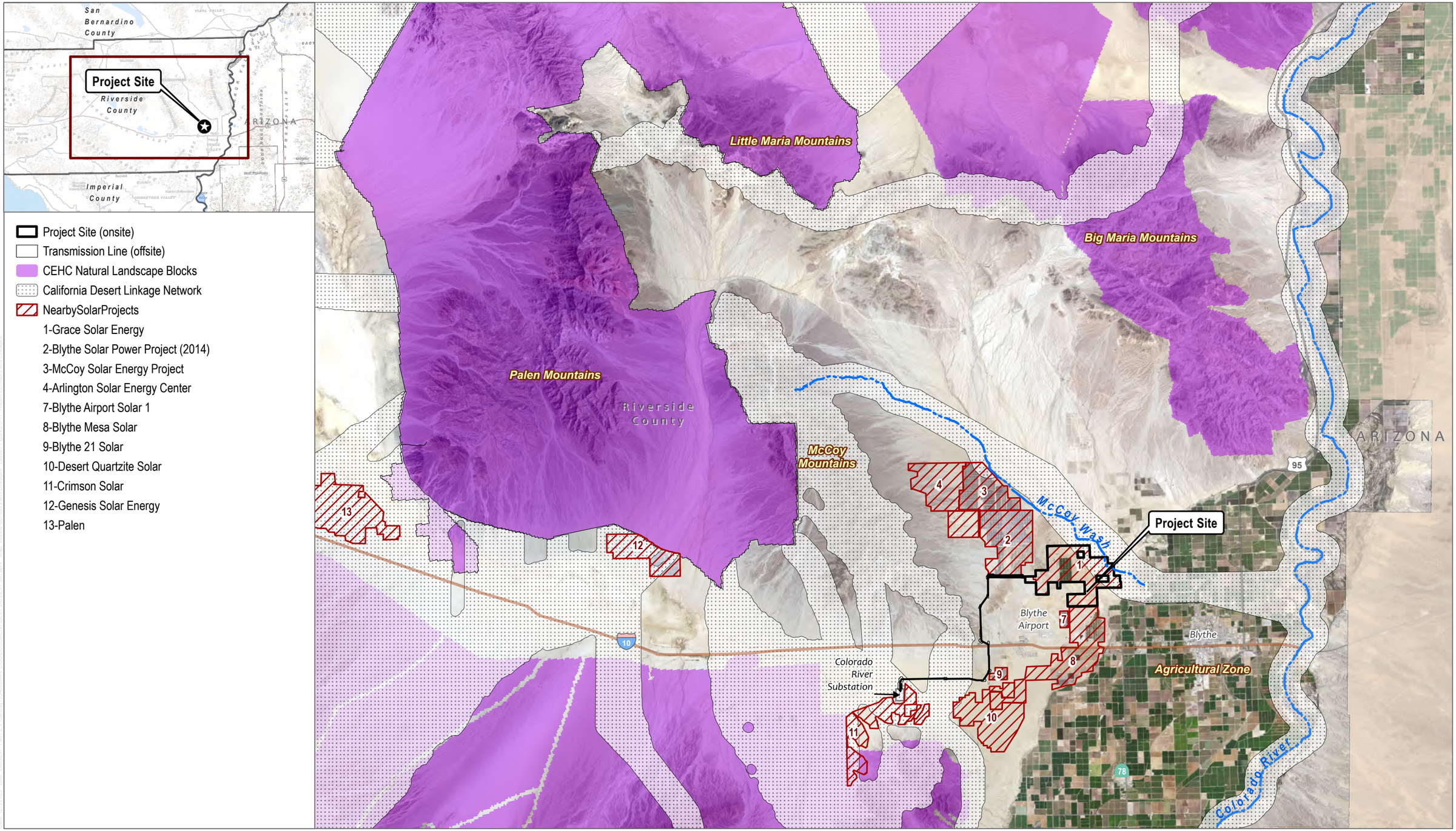
0 0.5 1 Miles

**FIGURE 3.5-10**

Special-Status Wildlife Sightings

Grace Solar Energy Center

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SOURCE: Esri World Imagery (accessed 2024); California Department of Fish and Wildlife 2010

DUDEK

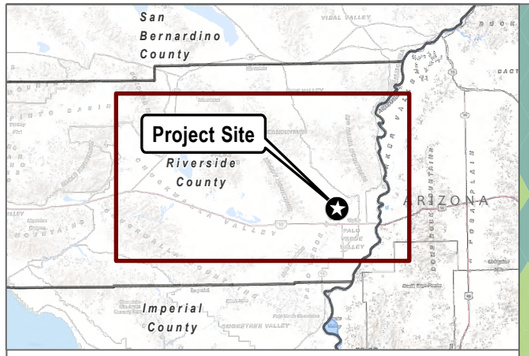
0 2 4 Miles

**FIGURE 3.5-11**

Wildlife Corridors and Linkages

Grace Solar Energy Center

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Project Site (onsite)

Transmission Line (offsite)

**Areas of Conservation Emphasis (ACE) Rank**

- 5 - Irreplaceable and Essential Corridors
- 4 - Conservation Planning Linkages
- 3 - Connections with Implementation Flexibility
- 2 - Large Natural Habitat Areas
- 1 - Limited Connectivity Opportunity

**NearbySolarProjects**

1-Grace Solar Energy
2-Blythe Solar Power Project (2014)
3-McCoy Solar Energy Project
4-Arlington Solar Energy Center
7-Blythe Airport Solar 1
8-Blythe Mesa Solar
9-Blythe 21 Solar
10-Desert Quartzite Solar
11-Crimson Solar
12-Genesis Solar Energy
13-Palen



SOURCE: Esri World Imagery (accessed 2024); California Department of Fish and Wildlife 2010

DUDEK

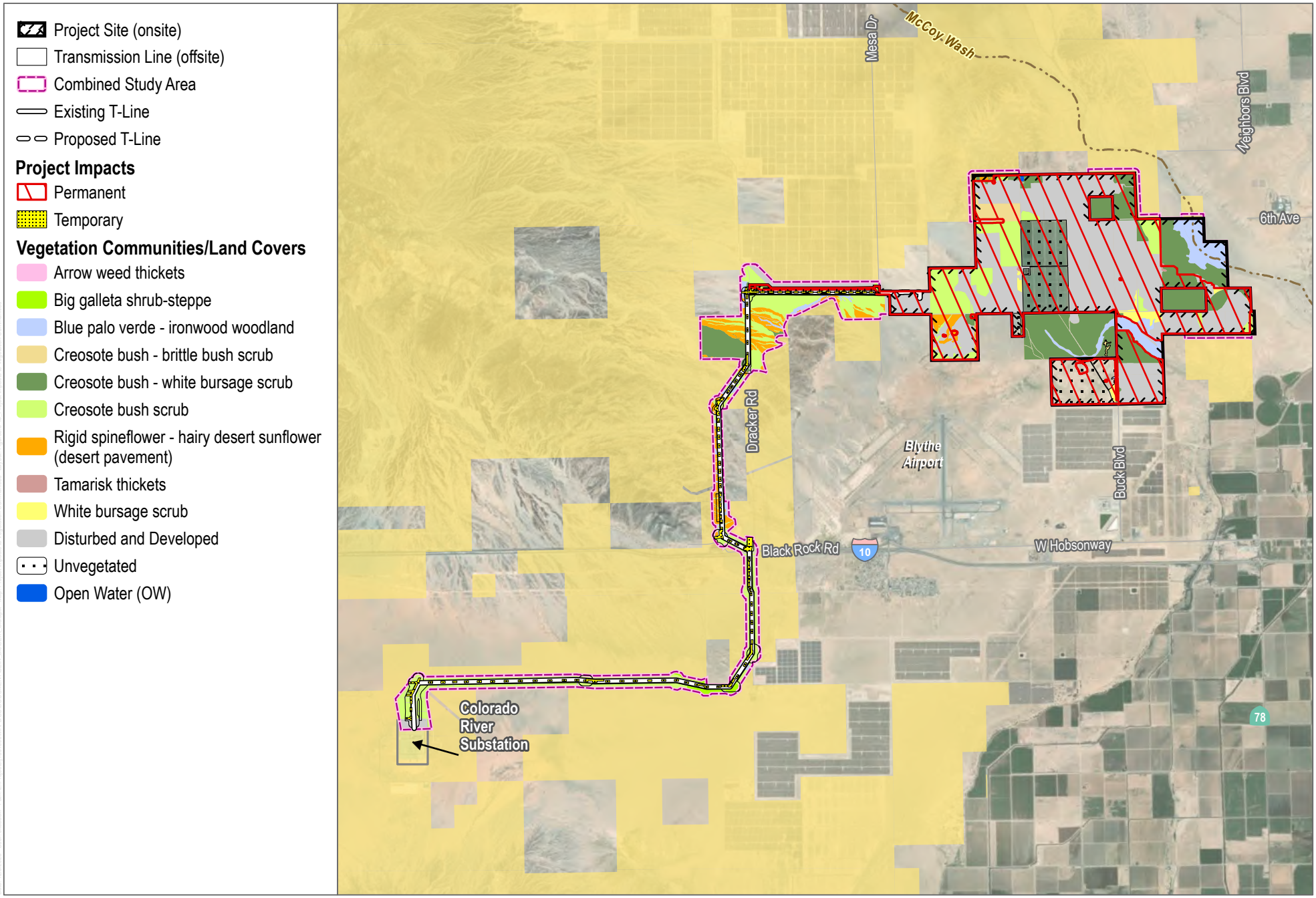
0 2 4 Miles

**FIGURE 3.5-12**

Terrestrial Connectivity - Areas of Conservation Emphasis (ACE)

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

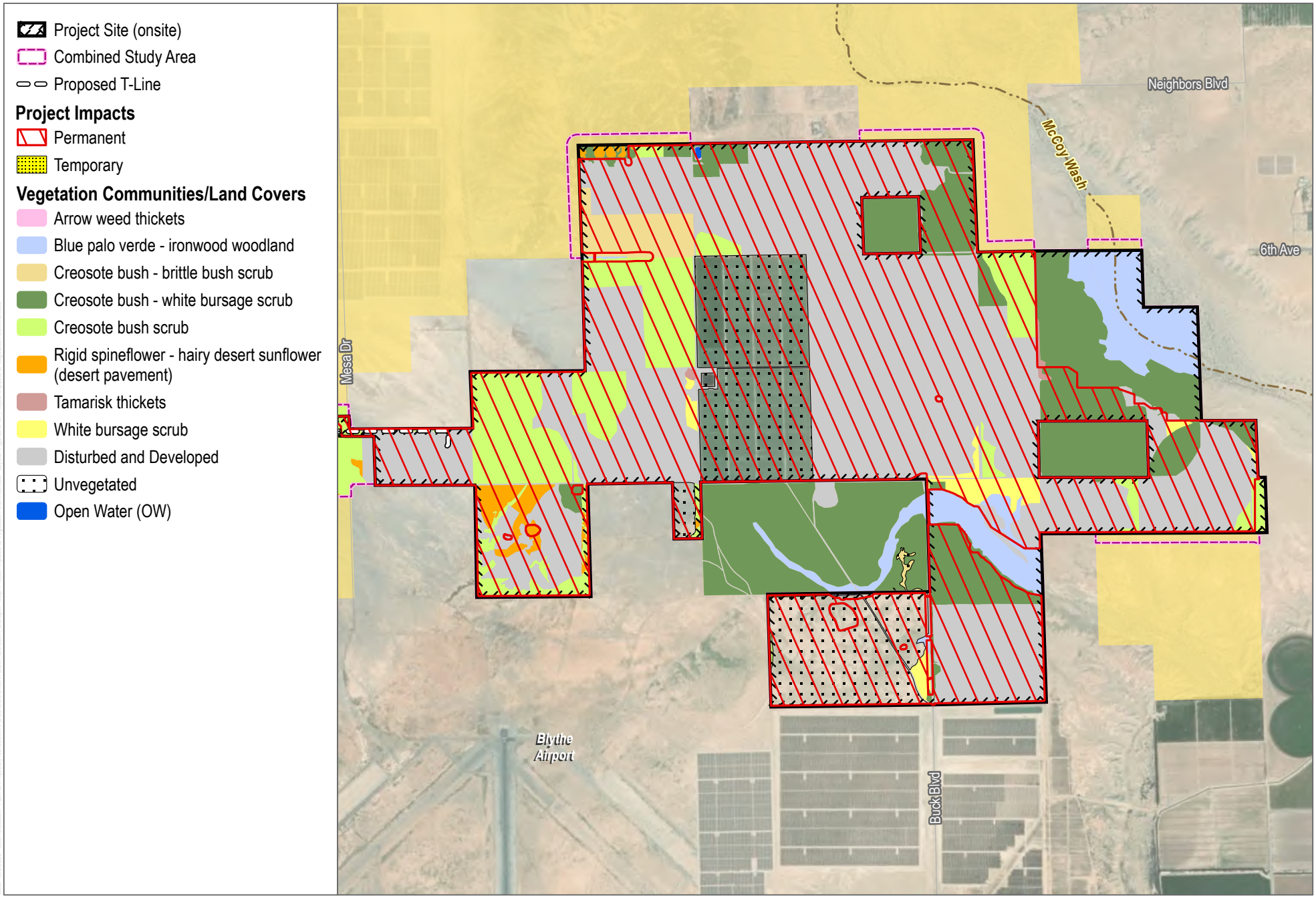
0 3,600 7,200 US Feet

**FIGURE 3.5-13a**

Project Impacts to Vegetation Communities

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

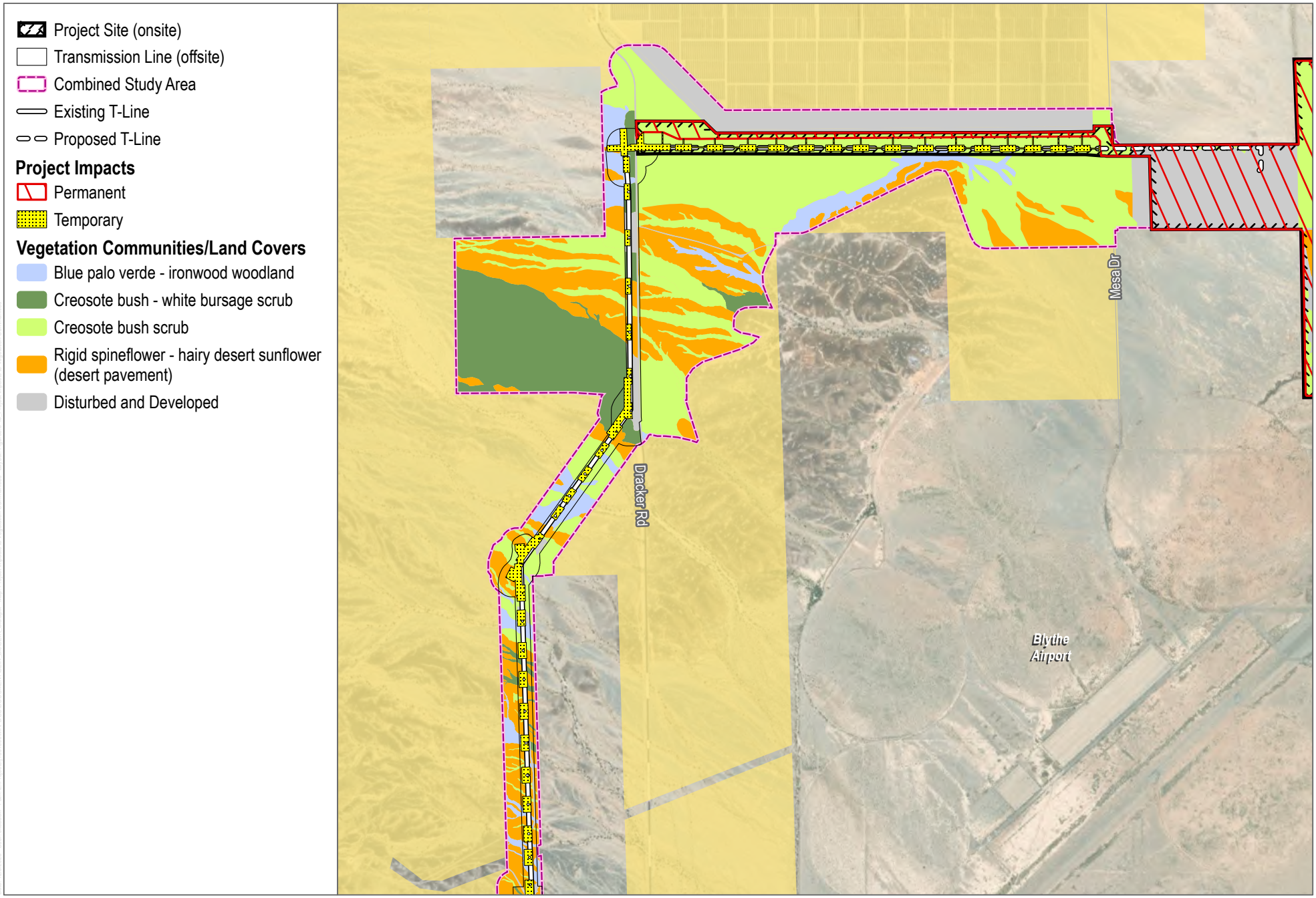
0 1,450 2,900 US Feet

**FIGURE 3.5-13b**

Project Impacts to Vegetation Communities

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

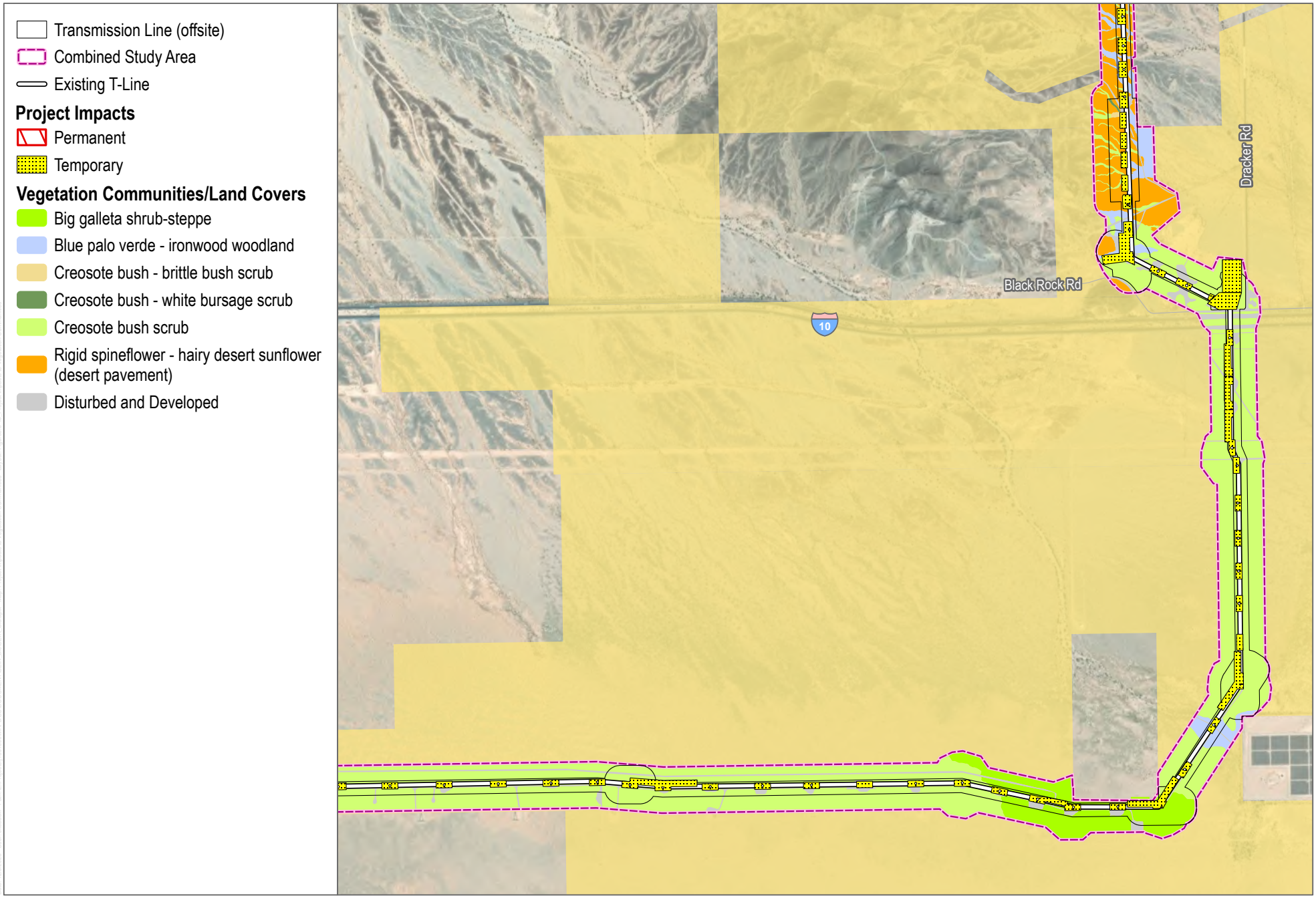
0 950 1,900 US Feet

**FIGURE 3.5-13c**

Project Impacts to Vegetation Communities

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 950 1,900 US Feet

**FIGURE 3.5-13d**

Project Impacts to Vegetation Communities

Grace Solar Energy Center

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SOURCE: Maxar 2023

DUDEK

0 950 1,900 US Feet

**FIGURE 3.5-13e**

Project Impacts to Vegetation Communities

Grace Solar Energy Center

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# 3.6 Cultural Resources

This section includes an analysis of the impacts to cultural resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the associated regulations, provides information on existing cultural resources in and surrounding the Project area, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to cultural resources, and lists Mitigation Measures (MMs) that would be incorporated into the Project to avoid and or substantially lessen to the extent feasible potentially significant impacts.

Cultural resources can reflect the history, diversity, and culture of a region, as well as the people who created the resources. Cultural resources are often the only remaining evidence of human activity that occurred in the past. Cultural resources can be natural or built, purposeful or accidental, or 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.

Information in this section is based on review of the following reports:

**Appendix J** Cultural Resources Supplemental Survey Memorandum prepared by Dudek

**Appendix A of Appendix J** Cultural Resources Technical Report prepared by Power Engineers, Inc.

The portion of the Project footprint located on private lands under County of Riverside jurisdiction has been previously evaluated by a Cultural Resources Survey Report prepared by Power Engineers, Inc. in association with the approved Palo Verde Mesa Solar Project (Approved Project) (Appendix A of Appendix J). The 2013 report was finalized with County review and approval. A project-level environmental impact report (EIR) was approved by the County in August 2017 for the Approved Project (SCH No.2012081026) (County 2017). Dudek conducted a supplemental survey of the Project site in 2024 and 2025, building upon the surveys completed by Powers Engineers, Inc., and the results of the cultural resource surveys conducted by Dudek is documented in a supplemental survey memorandum for the Project (Appendix J).

The portion of the Project footprint proposed on BLM administered lands will be evaluated under an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is currently under preparation with the BLM. A Class III Cultural Resources Inventory will be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments as required by the BLM will be incorporated herein, once available.

## 3.6.1 Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies.

As a portion of the Project is located on public lands administered by the BLM, the following federal laws, regulations and policies apply.

### Federal Laws, Regulations, and Policies

**National Environmental Policy Act.** The National Environmental Policy Act (NEPA) of 1969, as amended, requires analysis of potential environmental impacts to important historic, cultural, and natural aspects of our national heritage for major federal actions covered that may have a significant effect on the human environment (42 USC 4321-4375; Title 40 CFR Sections 1500-1508). The discussion of impacts pursuant to NEPA is defined by the Council on Environmental Quality regulations and requires consideration of the temporal scale, spatial extent, and intensity of the change that would be introduced by the Phase 2 transmission line associated with the Project.

**National Historic Preservation Act.** The federal government has developed laws and regulations designed to protect cultural resources that may be affected by actions undertaken, regulated, or funded by federal agencies. Under the National Historic Preservation Act (NHPA) of 1966, the Project is considered a federally licensed "undertaking" per Title 36 Code of Federal Regulations (CFR) Section 800.2(o) and subject to compliance with Section 106 of the NHPA, as amended. Under these guidelines, federal agencies are required to identify cultural resources that may be affected by project actions, assess the significance of these resources and their eligibility for inclusion on the National Register of Historic Places (NRHP) as per 16 United States Code (USC) 470w(5), and consult with the Advisory Council on Historic Preservation regarding project effects on significant resources. Eligibility is based on criteria defined by the U.S. Department of the Interior. Generally, districts, archaeological sites, buildings, structures, and objects that possess integrity are potentially eligible for inclusion on the NRHP under the following criteria (Title 36 CFR Section 60.4):

a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

b) that are associated with the lives of persons significant in our past; or

c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess 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.

If a cultural resource is determined to be an eligible historic property under Title 36 CFR Section 60.4, then Section 106 requires that the effects of the proposed undertaking be assessed and considered in planning the undertaking. According to Title 36 CFR Section 800, Regulations of the Advisory Council on Historic

Preservation Governing the Section 106 Review Process, the lead agency, State Historic Preservation Officer (SHPO), and Advisory Council on Historic Preservation:

> ...should be sensitive to the special concerns of Indian tribes in historic preservation issues, which often extend beyond Indian lands to other historic properties. …When an undertaking may affect properties of historic value to an Indian tribe on non-Indian lands, the consulting parties shall afford such tribe the opportunity to participate as interested persons. Traditional cultural leaders and other Native Americans are considered interested persons with respect to undertakings that my affect historic properties of significance to such persons.

**Desert Renewable Energy Conservation Plan Programmatic Agreement.** Compliance with Section 106 of the NHPA will be guided by the Desert Renewable Energy Conservation Plan (DRECP) Programmatic Agreement (PA) because the Phase 2 transmission line are located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects, as defined in the Final Environmental Impact Statement (BLM 2015a). The subsequent DRECP PA resulted from consultation among agencies, tribes, and other interested parties in defining how the Bureau of Land Management (BLM) will conduct Section 106 compliance within the DRECP Land Use Plan Amendment Area. The DRECP PA establishes a process that guides BLM in fulfilling its responsibilities under Section 106 of the NHPA for proposed renewable energy projects sited on public lands administered by BLM. Importantly, Section II of the DRECP PA directs BLM to obtain the active involvement of the SHPO, Advisory Council on Historic Preservation, other federal agencies, federally recognized tribal governments and Native American organizations, other interested parties, and the public. BLM is to engage tribes and tribal organizations at the earliest stages of assessing a proposed undertaking to "identify areas which may be of religious and cultural significance to them and which may be eligible for the National Register of Historic Places (NRHP)" (Section II.E.2 of BLM 2015b).

The following summary of the DRECP PA primarily addresses those sections that inform development of a work plan to guide identification and evaluation of resources and areas of cultural interest. DRECP PA Sections III and IV prescribe a process for BLM to involve the participating entities identified in Section II, while pursuing the identification and evaluation of historical and cultural resources that may be affected by the proposed development. This process description informs how a project applicant proposes to apply the process to a site-specific case (BLM 2015b).

Section III.B of the DRECP PA describes initial steps in the form of pre-application procedures, including a meeting with the applicant and invited parties (composed of SHPO, tribes, and other potential consulting parties) to discuss inventory and research strategies to identify historic properties and resources, such as those of cultural or religious significance to tribes. Section IV of the DRECP PA describes the major stages of assessment, which involve timelines provided in Section III.C: (1) determination of the area of potential effect (APE); (2) development of a Class I records search and literature review to guide development of a research design and work plan; (3) conducting a Class III inventory of the direct effects APE; (4) geoarchaeological, indirect effects, and historic built environment studies; (5) an ethnographic assessment; and (6) evaluations to determine NRHP eligibility. The stages are as follows (BLM 2015b):

- The initial step of the assessment process is the determination by BLM of the direct and indirect effects APEs for the following assessment steps. Buffers to the right-of-way application area may be added in defining the direct effects APE. A possibly larger area comprises the indirect effects APE (Section IV.A.1.c), in which historic properties potentially vulnerable to visual, auditory, and atmospheric effects resulting

from the Project may lie beyond the right-of-way application area boundaries. A cumulative effects APE will entirely encompass the direct and indirect effects APEs and include "reasonably foreseeable effects" occurring later in time or farther removed in distance (Section IV.A.1.d). The APEs may include lands not administered by BLM where NEPA compels analysis of Project impacts as a "connected action" (Section IV.A.1.e). BLM will provide the initial APE determinations to the SHPO and consulting parties, including tribes, for a 30-calendar-day review (Section III.C.1.a). All resulting comments will be provided to the SHPO (Section III.C.1.c) for a 10-calendar-day comment period (Section III.C.1.d). BLM must seek to resolve any disagreement on comments received during the 30-day review period.

- Identification of historic properties for assessment of potential Project effects begins with development of a research design and work plan for all cultural resource studies by the Applicant informed by a Class I records search and literature review of existing cultural resources information (Section IV.B.1). As stipulated in Section IV.B.1, BLM will use data in the BLM Class I overview to determine the appropriate level of identification effort for the proposed undertaking through review of the Applicant's work plan, which sets forth the steps to be taken to complete all NHPA Section 106 identification and evaluation requirements for the Project. As with the APE, BLM will distribute the research design and work plan, including proposed identification efforts, to the SHPO and Project-specific consulting parties for review and comment (Section IV.B.1.a), pursuant to the DRECP PA specified 30-calendar-day comment period (Section III.C.1.a). In addition, an ethnographic literature review will be circulated for review as part of the Class I study (Section IV.B.1.b).

- Following review of the work plan and proposed identification efforts, the Applicant will initiate the various identification efforts, including Class III field survey documentation and testing (Section IV.B.2), a geoarchaeology study (Section IV.B.3), an indirect effects study (Section IV.B.4), a built environment study (Section IV.B.5), and an ethnographic assessment (Section IV.B.7). Tribal consultation under the PA extends to opportunities to participate in the Class III archaeological surveys of Project areas (Section II.E.4). These documents will be subject to peer review and production of a final review report (Section IV.B.6).

- Using the various study reports, including initial archival research, input through BLM consultation efforts with Indian tribes, and peer review report, the Applicant will evaluate the significance and integrity of all resources identified and make a recommendation regarding each resource's eligibility for listing on the NRHP (Section IV.C). The resulting evaluations report is subject to the same review process by the SHPO and interested parties as the APE and identification studies (Section III.C). This entails BLM submitting the agency-proposed determinations of eligibility to the Project-specific consulting parties for review and comment, and concurrent request to SHPO for review and concurrence pursuant to Stipulation III I. Comments resulting from this review process form the basis for subsequently determining the findings of effects posed by the Project as addressed in DRECP PA, Sections V and VI.

**Native American Graves Protection and Repatriation Act.** The Native American Graves Protection and Repatriation Act was enacted on November 16, 1990, to address the rights of lineal descendants, Indian tribes, and Native Hawaiian organizations to Native American cultural items, including human remains, funerary objects, sacred objects, and objects of cultural patrimony. The act assigned implementation responsibilities to the Secretary of the Interior.

If human remains are encountered on federal lands, this act states that the responsible federal official must be notified immediately and that no further disturbance shall occur in the area until clearance is

given by the responsible federal official (Title 43 CFR Section 10.4). If the remains are determined to be Native American Indian, the federal agency will then notify the appropriate federally recognized Native American tribe and initiate consultation.

**Archaeological Resources Protection Act.** If federal or Indian lands are involved, the Archaeological Resources Protection Act may impose additional requirements on an agency. The act (1) prohibits unauthorized excavation on federal and Indian lands, (2) establishes standards for permissible excavation, (3) prescribes civil and criminal penalties, (4) requires agencies to identify archaeological sites, and (5) encourages cooperation between federal agencies and private individuals.

**Antiquities Act of 1906.** The Antiquities Act of 1906 states, in part, that any person who shall appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall upon conviction, be fined in a sum of not more than $500 or be imprisoned for a period of no longer than 90 days, or shall suffer both fine and imprisonment, in the discretion of the court.

## State Laws, Regulations, and Policies

There are numerous state regulations and policies that direct management of cultural resources on state lands and by state agencies. The following is a discussion of the most pertinent laws affecting the Project and impact analysis from a state and California Environmental Quality Act (CEQA) perspective. These laws identify three types of resources: historical resources, unique archaeological resources, and human remains. Tribal Cultural Resources (TCRs) are addressed in Section 3.20, Tribal Cultural Resources.

### *Historical Resources*

Under CEQA, cultural resources listed on, or determined to be eligible for listing on, the California Register of Historical Resources (CRHR) or a local register must meet the CEQA definition of "historical resources" and must be given consideration in the CEQA process. For this Supplemental Environmental Impact Report (SEIR), effects on historical resources may be considered impacts of the Project. Under the California Code of Regulations (CCR), Title 14, Chapter 11.5, properties listed on or formally determined to be eligible for listing on the NRHP are automatically eligible for listing on the CRHR. A resource is generally considered to be historically significant under CEQA if it meets the criteria for listing on the CRHR. These criteria are essentially the same as the eligibility criteria for the NRHP. In addition to being at least 50 years old, a resource must meet at least one (and may meet more than one) of the following four criteria:

- **Criterion 1**—It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- **Criterion 2**—It is associated with the lives of persons important to local, California, or national history;
- **Criterion 3**—It embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master or possesses high artistic values; or
- **Criterion 4**—It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association.

***Unique Archaeological Resources***

Additionally, CEQA states that it is the responsibility of the lead agency to determine whether a project will have a significant effect on "unique" archaeological resources. An archaeological artifact, object, or site can meet CEQA's definition of a unique archaeological resource even if it does not qualify as a historical resource (California Public Resources Code, Section 21083.2[g]; 14 CCR 15064.5[c][3]). An archaeological artifact, object, or site is considered a unique archaeological resource if "it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria" (California Public Resources Code, Section 21083.2[g]):

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.
- If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable efforts be taken to preserve these resources in place or provide mitigation measures.

***Human Remains***

California Public Resources Code, Sections 5097.98(b) and (e), require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until the landowner confers with the Native American Heritage Commission-identified Most Likely Descendants to consider treatment options. In the absence of Most Likely Descendants or of a treatment acceptable to all parties, the landowner is required to re-inter the remains elsewhere on the property in a location not subject to further disturbance. Section 5097.99 establishes as a felony the acquisition, possession, sale, or dissection with malice or wantonness Native American remains or funerary artifacts. Finally, Section 5097.991 establishes as state policy the repatriation of Native American remains and funerary artifacts.

California Health and Safety Code Section 7050 makes it a misdemeanor to mutilate, disinter, wantonly disturb, or willfully remove human remains found outside a cemetery and further requires a project owner to halt construction if human remains are discovered and to contact the county coroner.

## Local Laws, Regulations, and Policies

***Riverside County General Plan***

The purpose of the Cultural Resources section of the Multipurpose Open Space Element of the Riverside County (County) General Plan is to protect and preserve cultural (both archaeological and historic) resources. The following policies included in the Multipurpose Open Space Element relate to the Project with regards to cultural resources (County of Riverside 2015).

- **Policy OS 19.1.** Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.

- **Policy OS 19.2.** The County of Riverside shall establish a Cultural Resources Program in consultation with tribes and the professional cultural resources consulting community that, at a minimum would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state and federal law. (Action Item 144)

- **Policy OS 19.3.** Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

- **Policy OS 19.4.** To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state. (Action Item 145)

- **Policy OS 19.5.** Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

**City of Blythe General Plan**

The Open Space and Conservation Element addresses archaeological, historic, and paleontological resources. The purpose of the Open Space and Conservation Element is to identify those areas located within the City's Planning Area boundary that merit recognition or preservation because of their location use and/or natural, topographic, or aesthetic features. The applicable policy related to archaeological resources is provided below (City of Blythe 2007).

**Policy 25.** *Protect archaeologic, historic, and paleontologic resources for their aesthetic, scientific, educational, and cultural value.*

***Palo Verde Valley Area Plan***

The Palo Verde Valley Area Plan is an Area Plan within the General Plan that includes the Project site (County of Riverside 2021). The Palo Verde Valley Area Plan does not include any goals and policies related to cultural resources.

## 3.6.2 Environmental Setting

The following environmental setting is from Appendix A of Appendix J.

### Natural Setting

The Project site is located in the Palo Verde Valley, which is positioned along the western edge of the Colorado River. This area is located on the Palo Verde Mesa, a series of ancient raised river terraces, and is part of the Sonoran Desert. The topography is relatively flat and slopes toward the southeast; elevations range from 260 to 400 feet above mean sea level (AMSL). The Project area is located near the Big Maria

Mountains to the northwest, the McCoy Mountains to the west, the Mule Mountains to the southwest, and the Colorado River to the east. These mountain ranges, trending northwest to southeast, create a natural barrier between the Colorado River and the greater Colorado Desert. Development in the Project vicinity primarily includes agricultural fields and the Blythe Airport; the Project area also includes undeveloped open desert.

The subtropical climate of the Colorado Desert, a sub-region of the Sonoran Desert, is currently characterized by dry, mild winters averaging 45 degrees Fahrenheit (ºF) and dry, hot summers that average 104ºF. Summer highs are known to reach 120ºF. Precipitation ranges between two and ten inches per year, with most of the precipitation occurring between November and March. Although rainfall is primarily in the winter months, the region is periodically influenced by tropical weather conditions including sudden monsoonal summer storms.

In the Riverside County region, conditions during the Late Pleistocene (22,000 to 11,000 years before present [BP]) were cooler and wetter than today, and supported pinyon-juniper woodlands, lakes, savannah grasslands and creosote scrub at the lower elevations. The course of the Colorado River changed over time, creating terraces and depositing sediments between its headwaters in the Colorado Rocky Mountains and its terminus in the Gulf of California. During the Early Holocene (11,000 to 8,000 BP) the river flowed into previously dry areas inland and with periodic flooding episodes, the extent of inland lakes, such as the Salton Trough and the ancient Lake Cahuilla, increased dramatically. During the Middle to Late Holocene (8,000 BP to present) the warm and dry conditions continued and were dominated by summer monsoons in the desert and winter storms along the coast. Lakes became ephemeral (Van Devender and Spaulding 1983).

Information about Mojave Desert paleohydrology is provided by packrat midden studies. The reduction in the evidence for blackbrush (*Coleogyne ramosissima*) desert scrub in middens clearly indicated a warmer and drier environment; however, to the south in the Salton Sink, the timing of the filling and emptying of ancient Lake Cahuilla contradicts the chronology of droughts experienced in the Mojave Desert.

Geomorphic evidence demonstrates that the high lake stands were the result of the shifting of the Lower Colorado River channel. Lake Cahuilla was frequently filled between 500 and 1,500 BP, although not necessarily due to climatic factors (Waters 1982).

Surface water sources are minimal on the Palo Verde Mesa, limited to seasonal and perennial sources. Perennial water comes from McCoy Springs in the McCoy Mountains west of the Project area. Springs, including McCoy Springs, are usually at the bases of the nearby mountains. Monsoon activity turns dry washes into raging torrents that cut through the Palo Verde Mesa. The Colorado River is less than eight miles east of the Project area.

Sediments in the Project area originated from quaternary deposits from the Colorado River, which ran through the Project area at one time, and from alluvial fan deposits from the mountains to the northwest. Alluvium, colluvium, and slope-wash deposits of the Late Pleistocene and Holocene are found in drainage features, including valleys and streams. The alluvial deposits grade indiscernibly with colluvium and slope-wash deposits flanking the lower slopes next to the valleys. Large remnant river terraces remain within the Project area. Heavily patinated desert pavement (a layer of course pebbles and gravel created after wind removal of the finer materials) is common in this climate and is often present in broad, well-developed patches within the Project vicinity (Norris and Webb 1990). Nearby terrace-top cobble deposits

were a source of stone material collected by Native Americans. This lithic material includes quartzite, chert, and chalcedony, all of which were used by the prehistoric inhabitants for stone tools.

Today, the vegetation communities in the Project vicinity are similar to those of the Mojave Desert to the northwest. These vegetation and habitat communities are sparse but are able to support Creosote Bush Scrub and also include Desert Dunes, Desert Dry Wash Woodland, and agricultural land. The natural vegetation community is primarily creosote bush scrub, which includes creosote bush (Larrea tridentate) and white bursage or burrobush (*Ambrosia dumosa*). Closer to the Colorado River, palo verde (*Parkinsonia florida*) is found within drainages as well as mesquite (Prosopis spp.) and ironwood (*Olneya tesota*) bushes. These are among the important food plants used by the local tribes (Bean and Saubel 1972). Currently, 90 percent of the land within the Project boundaries is used for agriculture or is developed; the remainder is open, undeveloped desert.

Fauna within the Project vicinity include desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit, *Lepus californicus*), mule deer (*Odocoileus hemionus*), and desert bighorn sheep (*Ovis canadensis nelsoni*). The desert cottontail is most abundant in the dunes area whereas the black-tailed jackrabbit is more prevalent on the desert floor, floodplains, and rocky slopes (Ryan 1968; Jaeger 1965). Reptiles include lizards and snakes, particularly the western diamondback (*Crotalus atrox*) and the desert tortoise (*Gopherus agassizi*). Avian species common to the Project area include the common raven (*Corvus corax*) and the greater roadrunner (*Geococcyx californianus*).

## Prehistoric Setting

### *Paleoindian Period (San Dieguito) (12,000 to 7,000 BP)*

The Paleoindian period experienced profound environmental changes, as the cool, moist conditions of the Pleistocene gave way to the warmer, drier climate of the Holocene (Spaulding 1990). Settlement patterns of this period suggest that habitation occurred along prehistoric lakeshores and on mesas near springs and washes (Schaefer and Laylander 2007). The Palo Verde Mesa area was not conducive to settlement due to the limited water resources and was likely used as a travel corridor between the mountains and rivers (von Werlhof 2004). Within the larger Riverside County region, Paleoindian sites may be found on stable landforms and in protected caves above floodplains and valley/riparian environments, and along ridge systems and in mountain passes that may have served as travel routes (Moratto 1998).

The Paleoindian inhabitants were nomadic large-game hunters whose tool assemblage included choppers; percussion-flaked scrapers and knives; large, well-made fluted, leaf-shaped, or stemmed projectile points (e.g., Lake Mojave, Silver Lake); crescents; heavy core/cobble tools; hammerstones; bifacial cores; and scraper planes (Rogers 1939, 1966; Warren 1968). The subsistence strategy used during the San Dieguito period focused primarily on hunting large and small game, as well as gathering available plants throughout the seasons. Near the end of this period, the climate began to warm, which caused the lakes and marshes to dry, resulting in the need for different subsistence and settlement strategies (Moratto 1984).

### *Archaic Period (Pinto and Amargosa) (7,000 to 1,500 BP)*

The climatic patterns of the Late Paleoindian period continued into the Early Archaic period. In the Colorado Desert region, Rogers (1939) assigned the Amargosa complex to this period, which dates to approximately 7,000 to 1,500 BP (Vaughan and Warren 1980). Tool types identified with this period

include Pinto and Amargosa projectile points and knives, scrapers and choppers. The use of ground stone tools increased during this period (McGuire and Shiffer 1982; Warren 1984).

In the inland regions of Southern California, this period of cultural development is marked by tools used for grinding seed for flour. Artifacts dating to this period include large leaf-shaped projectile points and knives; manos and milling stones used for hard-seed grinding; and many other artifacts, such as beads, pendants, charmstones, discoidals, spherical stones, and cogged stones (Kowta 1969; Warren et al. 1961).

The beginning of the Late Archaic coincides with a period of increased moisture in the region. Research suggests that the California desert environment was unstable during these time periods, forcing the

hunter-gatherers towards more hospitable regions (Crabtree 1981; Schaefer 1994; Weide 1974). However, Late Archaic sites have been recorded in more southern portions of Riverside County's low desert near the Peninsular Ranges where water was more available.

Late Archaic site types include residential bases with large, diverse artifact assemblages, abundant faunal remains, and cultural features, as well as temporary bases, temporary camps, and task-specific activity areas. Diagnostic projectile points of this period include more refined notched (Elko), concave base (Humboldt), and small stemmed (Gypsum) forms (Warren 1984). The mortar and pestle were used to process acorns, an important storable resource. Haliotis and Olivella shell beads and ornaments and split-twig animal figurines indicate that the interior California occupants were in contact with populations on the California coast and in the southern Great Basin.

***Late Prehistoric Period (Patayan Complex) (1,500 to 150 BP)***

A period of even more persistent drought began by 1,500 years ago, and conditions became significantly warmer and drier (Jones et al. 1999; Kennett and Kennett 2000). The dry period continued until 750 years ago (Spaulding 2001).

The Patayan complex is marked by strong regional cultural developments to the economic system and settlement patterns, especially in the Southern California desert regions, which were heavily influenced by the Hakataya (Patayan) culture of the lower Colorado River area (Warren 1984). This period includes a pre-ceramic transitional phase ranging between 1,500 and 1,200 years BP. The Patayan complex is distinguished from the transitional phase by the introduction of pottery using the paddle-and-anvil technique as well as the use of bow-and-arrow technology. Also noted is the use of flood-plain agriculture (Rogers 1945). The annual flooding of the Colorado River provided water to sustain the crops and also revitalize the soil. Nearby Lake Cahuilla appears to have flooded between 950 and 300 years BP (Laylander 1997; Schaefer 1994). These technological advancements are believed to be from Mexico or the ancestral Pueblo cultures of the Southwest deserts (McGuire and Schiffer 1982; Rogers 1945; Schroeder 1979).

Diagnostic artifacts include Saratoga Springs projectile points, small triangular projectile points, mortars and pestles, steatite ornaments and containers, perforated stones, circular shell fishhooks, numerous and varied bone tools, and bone and shell ornaments. Elaborate mortuary customs and extensive trade networks are also characteristic of this period. Additionally, abundant amounts of obsidian were being imported into the region from the Obsidian Butte source exposed by the desiccation of Lake Cahuilla.

Two ceramic types have been identified as the most prevalent for the Palo Verde Valley area, Lower Colorado Buffware and Tizon Brownware. Harner (1957) observed that in the Chuckwalla Valley the frequency of Lower Colorado Buff was double that of Tizon Brown. When this pottery was compared and

cross-dated with a collection from the Bouse Site in Arizona, Harner found that the pottery from the Chuckwalla Valley could date between A.D. 1300 and 1900.

Lower Colorado Buffware is made from riverine and lacustrine clay, usually with fine grains of sub- angular to sub-round quartz, feldspars, and other opaque spars. Most vessels are highly oxidized due to the firing process. The surface finish is typically smoothed with faint wipe marks left by mops. The larger vessels may display anvil marks on the interior surfaces. A thick cream-colored scum coat is common in the desert regions, and stucco treatment is also common along the Colorado River and in the desert. The surface color is usually tan with pink tones. Recurved rims are common, polish is rare, and decorations often include fingernail impressions, in casing and punched holes. Colorado Buff dates to Patayan III (A.D. 1500 to post-1900).

Tizon Brownware is made from clays from decomposing granite outcrops in the California-Colorado desert regions, and usually contains a higher iron content. The vessels are typically reddish brown and contain little to no temper. Both Tizon Brown and Lower Colorado Buff were usually made using coils, smoothed and shaped by a paddle and anvil.

In an ongoing study, Laylander and Schaefer (2010) applied a regional perspective to evaluate and treat cultural resources within a broad landscape approach (2010). The current Project falls within their Prehistoric Trails Network Cultural Landscape (PTNCL) area, which includes Palo Verde Valley, McCoy Wash and Palen Valley.

By the Late Prehistoric period, there appears to have been a transition to more mobile patterns of travel and trade between the Colorado River and Lake Cahuilla (Pendleton 1984). Long range travel for resource procurement and trade resulted in a system of trails through the Colorado Desert. The increased mobility along the trail system also allowed the opportunity for interaction between neighboring tribes. As the Spanish began to explore the area, native trails and trade routes were used and expanded.

Three prehistoric trails were in the Project vicinity; these were likely used to travel to and from springs and other water sources. McCarthy (1993) explained that trails in the McCoy Springs region were unbordered and do not indicate evidence of deliberate construction.

Early research in the area noted recognizable trail types, including major long-distance, minor long-distance, and subsidiary trails between settlements and resources areas (Rogers 1941). McCarthy (1993) defines two types of trails, primary and secondary. Primary trails are based around a destination fixed on the landscape, such as a spring. McCoy Springs was the destination spot for all of the trail segments in the current Project vicinity. Secondary trails branch off from the primary trails. McCarthy identified CA- RIV-53 as the predominant trail that leads to McCoy Springs. The trails along the southern flank of the McCoy Mountains probably emanate from the Colorado River (Palo Verde Valley) and lead toward Chuckwalla Valley. Between the McCoy and the Chuckwalla Mountains, several springs (McCoy, Chuckwalla, and Corn Springs), tanks (Palen and Mule Tanks), and dry lake beds (Ford Dry Lake and Palen Lake) were linked with a network of trails. The trails that were found within the desert pavement setting were in excellent condition. These trails include CA-RIV-53 (known as the Halchidhoma Trail), CA-RIV-and CA-RIV-3673.

Other trails lead toward canyons that contain temporary water sources. Petroglyph sites have been documented in these canyons; two short trail segments that lead to a large canyon southeast of McCoy Peak, have been documented in the Project vicinity. In addition to water sources, other resource areas would include lithic quarries and assay areas. A line of pebble terraces line the southern flank of the McCoy Mountains. Several extremely large prehistoric lithic sources and assay sites have been recorded in these

terraces. Trail segments between these sites have been documented. McCarthy speculates that shorter trail segments in the area of McCoy Wash were used to connect specialized activity areas within larger habitation areas (McCarthy 1993).

Trails were also used for trade routes. Trade between Southern California and the Southwest may have begun more than 9,000 years ago (Ruby 1970), but the predominant trading activity ranged between A.D. 900 and A.D. 1300. Exchange items included California marine shell and Southwestern pottery. Johnston and Johnston (1957) found segments of trails from the Colorado River through the San Gorgonio Pass and into Riverside County. The system connected the Palo Verde Valley to the McCoy Mountains through the Chuckwalla Valley into the Chuckwalla Mountains.

Trails are also a significant element in the sacred landscape; they link the spiritual world to the natural landscape. Trails have been marked with rock shrines and artifacts such as pottery drops and flaked stone scatters, particularly white quartz. Songs and stories contain named places such as mountains, water sources, valleys, and other geographical locations along known trails (Fowler 2009).

## Ethnographic Setting

The Colorado Desert area of Riverside County is within the ethnographic boundaries of several different eighteenth and nineteenth century Native American groups. Ethnographers documented these tribes and prepared syntheses for the Quechan (Bee 1981, 1982, 1983, 1989; Forbes 1965; Forde 1931), Halchidhoma (Harwell and Kelly 1983; Spier 1933), the Mojave (Kroeber 1925; Stewart 1983), and the Chemehuevi (Kelly and Fowler 1986; Laird 1976, 1984), as well as the Cahuilla (Bean 1978; Bean and King 1974; Bean and Vane 1978).

### *Colorado River Peoples: the Quechan, Halchidhoma, and Mojave*

The first Europeans to encounter and document the traditional inhabitants of the Lower Colorado River tribes were the Spanish, followed by American explorers. Kroeber (1920, 1925) conducted extensive fieldwork at the turn of the twentieth century; in particular, he studied the Mojave tribe in the Needles area. Spanish missionary influence did not reach the desert cultures, which enabled them to retain much of their language, religion and cultural practices. Early ethnographers were able to conduct fieldwork and documented many details about oral histories, ritual and burial practices, as well as lifeways practiced prior to contact as well as those during the first half of the twentieth century. Malcolm Rogers studied the Colorado River Tribes in the 1930s and documented information that included the lithic and ceramic technologies.

After A.D. 1000, the Colorado River tribes appear to have become more mobile and extended their travel between the river and Lake Cahuilla; and consequently expanded their resource procurement patterns (Pendleton 1986). This resulted in the development of an extensive trail network throughout the Colorado Desert. Evidence of travel and trade is indicated by the presence of pottery drops and shrines lining the trails (McCarthy 1993). The trails network was also a major component of the tribe's belief system, interconnecting important geographical locations and ceremonial sites with song cycles and rituals.

Lithic quarries along various mountain ranges were used for tool material, springs within these mountains provided water. Several springs are located within a day's travel of the Project area, in addition to McCoy Springs, Corn and Chuckwalla springs are less than 30 miles to the west.

The lower Colorado River region was inhabited by numerous tribes at the time of the first Spanish contact. Alarcon and Diaz were the first to travel up the Colorado River in 1540; their description of the interaction between tribes indicates shifting boundaries and inter-tribal hostilities (Forbes 1965). A later expedition by Onate in 1605 documents several tribes, including the Halchidhoma, the Quechan and the Mojave at various points along the river. By 1774, the Anza Expedition encountered the Halchidhoma living between the Mojave and Quechan territories near Parker, Arizona. Historical accounts describe constant conflict among the tribes with the Quechan and Mojave against the Halchidhoma. Ultimately, the Halchidhoma left the area and resettled in the mid-1800s in the Gila River area (Dobyns et al. 1963; Kroeber 1925).

Settlement was determined primarily by proximity to permanent water sources. Villages and camp sites were most often in the foothills and less frequently on the desert floor, depending on the availability of water. Tribal boundaries and territories were dynamic as a result of interactions and warfare between tribes (Forbes 1965).

Like some of the other river Yuman tribes, the Mojave focused on floodplain agriculture, producing close to half of their dietary needs from crops, including maize, squash, melons, beans and a variety of grasses (Bee 1983; Castetter and Bell 1951). Similarly, the Quechan also relied on agriculture as well as fish from the Colorado River. In addition, both small and large game were hunted, adding important dietary protein.

The Colorado River Tribes share similar beliefs that are strongly linked to dreaming and ritual songs that apply to daily life and personal knowledge. These beliefs are based on real places which are visited physical or in dreams (Kroeber 1925). Forbes noted that religion, cultural identity, various aspects of daily life, and the landscape on which they lived were intricately intertwined. Important ceremonial locations include intaglios, petroglyphs, lithic scatters and cleared circles along the Colorado River and in the surrounding hills. As previously mentioned, one key component of the cultural landscape is a regional trail system (Forbes 1965).

***Chemehuevi***

The Chemehuevi tribe is the southern-most group of the Southern Paiutes (Kelly and Fowler 1986). Their territory included the western side of the Colorado River into the Palo Verde Mountains and north toward Cadiz Dry Lake.

The Chemehuevi share many cultural elements with the Mojave, including habitation structures, ground stone tool types as well as spiritual beliefs. The Chemehuevi were organized in small mobile groups who traveled widely, interacting with neighboring tribes. They subsisted on small game, hunting as far west as San Bernardino, and on harvesting seasonal plant resources throughout the region. They hunted with the Quechan in Arizona and the Serrano in Tehachapi, and were reported to have hunted abalone shell in the Santa Barbara Channel and to have journeyed to the Hopi Villages (Kelly and Fowler 1986). They were not known to have used pottery but rather chose basketry and other woven implements, often decorated. The Chemehuevi who settled along the Colorado River lived in relatively permanent structures and utilized agriculture to a greater extent than related groups to the west (Laird 1976). Historically, they grew a variety of crops including vegetables, beans, winter wheat and grasses.

Chemehuevi spiritual beliefs include a sacred landscape which incorporates both the spirit world and the natural world. These rituals include songs and dreams which are the basis of their daily lives, linking their beliefs, material existence and the cultural landscape. Kroeber states that knowledge is acquired by each man according to his dreams (Kroeber 1925). The “Salt Song” describes a ceremonial trail that traverses through three states and describes the significance of the mountains and the medicines found in them.

### *Cahuilla*

The Cahuilla are one of several groups who migrated into California from the Great Basin, although the specific time, duration, and process is unclear, it is estimated to have taken place around 1500 BP (Kroeber 1925; Laylander 1985). The Cahuilla's traditional territory encompassed diverse topography ranging from 273 feet below sea level at the Salton Sink to 11,000 feet AMSL in the San Bernardino Mountains. Their territory extended from the summit of the San Bernardino Mountains in the north to the Chocolate Mountains and Borrego Springs in the south. Its eastern border included the Colorado Desert west of Orocopia Mountain, and its western border included the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain (Bean 1978).

Although the traditional territory is vast, the Santa Rosa and San Jacinto Mountains and the Coachella Valley in Riverside County are the center of the Cahuilla, including Palo Verde Mesa. Numerous land holding clans claim territory in this area, each of which ranged from the desert to the mountain areas. Clans could include more than one lineage, each of which had independent community areas that were owned within the larger clan area (Wilke and Lawton 1975).

Cahuilla villages usually were in canyons or along alluvial fans near adequate sources of water and food plants. The immediate village territory was owned in common by a lineage group or band. The other lands were divided into tracts owned by clans, families, or individuals. Trails used for hunting, trading, and social interaction connected the villages. Each village was near numerous sacred sites, such as rock art panels (Bean and Shipek 1978).

The Cahuilla belief system and oral tradition indicate that when Lake Cahuilla dried up, the desert floor was settled; 17 or more rancherias have been identified in Coachella Valley. These rancheria locations are associated with hand-dug wells, springs, or palm oases. Water collection and conveyance features and associated agricultural fields have been documented from the early 1800s (Wilke and Lawton 1975).

## Euro-American Context

European presence in the Colorado River region began with explorations in the sixteenth century; however, permanent settlement occurred in the mid-nineteenth century as a result of the development of transportation and water conveyance. Exploration was primarily for travel routes in search of interior waterways and from Mexico north toward Monterey for the establishment of the California missions by the Spanish. The end of the Mexican War of 1846 to 1848, the discovery of gold in California in 1849, and the establishment of California as a state on September 9, 1850 all contributed to a steady influx of non-Hispanic settlers into the area. Later, mining, agriculture and military training brought settlement to the Riverside County area.

### *Transportation*

Prior to the European presence in the Colorado Desert area, transportation was limited to foot trails used by the Native Americans. As the Spanish began to explore the area, these native trails and trade routes were further used and expanded. One of the more important routes, known as the Bradshaw Trail, was developed as the result of the search for gold in Southern California, specifically in the area of the La Paz, along the eastern side of the Colorado River (Gunther 1984; Johnston 1972, 1987), north of the Project area. William D. Bradshaw, a forty-niner working in the San Bernardino County area, was determined to find an overland route from the Pacific Ocean to the Colorado River, where gold had been recently discovered in what is now Ehrenberg. Bradshaw had previously mined for gold in Sutter's Mill in 1849,

and anticipated La Paz to become a gold strike boom-town. To accommodate the expected influx of miners headed toward La Paz, Bradshaw recruited a group of eight men to scout out a direct route (Gunther 1984; Johnston 1972, 1987).

Bradshaw worked with Chief Cabazon, the leader of the Desert Cahuilla, and a Coco Maricopa Indian mail runner to map a route using an ancient native trail that linked water sources across the Colorado Desert. The trail passed through the San Gorgonio Pass through Palm Springs, then turned south and ran through Martinez to the north side of the Salton Sink and between the Orocopia and Chocolate Mountain ranges. The route then skirted the southern edge of the Chuckwalla range, crossed through the Mule Mountains and reached the Palo Verde Valley. Bradshaw also established a ferry service to cross the Colorado River and proceeded to promote his new trail and ferry enterprise (Gunther 1984; Johnston 1972, 1987). The Bradshaw Trail is approximately 10 miles south of the Project area.

Also paramount to the development of the Colorado Desert was the arrival of the Southern Pacific Railroad (SPRR), a transcontinental railroad system. The SPRR was founded as a land holding company in 1865 and acquired various smaller railroad companies that would eventually link New Orleans, Texas, New Mexico, Arizona and California through Los Angeles and then north into San Francisco through to Portland, Oregon. Numerous communities sprang up along the route and greatly accommodated the mining boom in the local area (Vredenburgh et al. 1981). The rail road was instrumental in settlement of the Colorado Desert areas by providing access to immigrants as well as shipping consumer goods and produce between the east and west coasts (Fickewirth 1992). The SPRR reached Yuma, Arizona in 1877 and links north on the river were provided by commercial river boat traffic (Vredenburgh et al. 1981).

Later, to facilitate the mining activities in the Blythe area, a spur was constructed to the Atchison, Topeka, and Santa Fe Blythe-Ripley Line in 1916.

### *Mining*

With the signing of the Treaty of Guadalupe-Hidalgo in 1848, the Southwest came under the control of the United States. The Colorado Desert was the scene of prolonged mining from 1850, with the beginning of the gold rush in California. The small town of La Paz, 45 miles northeast of Blythe on the eastern bank of the Colorado River, was a boomtown in the 1860s (Wilson 1961). The mid-1860s saw the town of La Paz swell in population to over 5,000, but by 1870 the miners had gleaned most of the gold-bearing ore from this site.

Mining and prospecting was primarily focused in the mountains and high desert north of Blythe but small-scale mining did occur from the 1860s until after the Great Depression in the 1930s (Morton 1977). Although gold was found only in small amounts, mining of gypsum and manganese were more successful ventures. To the north in the McCoy Mountains, several significant manganese mines provided ore for armaments during both World Wars I and II (Butler 1998). Other minerals that were mined from the areas surrounding the Project area include fluorite, copper and uranium (E. Warren et al. 1981).

### *Homesteading and Agriculture*

The passage of the Homestead Act in 1862 and the Desert Land Act in 1877 were instrumental in the settlement of the Lower Colorado River area. The Homestead Act offered the opportunity for United States citizens to file a claim on 160 acres or less of land for $1.25 per acre. The Act stipulated that the claim be for purposes of actual settlement and cultivation, and the claimant was required to “improve”

the plot by building a dwelling and cultivating the land. After five years on the land, the original filer was entitled to the property, free and clear.

The Desert Land Act was similar to the Homestead Act in that it was enacted to encourage and promote economic development of the desert lands of the Western states. This act also required the filer to irrigate and cultivate the land within three years. A married couple could pay $1.25 per acre for a maximum of 640 acres whereas a single man would receive half the land but pay the same price. Proof of irrigation was required for the filer to obtain title. This act was later revised to offer a maximum of 320 acres with proof of irrigation required within four years.

The agriculture in the Palo Verde Valley was made possible by the construction of canals and pipelines as well as the securing of water appropriations. The first irrigation project was completed in 1883, after the death of Thomas Blythe who made the first appropriation (E. Warren et al. 1981). The valley was subject to flooding until after the completion of Boulder Dam in the 1930s.

***City of Blythe***

Thomas Blythe, an Englishman, arrived in the area in 1875 in search of gold and real estate development possibilities. Having been successful in real estate investments in San Francisco, Blythe came to the Lower Colorado River area and established water rights along the Colorado River. His efforts in irrigation and cultivation of the land were successful; 40,000 acres were irrigated as a result of his diverting water from the Colorado River (Blythe Chamber of Commerce 2011). Further development of the desert lands into fertile agricultural fields continued. The city was incorporated in 1916.

***World War II Desert Training Center/California-Arizona Maneuver Area***

A comprehensive historic context for the Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA) was published by Bischoff in 2000. The following is a very brief summary of Bischoff's (2000) report.

Soon after the United States entered World War II, General George S. Patton, Jr. was assigned the task of developing a training center to prepare Army troops for combat against German forces in North Africa. Patton identified an area in the California desert that offered realistic terrain and combat conditions to train the troops. The lack of water, extreme heat and difficult terrain as well as the remote location would assist preparing troops for mobilization and combat tactics. Ultimately, training missions were both ground and air; all manner of equipment and battle strategies were tested and perfected there (Bischoff 2000).

Patton established base operations headquarters at Camp Young, near Indio, and began training troops in April 1942. The Desert Training Center (DTC) facility extended from Desert Center in California to the Colorado River, as far north as Searchlight, Nevada and as far south as Yuma, Arizona. To accommodate the massive number of troops brought to the region, several desert airfields were taken over by the Army in 1942, including the airfield that was to become Blythe Army Air Base (BAAB). The name of the DTC was changed to the California-Arizona Maneuver Area (C-AMA) in October 1943, and the mission of the C-AMA was expanded to include simulation of large-scale operations and logistics beyond exclusively desert warfare tactics.

The DTC/C-AMA consisted of 11 major camps, of which seven were in California and four were in Arizona. The largest camps, Camp Iron Mountain, Camp Granite, and Camp Coxcomb, were north of Desert Center. All of the facilities were connected by railroads and major roads (Vredenburgh et al. 1981).

The DTC/C-AMA was where actual battle simulation was first used. The training offered in surviving the elements, tactical mobility and mastering ordinance and engagement provided unparalleled experience for troops and commanding officers. In April 1944, the facilities began evacuations and closing, eventually being turned back to the U.S. Department of the Interior and private landowners (Bischoff 2000).

***Blythe Army Air Base***

The proposed Project is adjacent to and north of the BAAB that, beginning in 1942, supported the military training missions associated with the DTC/C-AMA and later provided aerial bombardment training between 1942 and 1944. As a cultural resource, BAAB was documented in 2010 as 33-018837 and evaluated for the NRHP (Mitchell 2010a). This report provides a brief summary based on Mitchell (2010a, 2010b) and Wilson (2008; personal communication 2011).

Under the Civil Aeronautics Act of 1938, the Civil Aeronautics Administration was charged with developing civilian airfields throughout California that could be used for defense. BAAB had humble beginnings in 1940 as a private, unpaved airstrip, originally known as Intermediate Flying Field Site 21. In addition, Site 21 was intended for emergency landings for flights between Los Angeles and Phoenix. The following year (1941) the Works Progress Administration provided funds to upgrade the airfield to two paved runways as part of the National Defense Program, with Riverside County sponsoring the project and maintaining the airfield.

In February 1942, General Patton was tasked to identify a location suitable for training troops in desert warfare as preparation for deployment to North Africa. The selected location became the DTC/C-AMA (see 4.3.5World War II Desert Training Center/California-Arizona Maneuver Area discussion below). Construction was planned for DTC airfields at Thermal, Desert Center, Rice, and Shaver's Summit (now Chiriaco Summit). Because construction for the Site 21 airfield outside Blythe was already underway, it was incorporated into General Patton's DTC/C-AMA operation and used immediately for air support until the four new airfields became operational.

On April 7, 1942, approval was given for Site 21 to become BAAB, and improvements were begun in preparation for the arrival of the 46th Bombardment Group, whose initial mission was to provide medium bomber crews in support of Patton's rigorous desert warfare training. This group was joined by the 3rd Observation Squadron to perform observation missions in support of the Army ground forces on maneuvers at the DTC. For five months, General Patton oversaw the operations of the DTC/C-AMA, including BAAB. In September 1942, General Henry "Hap" Arnold and Lt. Col. Richard Lee took over command of the base from General Patton; by the end of that year the base population was 800 officers and 5,400 enlisted men (Wilson 2008).

Construction continued on the base throughout 1942; by December a deep water well, a small hanger, an engineering building, the base theater, four warehouses and 60 barracks had been completed, and four runways with aprons had been paved and were in use. However, by the end of 1942, DTC airfields were operational at Thermal, Rice and Desert Center and support from BAAB was no longer needed. At that point, BAAB was relieved of its DTC air support role and changed to heavy bomber training under the 2nd Air Force. The 34th Bombardment Group was assigned to BAAB; its mission was training in B-17 Flying Fortress and B-24 Liberator aircraft. In total, BAAB's direct association with the DTC/C- AMA lasted eight

months, from April 1942 to the end of the same year, and its association with General Patton lasted only five months.

In 1943, the base hospital, an officer's club, and the pool were opened for use. Also, a mess hall, a base chapel, a barber shop and additional hangers were completed. Numerous bombardment groups trained at the base for the next two years. Included in the troops assigned to the base for short periods were the Women's Army Auxiliary Corps and the 99th Fighter Squadron, also known as the Tuskegee Airmen.

By March 1944, the training mission at BAAB began to gear down. Most of the troops had completed training and were deployed to new assignments; no new crews were being assigned to BAAB for training. The DTC was closed in April 1944; BAAB became an alternative landing site for March Field in Riverside. BAAB remained staffed to provide emergency landing for airplanes unable to land at their designated home fields due to weather. By October 1945, BAAB was downgraded to an airfield, being closed and surplus government property the following year. It continued to be used for various training purposes until 1948 when the government transferred the property to the County of Riverside, which currently operates a portion of the property as the Blythe Airport. Farming on the airfield property during the 1970s and 1980s destroyed most of the original buildings and features.

## 3.6.3 Cultural Resources Inventory

### Cultural Resources Study Area

The study area for direct effects, or the Project's physical APE, to cultural resources is defined as all areas that would be subject to ground-disturbing activity associated with the development of the Project. The Project's APE includes the approximately 3,310 acres of private land, as well as 395 acres on BLM lands within the Project boundary; however, permanent and temporary ground disturbing activities associated with the Project footprint would occur on approximately 2,933 acres on private lands and 103 acres on BLM lands.

Indirect effects may occur from construction, operation, maintenance, and decommissioning of the Project. These effects can include visible, auditory, or atmospheric changes that impact the setting of the Project. The indirect effects area includes a 1-mile radius around the Project site.

### Definitions of Cultural Resources

A cultural resource is defined as any object or specific location of past human activity, occupation, or use identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, built environment, and TCRs.

**Archaeological resources** include both historic-era and prehistoric remains of past human activity. Historic-era resources can consist of structural remnants (such as cement foundations), historic-era objects (such as bottles and cans), and sites (such as refuse deposits or scatters). Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails.

**Built environment resources** consist of standing historic era buildings and structures, the latter of which include canals, roads and trails, bridges, ditches, and cemeteries.

Pursuant to CEQA Guidelines Section 5064.5, **historical resource** is a term used to define a prehistoric or historic-aged resource that is recommended eligible for, determined eligible for, or listed on the CRHR. Any resource that is determined eligible or listed on the NRHP is automatically eligible for listing on the CRHR and is considered a significant resource for the purpose of this analysis.

Additionally, a **unique archaeological resource**, as defined above in Section 3.6.1, Regulatory Framework, is also considered a significant resource for the purpose of this analysis.

Within the State of California there are provisions in CEQA, its Guidelines, and other provisions of the California Public Resources Code for the protection and preservation of significant cultural resources (i.e., "historical resources" and "unique archaeological resources"). The CEQA Guidelines provide three ways in which a resource can be a "historical resource," and thus a cultural resource meriting analysis: (1) the resource is listed on the CRHR; (2) the resource is included in a local register of historical resources (pursuant to Section 5020.1(k) of the California Public Resources Code), or identified as significant in an historical resources survey (meeting the criteria in Section 5024.1(g) of the California Public Resources Code); or (3) the lead agency determines the resource is "historically significant" by assessing CRHR listing guidelines that parallel the federal criteria (14 CCR 15064.5[a][1]-[3]). To qualify as a historical resource under (1) or (3), the resource must also retain the integrity of its physical identity that existed during its period of significance. Integrity is evaluated with regard to retention of location, design, setting, materials, workmanship, feeling, and association (14 CCR 4852[c]). Finally, under California law, Native American human remains and associated grave goods are granted special consideration.

Mitigation of cultural resources that are found to be ineligible for CRHR listing is not required (Title 36 CFR Section 800 and 14 CCR 15064.5[c][4)]).

## Records Searches

### Methodology

A records search at the Eastern Information Center (EIC) was conducted by EIC staff on May 19, 2023, for the Project APE and a surrounding one-mile radius.

### Previous Studies

The EIC records search identified 61 previous cultural resources studies that have been performed within 1-mile of the Project APE. Of the 61 previous studies, 28 cover a portion of the APE (refer to Table 1 in Appendix J for a list of previous studies). Additionally, eight studies not yet on file with the EIC have been added; six studies cover adjacent solar projects on BLM lands located outside of the Project APE and two studies cover the Project APE. These two studies include an inventory report prepared by Power Engineers, Inc. for the Palo Verde Mesa Solar Project (Appendix A of Appendix J) which covers the entire APE located on privately owned lands, and an EIR prepared for Palo Verde Mesa Solar Project (SCH No.2012081026) (County 2017) that was approved by the County in August 2017. Based on the previous studies, the entire APE located on privately owned lands has been studied.

## Previously Identified Resources

### *Cultural Resources within the Project APE (Privately Owned Lands)*

The EIC records search identified a total of 26 cultural resources located within the APE located on privately owned lands consisting of five prehistoric sites (one lithic quarry, one lithic scatter, two ceramic scatters, and one lithic and ceramic scatter), two historic period sites (two trash scatters), three multicomponent sites (three trash scatter and ceramic and lithic scatters), 13 prehistoric isolates, two historic period isolates, and one built environment resource. All resources located on privately owned lands within the Project APE have been previously evaluated with County review and concurrence. Of the 26 cultural resources, four, P-33-002846, P-33-020946, P-33-020948, and P-33-020949 are recommended eligible for the California Register of Historical Resources (CRHR).

**Table 3.6-1. Previously Recorded Cultural Resources within the Project APE (Privately Owned Lands)**

| Primary No./ Temporary No. | Trinomial | Age | Description | CRHR Eligibility Status |
|---|---|---|---|---|
| P-33-002846 | CA-RIV-2846 | Prehistoric | Large Lithic Quarry | Eligible |
| P-33-019388 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-019613 | - | Historic | Isolate: Cans | Not Eligible |
| P-33-020929 | - | Prehistoric | Isolate: Flake and tested Cobble | Not Eligible |
| P-33-020930 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-020931 | - | Prehistoric | Isolate: Ceramic Sherd (Grayware) | Not Eligible |
| P-33-020932 | - | Historic | Isolate: .50-Caliber Casing | Not Eligible |
| P-33-020933 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-020934 | - | Prehistoric | Isolate: Flakes | Not Eligible |
| P-33-020935 | - | Prehistoric | Isolate: Tested Cobble and Flake | Not Eligible |
| P-33-020936 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-020937 | - | Prehistoric | Isolate: Core and Scraper | Not Eligible |
| P-33-020938 | - | Prehistoric | Isolate: Core and Biface Scraper Tool | Not Eligible |
| P-33-020939 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-020940 | - | Prehistoric | Isolate: Flake | Not Eligible |
| P-33-020941 | - | Prehistoric | Isolate: Scraper Tool | Not Eligible |
| P-33-020942 | CA-RIV-10833 | Historic | Trash Scatter | Not Eligible |
| P-33-020943 | CA-RIV-10855 | Historic | Trash Scatter | Not Eligible |
| P-33-020945 | CA-RIV-10857 | Multicomponent | Trash Scatter/ Prehistoric Lithic and Ceramic Scatter | Not Eligible |
| P-33-020946 | CA-RIV-10858 | Multicomponent | Trash Scatter/ Prehistoric Lithic and Ceramic Scatter | Eligible |
| P-33-020947 | CA-RIV-10859 | Multicomponent | Trash Scatter/ Prehistoric Lithic and Ceramic Scatter | Not Eligible |
| P-33-020948 | CA-RIV-10860 | Prehistoric | Ceramic and Lithic Scatter | Eligible |
| P-33-020949 | CA-RIV-10861 | Prehistoric | Ceramic Scatter | Eligible |
| P-33-020950 | CA-RIV-10862 | Prehistoric | Ceramic Scatter | Not Eligible |
| P-33-020951 | CA-RIV-10863 | Prehistoric | Lithic Scatter | Not Eligible |

**Table 3.6-1. Previously Recorded Cultural Resources within the Project APE (Privately Owned Lands)**

| Primary No./ Temporary No. | Trinomial | Age | Description | CRHR Eligibility Status |
|---|---|---|---|---|
| P-33-014083 | - | Historic | Parker-Headgate Rock-Blythe 161 kV Transmission Line | Not Eligible |

***Field Survey***

The cultural resources survey for the Approved Project was conducted between January 24 and February 2, 2012, by Power Engineers, Inc (Rudolph, J., G. Austerman, and J. Marty. 2013). During the surveys, archaeologists walked parallel transects, using 15- meter (50-foot) intervals, to identify archaeological and architectural resources within privately owned lands within the Project APE (Appendix A of Appendix J).

The cultural resource supplemental field survey conducted by Dudek took place between September 4 and September 5, 2024, and April 30, 2025. During the supplemental field survey, the survey crew was accompanied by a tribal participant from the Agua Caliente Band of Cahuilla Indians, Cahuilla Band of Indians, and Colorado River Indian Tribes. The crew revisited cultural resources previously surveyed by Power Engineers, Inc., within the private lands within the Project APE and relocated artifact concentrations, features, and landforms as identified by Power Engineers, Inc. in the 2012 survey phase. The sites were then subjected to close-interval surface survey, with less than 5-meter intervals, and pin-flagging of artifacts to confirm the originally mapped items and site boundaries. Within each transect, crews examined the ground surface for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, post holes, foundations), and historic artifacts (e.g., metal, glass, ceramics, building materials). Ground disturbances such as burrows, cut banks, and drainages were also visually inspected for exposed subsurface materials.

The pedestrian survey attempted to revisit 25 archaeological resources consisting of 10 sites and 15 isolates. Ten archaeological resources were revisited during the supplemental survey to confirm if conditions have changed since the 2012 pedestrian survey conducted by Power Engineers, Inc. Eleven out of the 15 isolates were revisited during the supplemental survey.

P-33-014083 is a previously recorded transmission line located within a small corner of the privately owned lands within the APE and is considered a built environment resource. The transmission line was constructed in the 1940s and is still in use today. Power Engineers, Inc. recommended P-33-014083 not eligible for listing on the NRHP or the CRHR (Appendix A of Appendix J).

The built environment resource was not revisited during the survey. Isolated finds are generally considered to be not eligible for the CRHR. No significant impacts will occur to the isolated finds as a result of the Project; therefore, the isolates were not revisited during the adequacy check.

<u>Archaeological Sites</u>

P-33-002846 consists of an extension of this resource that has been documented as intersecting the APE. This prehistoric site was originally recorded in 1984 by the BLM as a very large quarry activity site covering over 430 acres and part of a very large complex of sites on similar terraces in the area (Reed 1984a, 1984 b). The BLM noted that unauthorized rock collecting activity destroyed much of the integrity and

recommended the site not eligible for listing in the NRHP and the SHPO agreed with the recommendation (Reed 1984a, 1984b). The site was revisited by the BLM in 1988, and three cleared circles were noted. Testing also occurred within sample areas of the site. The test units indicated a lack of subsurface deposits, and the BLM recommended that the site lacked sufficient integrity to meet the criteria for NRHP listing (Mitchell 1988). USDA- Natural Resources Conservation Services revisited the site in 2000 and 2001 and noted that a dirt road bisects the area, and rocks were collected (Spencer et al. 2000). AECOM revisited the site in 2009 and 2010 and recommended the site eligible for listing in the NRHP due to the density of artifacts and the potential for containing temporally diagnostic features. The BLM concurred with AECOM's recommendation and determined the site eligible for listing in the NRHP in a Memorandum of Agreement for the McCoy Solar, LLC, right-of-way grant (BLM, McCoy Solar, LLC, SHPO, ACHPR, 2012). Resources determined eligible for listing in the NRHP are automatically eligible for listing in the CRHR. As such, site P-33-002846 is eligible for listing in the CRHR and is considered a historical resource under CEQA. Power Engineers, Inc. conducted a survey in 2012 which extended the southern site boundary by 350 m x 120 m for a total of 8.3 acres to include five small pebble terraces including tested cobbles or core fragments with flakes. These artifact areas were labeled as Segregated Reduction Loci (SRL), and the southern extension of the site included 32 SRL features, four flaked stone tools, nine tested cobbles, 27 cores, and 390 flakes. The site was noted to be in poor condition from vehicular and agricultural activities and consistent with previous site findings of the site having been recommended not eligible for listing in the NRHP (Reed 1984; Mitchell 1988). Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Multiple evaluations and assessments of P-33-002846 have been conducted resulting in various recommendations of the resource. While Power Engineers, Inc. recommended the updated southern section of the site located within the privately owned lands within the Project APE as not eligible for inclusion in the CRHR (Appendix A of Appendix J), the expanded component located within the privately owned lands within the Project APE is likely non-contributing to the overall site's eligibility to the NRHP.

Dudek revisited site P-33-002846 within the privately owned lands within the Project APE during the recent survey and noted the site condition was consistent with previous recordation. The site was observed to be in poor condition as grading or brush clearing was evident as small rock push piles were noted within the site. The site boundary was confined to the mesa area and did not appear to extend south into the alluvial areas. Dudek did not visit any features located outside of the Project APE.

**P-33-020942** was recorded by Power Engineers, Inc. in 2012 and consists of a large scatter of structural debris and a few domestic artifacts measuring 180 m x 175 m, scattered across several acres in an agricultural field and is likely a secondary deposit or dump site. The site was noted to be located north of a Blythe Army Air Base (BAAB) utility building and the agricultural field was recently disked. In addition, several concentrations of debris consisting of large chunks of concrete rubble, clay sewer pipe fragments, brick, and additional construction/building fragments were observed to be in piles, likely the result of multiple dumping episodes. Domestic artifacts included two sanitary cans, ten can fragments, five cobalt glass fragments, two bottles, and over 50 bottle fragments. The site was noted to be in poor condition from the recent disking and from the pushing of debris into piles. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020942 and noted the site condition was consistent with previous recordation, with the addition of one secondary cryptocrystalline silicate (CCS) flake within the site boundary. P-33-020942 has been revised to be noted as a multicomponent site. The site was observed to be in poor condition as

the loci were observed to be more dispersed than originally recorded but were still recognizable. Disturbances also included evidence of off-road activity, vegetation, and bioturbation throughout the site.

**P-33-020943** was recorded by Power Engineers, Inc. in 2012 and consists of a small historic can and glass scatter measuring 15 m x 30 m, located in an agricultural field that had been recently disked. The cans consisted primarily of sanitary cans, and four were strung on a loop of bailing wire. This method cans stringed together were used by sheepherders to move their flocks; the cans were often filled with rocks to make noise and were referred to as a "Shepperd's Bell". The site was noted to be in poor condition from the recent disking and seasonal flooding, and that it was possible some of the artifacts represent a secondary deposit as refuse dumping was common in the area. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020943 during the survey and noted the site condition was consistent with previous recordation. No additional cultural material was observed. The site was observed to be in poor condition and disturbances also included vegetation and bioturbation throughout the site.

**P-33-020945** was recorded by Power Engineers, Inc. in 2012 and consists of a multicomponent site which includes a historic trash scatter and prehistoric lithic and ceramic scatter measuring 60 m x 88 m, located in a recently disked agricultural field. The site is contained in two concentrations; Locus A which consists of primarily historic components, and Locus B consisting of prehistoric lithics and ceramics (Rudolph et al. 2013). Locus A measures 40 m x 40 m and contains both prehistoric and historic artifacts consisting of nine grayware sherds, 12 flakes, a tested cobble, and a core along with historic domestic refuse consisting of two whiteware fragments, a crockery rim fragment, a mother of pearl button, bone fragments exhibiting cut marks, three terra cotta brick fragments, and glass fragments. Locus B measures 20 m x 20 m and contains 14 grayware sherds, six flakes, and two tested cobbles. The historic artifacts consist of domestic debris and the prehistoric artifacts may represent lithic core reduction activity (Rudolph et al. 2013). The site was noted to be in poor condition as the area was subjected to agricultural and possibly military training activities from the past 70 years and was recently disked. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020945 during the survey and noted the site condition was consistent with previous recordation**.** No additional cultural material was observed. The site was observed to be in poor condition, a majority of the site was covered in vegetation, and bioturbation was also noted.

**P-33-020946** was recorded by Power Engineers, Inc. in 2012 and consists of a multicomponent site which includes a concentration of fire affected rock (FAR), ceramic sherds, and flakes, and the historic component consists of glass fragments, cans, and metal debris, measuring 70 m x 60 m, located in a recently disked agricultural field (Rudolph et al. 2013). The prehistoric artifacts are concentrated within the center of the site; the concentration of FAR consisting of over 20 cobbles measures 5 m x 10 m, and the historic material are located along the site periphery. The concentration of FAR with the ceramic and lithic artifacts suggests the site may represent a short-term camp (Rudolph et al. 2013). Since the site is located in an agricultural field located close to 9th Avenue, the historic artifacts are likely the result of residential or industrial refuse dumping. The site was noted to be in poor condition from the agricultural disking, however, since the artifacts indicate the site represents lithic core reduction and there is a potential for subsurface deposit of artifacts, and the presence of FAR concentration may indicate a

subsurface feature exists, Power Engineers, Inc. recommended the site eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020946 during the survey to be more dispersed than originally recorded as the ceramic scatter were concentrated on the southern and western edges of central FAR feature. No additional cultural material was observed. The site was observed to be in poor condition, a majority of the site was covered in vegetation, and bioturbation was also noted.

**P-33-020947** was recorded by Power Engineers, Inc. in 2012 and consists of a multicomponent site which includes the remains of a demolished pumphouse, railroad ties, construction-related debris, domestic refuse, and a small concentration of prehistoric lithic material measuring 27 m x 66 m, along a dirt road between agricultural fields. The remnants of the pump house consist of five rectangular concrete footings, and the domestic refuse include glass fragments, and domestic material and refuse. The construction-related debris include red brick fragments, sheet rock, roofing tile, nails, and more than 100 redwood tie remnants. The prehistoric artifacts consist of 10 flakes, cores, and tested cobbles, located in the southern section of the site. The site was noted to be in poor condition due to the structural decay of the pump house, the refuse appears to be the result of numerous dumping episodes, and because the site contains modern refuse such as plastic bottles and PVC pipe. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020947 during the survey and noted the site condition was consistent with previous recordation**.** The site was observed to be in poor condition. No additional cultural material was observed. Disturbances included evidence of off-road activity, utility poles, vegetation, and bioturbation throughout the site.

**P-33-020948** was recorded by Power Engineers, Inc. in 2012 and consists of a prehistoric lithic and ceramic scatter measuring 12 m x 40 m located in an agricultural field that was recently disked and located near a pebble terrace at the base of the McCoy Mountains. A total of 23 ceramic body sherds and one rim sherd were observed. The temper consists of coarse sand, and it is possible that all sherds represent one vessel. The lithic material includes one primary flake, one secondary flake, two tertiary flakes, and one exhausted core. The site was noted to be in poor condition as the area has been utilized as an agricultural field. Due to the potential for an intact subsurface deposit, Power Engineers, Inc. recommended the site eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020948 during the survey and noted the site condition was consistent with previous recordation. No additional cultural material was observed. A majority of the site was covered in vegetation, and bioturbation was noted throughout the site.

**P-33-020949** was recorded by Power Engineers, Inc. in 2012 and consists of a prehistoric ceramic scatter measuring 30 m x 20 m, located in an agricultural field that was recently disked and located closer to pebble terraces and McCoy Wash. Two types of redware sherds were identified; three sherds have a smooth interior surface with a coarse-textured exterior surface with a fine sand with quartz inclusions temper and 20 sherds consisted of a coarse-tempered redware with coarse sandy temper. The lithic material includes one primary flake, one secondary flake, two tertiary flakes, and one exhausted core. The site was noted to be in poor condition as the area has been utilized for agricultural operations and possibly for military training activities for the past 70 years. Therefore, due to the potential for an intact subsurface

deposit, Power Engineers, Inc. recommended the site eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020949 during the survey and noted the site condition was consistent with previous recordation. No additional cultural material was observed. The site was observed to be in poor condition. Vegetation and bioturbation were noted throughout the site.

**P-33-020950** was recorded by Power Engineers, Inc. in 2012 and consists of a prehistoric ceramic scatter measuring 5 m x 5 m, located in McCoy Wash and within the tracks of a rough two-track road. A total of 12 buff-colored body sherds were observed with a smooth burnished exterior surface with a fine-grained sandy temper. The site was noted to be in poor condition with impacts from erosion and off-road vehicles, and since the site integrity has been disturbed from alluvial and vehicle activity. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020950 during the survey and noted the site condition was consistent with previous recordation, with the addition of two buff-colored body ceramic sherds, updating the total number of sherds to 14. The site was observed to be in poor condition as evidence of off-roading were observed throughout the site.

**P-33-020951** was recorded by Power Engineers, Inc. in 2012 and consists of a prehistoric lithic scatter measuring 25 m x 10 m, located on a slope overlooking McCoy Wash. The scatter consists of 22 flakes, two core fragments, and a tested cobble. The site may represent a lithic reduction site associated with a travel corridor between quarries. It was noted that there is a loss of integrity and little potential for subsurface deposit of artifacts from the degree of surface disturbance from alluvial, previous long-term agricultural activity, and vehicular activity. Power Engineers, Inc. recommended the site not eligible for inclusion in the CRHR (Appendix A of Appendix J).

Dudek revisited P-33-020951 during the survey and noted the site condition was consistent with previous recordation. The site was observed to be in poor condition with evidence of off-roading observed throughout the site, and it was noted that sediments were quite sandy.

***Cultural Resources within the APE (BLM Lands)***

Cultural resources located within the APE on BLM lands will be addressed in a separate report that is being prepared for the Project and will be reviewed by multiple parties. The process is explained below.

The BLM will require the development of a BLM Class I records search and literature review of existing cultural resources information to be used to develop a research design and work plan for all cultural resources studies for the proposed project and an ethnographic literature review which will be reviewed by the SHPO, and Tribes and Tribal Organizations for comment. A Class III inventory, geoarchaeological study, and indirect effects study will be prepared and require peer review.

The BLM will consult with the Tribes and Tribal Organization to identify any resources that have cultural or religious significance to the Tribes and Tribal Organizations. The BLM will determine if any of the cultural resources identified within the APE meets one or more of the NRHP eligibility criteria. Resources that meet one or more criteria shall be considered historic properties.

Where resources are identified that are evaluated as not eligible under Criteria A-C, and where their Criterion D values are unknown but will be avoided by project design or by implementing protection measures, the BLM will treat such resources as eligible for the NRHP under Criterion D without formal evaluation, for that project only, and their significant values will be avoided.

The BLM will submit the agency proposed determinations of eligibility to the project-specific consulting parties for review and comment and will concurrently request SHPO review and concurrence. The BLM shall make findings of effect and identify the type of adverse effect for each effected property and will submit the agency proposed findings of effect to the project-specific consulting parties for review and comment and will concurrently request SHPO review and concurrence.

Avoidance of historic properties is the preferred method to address adverse effects, and the BLM will require avoidance to the maximum extent practicable. The BLM will execute a project-specific memorandum of agreement. The BLM will identify all mitigation measures for historic properties that will be adversely affected by a specific project in an Historic Properties Treatment Plan.

A separate environmental review document (Environmental Assessment) under NEPA is being prepared for the Project for impacts on BLM lands (DOI-BLM-CA-D060-2025 -0010-EA). All resources identified on BLM land would either be avoided or mitigated through Conservation Management Actions (CMAs) included in Section 3.6.5 below.

## 3.6.4 Impact Analysis

### Methodology

This analysis relies on the Cultural Resources Supplemental Survey Memorandum prepared for the Project (Appendix J). Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

This SEIR organizes the criteria for determining significance according to the significance thresholds set forth in Riverside County's Environmental Assessment Checklist, which are derived from the State CEQA Guidelines.

State CEQA Guidelines, Appendix G, Section V addresses typical adverse changes in the significance of a historical resource and/or archaeological resource as defined under California Code of Regulations, Title 14, Chapter 3, Section 15064.5.

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations, Section 15064.5?

c) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to California Code of Regulations, Section 15064.5?

d) Disturb any human remains, including those interred outside of formal cemeteries?

Significance thresholds are set forth in the County's Environmental Assessment Checklist are derived from Section V of Appendix G to the State CEQA Guidelines (listed above), and state that the proposed project would have a significant impact on cultural resources if construction and/or operation of the project would:

a) Alter or destroy a historic site.

b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5.

c) Alter or destroy an archaeological site.

d) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5.

e) Disturb any human remains, including those interred outside of formal cemeteries.

Each potential impact was evaluated to determine if it would be significant and, if so, if feasible mitigation would reduce its impact to less than significant. There are three categories of measures designed to avoid, minimize, or mitigate Project impacts to cultural resources:

- Project-Specific Applicant Proposed Measures (APMs) related to cultural resources. The Applicant has committed to implementing APMs to avoid and minimize the effects of the Project on cultural resources for the entire Project on BLM-administered lands and private lands.

- DRECP CMAs would provide additional protection of cultural resources on BLM-administered lands. The Project's conformance with these potentially applicable cultural resource CMAs would be determined by BLM.

- Mitigation Measures (MMs) to supplement the APMs, where needed, to reduce significant or potentially significant impacts to the extent feasible under CEQA. The MMs specify further detail, such as performance standards and reporting requirements, to ensure mitigation will effectively avoid or substantially lessen significant or potentially significant impacts to the extent feasible, consistent with CEQA.

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
- 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

## Environmental Impacts

This section analyzes impacts to cultural resources identified within 3,310 acres of private land and 395 acres of BLM land that comprise the Project APE. This section also includes an examination of the

Project's cultural resources impacts per the County's Environmental Assessment Checklist identified above. Evaluations for NRHP eligibility and effect will be addressed in the cultural resources technical report in support of the NEPA process.

This analysis considers both direct and indirect impacts to cultural resources.

- **Direct impacts** to cultural resources are those associated with Project construction, operation, maintenance, and decommissioning. Construction usually entails surface and subsurface ground disturbance, and direct impacts to cultural resources may result from the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historical built-environment resources when those buildings or structures must be removed to make way for new buildings or structures or when the vibrations of construction impair the stability of historical buildings or structures nearby. New buildings or structures can have direct impacts on historical built-environment resources when the new buildings or structures are stylistically incompatible with their neighbors and the setting, or when the new buildings or structures produce a harmful effect to the materials or structural integrity of the historical built environment resources, such as emissions or vibrations.

- **Indirect impacts** to cultural resources are those that may result from increased erosion due to site clearance and preparation or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Similarly, historical built environment resources can suffer indirect impacts when Project construction creates potentially damaging noise and vibration, improved accessibility and vandalism, or greater weather exposure. The long-term presence of solar panels, transmission lines, or towers also has the potential to result in indirect visual impacts to significant cultural resources where setting is a key contributor to the property's importance.

Additionally, unknown and potentially significant buried resources could be inadvertently unearthed during ground-disturbing activities during construction and decommissioning. Destruction of potentially significant cultural resources could be a significant impact.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that eleven cultural resources were identified within the Project APE that have either been previously determined CRHR-eligible or remain unevaluated for CRHR-eligibility. Grading and earth-disturbing activities were determined to have the potential to impact cultural resources. The EIR determined that implementation of MM-CUL-1 through MM-CUL-5 would reduce impacts to less than significant.

***Threshold a: Would the project alter or destroy a historic site?***

**Project APE (Privately Owned Lands)**

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* As described above in Section 3.6.3, Cultural Resources Inventory, of the 10 archaeological sites that were identified within the APE, the following four are recommended eligible for the CRHR:

- P-33-002846, a prehistoric lithic quarry, has been treated as eligible for inclusion to the NRHP by the BLM.

- P-33-020946, a multi-component site containing historic refuse and prehistoric ceramic and lithic artifacts. The presence of fire-affected rock suggests a potential for subsurface deposit.

- P-33-020948, a prehistoric site containing ceramic and lithic artifacts. The site's proximity to pebble terraces at the base of the McCoy mountains and other lithic assay sites suggests a potential for subsurface deposit of artifacts that may provide important scientific data.

- P-33-020949, a prehistoric site containing ceramic artifacts. This site's proximity to pebble terraces at the base of the McCoy mountains and to prehistoric Native American trail systems suggests a potential for a subsurface deposit.

Additionally, P-33-014083 is a previously recorded transmission line located within a small corner of the Project APE and is considered a built environment resource. The transmission line was constructed in the 1940s and is still in use today. Power Engineers, Inc. recommended P-33-014083 not eligible for listing on the NRHP or the CRHR.

Consistent with the 2017 EIR for the Approved Project, Project design would avoid ground-disturbing activities at or within 100 feet of all the cultural resources in the Project APE that have either been previously recommended CRHR-eligible (i.e., qualify as a historical resource under CEQA) or remain unevaluated for CRHR-eligibility (i.e., may qualify as a historical resource under CEQA). Implementation of **MM-CUL-1** through **MM-CUL-9**, would reduce impacts to a level that is less than significant. Palo Verde Mesa Solar Project also identified a **less than significant impact with mitigation** incorporated. While the conclusions are the same, the mitigations have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

### Project APE (BLM Lands)

The portion of the Project APE associated with BLM administered lands will be evaluated in an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is currently under preparation with the BLM. Specifically, the portion of the APE associated with BLM administered land will be evaluated under a Class III Cultural Resources Inventory to be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments, including mitigation measures as required by the BLM, will be incorporated herein, once available.

***Threshold b: Would the project cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?***

***Project APE (Privately Owned Lands)***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* As described above in Section 3.6.3, Cultural Resources Inventory, four cultural resources, P-33-002846, P-33-020946, P-33-020948, and P-33-020949 are recommended eligible for the CRHR. Additionally, P-33-014083 is a previously recorded transmission line located within a small corner of the Project APE recommended not eligible for listing on the CRHR.

Additionally, as noted in the 2017 EIR, given the number of land patents indicated by the BLM General Land Office patent records review, the Project APE should be considered moderately sensitive for the

subsurface presence of historic-period archaeological resources associated with homesteading including stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Additionally, the Project is located approximately 0.50 miles from the BAAB Historic District and may have the potential for additional subsurface cultural resources associated with the district and its World War II period of significance between the years 1942-1943. These resources may be contributing archaeological resources for the BAAB that was a part of a larger regional historic landscape associated with World War II military training activities and facilities.

Consistent with the 2017 EIR for the Approved Project, Project design would avoid ground-disturbing activities at or within 100 feet of all cultural resources in the Project APE that have either been previously recommended CRHR-eligible (i.e., qualify as a historical resource under CEQA) or remain unevaluated for CRHR-eligibility (i.e., may qualify as a historical resource under CEQA). Implementation of **MM-CUL-1** through **MM-CUL-9** would reduce impacts to a level that is less than significant. Palo Verde Mesa Solar Project also identified a **less than significant impact with mitigation** incorporated. While the conclusions are the same, the mitigations have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

### Project APE (BLM Lands)

The portion of the Project APE associated with BLM administered lands will be evaluated in an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is currently under preparation with the BLM. Specifically, the portion of the APE associated with BLM administered land will be evaluated under a Class III Cultural Resources Inventory to be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments, including mitigation measures as required by the BLM, will be incorporated herein, once available.

***Threshold c: Would the project alter or destroy an archaeological site?***

### Project APE (Privately Owned Lands)

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* As described in Section 3.6.3 above, as well as the 2017 EIR for the Approved Project and confirmed in Appendix J, the cultural resources surveys resulted in the identification of four archaeological sites P-33-002846, P-33-020946, P-33-020948, and P-33-020949 which were previously recommended eligible for the CRHR and considered historical resources under CEQA. Project design would avoid ground-disturbing activities at or within 100 feet of all 10 of the cultural resources (including P-33-002846, P-33-020946, P-33-020948, and P-33-020949) in the Project APE that have either been previously determined or recommended CRHR-eligible (i.e., qualify as a historical resource under CEQA) or remain unevaluated for CRHR-eligibility (i.e., may qualify as a historical resource under CEQA). Implementation of **MM-CUL-1** through **MM-CUL-9** would reduce impacts to a level that is less than significant. Palo Verde Mesa Solar Project also identified a **less than significant impact with mitigation** incorporated. While the conclusions are the same, the mitigations have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

### Project APE (BLM Lands)

The portion of the Project APE associated with BLM administered lands will be evaluated in an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is

currently under preparation with the BLM. Specifically, the portion of the APE associated with BLM administered land will be evaluated under a Class III Cultural Resources Inventory to be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments, including mitigation measures as required by the BLM, will be incorporated herein, once available.

***Threshold d: Would the project cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?***

**Project APE (Privately Owned Lands)**

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* Of the ten archaeological sites identified by Power Engineer, Inc. during the 2012 survey located within the APE on privately owned lands and confirmed by Dudek in 2024, four sites (P-33-002846, P-33-020946, P-33-020948, and P-33-020949) are recommended eligible for the CRHR.

Additionally, as noted in the 2017 EIR, given the number of land patents indicated by the BLM General Land Office patent records review, the Project APE should be considered moderately sensitive for the subsurface presence of historic-period archaeological resources associated with homesteading including stone or concrete footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Additionally, the Project is located approximately 0.50 miles from the BAAB Historic District and may have the potential for additional subsurface cultural resources associated with the district and its World War II period of significance between the years 1942-1943. These resources may be contributing archaeological resources for the BAAB that was a part of a larger regional historic landscape associated with World War II military training activities and facilities.

No significant impacts would occur to the isolated finds as a result of the Project. As isolates, they do not have sufficient data potential or other attributes required to address CRHR Criteria and are not eligible for listing in the CRHR. Isolates are not considered potential "historical resources" under CEQA, and therefore are not significant under CEQA. As such, isolate resources do not require further evaluation.

All Project ground-disturbing activities have the potential to impact previously unidentified cultural resources. If any such resources are present in the Project APE and qualify as unique archaeological resources, any impacts to the resources resulting from the Project could be significant. However, implementation of **MM-CUL-1** through **MM-CUL-9** would reduce direct impacts to cultural resources to a level that is less than significant. Palo Verde Mesa Solar Project also identified a **less than significant impact with mitigation** incorporated. While the conclusions are the same, the mitigations have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

**Project APE (BLM Lands)**

The portion of the Project APE associated with BLM administered lands will be evaluated in an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is currently under preparation with the BLM. Specifically, the portion of the APE associated with BLM administered land will be evaluated under a Class III Cultural Resources Inventory to be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments, including mitigation measures as required by the BLM, will be incorporated herein, once available.

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

### Project APE (Privately Owned Lands and BLM Lands)

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* A review of the archaeological record searches and results of field surveys completed for the Approved Project in 2012, as well as for the Project in 2024, did not identify any human remains in the Project APE. However, previously unidentified human remains could be found and potentially impacted (directly or indirectly) during Project construction. If human remains or related resources are discovered, such resources shall be treated in accordance with state and local regulations and guidelines that govern the disclosure, recovery, relocation, and preservation of human remains (14 CCR 15064.5[e]). With incorporation of **MM-CUL-5**, any potential impacts on human remains would be less than significant. Palo Verde Mesa Solar Project also identified a **less than significant impact with mitigation** incorporated. While the conclusions are the same, the mitigation has been updated for the Proposed Project to reflect current County standard language and reflect feedback received during tribal consultation for the Proposed Project.

## Cumulative Impacts

**Geographic Scope**. Cultural cumulative impacts include the Project's impacts and those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario). These projects all involved or will involve grading or other excavation activities that have the potential to impact cultural resources. This geographic scope was selected because the archaeological and historical resources within this area are expected to be similar to those that occur on the Project APE due to their proximity and because similar environments, landforms, and hydrology would result in similar land use and, thus, site types.

**Cumulative Impacts**. As discussed in 3.6.4 above, potential construction impacts of the Project to known and unknown historical resources, unique archaeological resources, and human remains could contribute to this direct cumulative impact. The 2017 EIR found that direct impacts from past, present, and reasonably foreseeable projects in the geographic area of analysis could, when taken together in combination, create a cumulatively significant impact on historical resources. However, the Project's incremental impact would be limited to the Project APE. Implementation of **MM-CUL-1** through **MM-CUL-9** would reduce Project impacts to less than significant. These measures would also ensure that the historical information associated with discovery of any previously unknown significant finds is appropriately documented and made available to contribute to the understanding of historical research themes. The remaining, less-than-significant impacts are only potential, in that they arise only if unknown resources are discovered. The remaining impacts are therefore minor and would not contribute considerably to significant cumulative impacts.

Since the 2017 EIR, large scale solar and energy projects in the area have been developed or are approved for development including but not limited to Blythe Solar, McCoy Solar, Arlington Solar, Desert Quartzite Solar, Devers-Colorado River Transmission Line and Sapphire Solar. As noted in the 2017 EIR, addition to direct physical impacts, construction of the large utility-scale solar and energy projects proposed and developed throughout this region would result in substantial changes in the setting of the areas in which they are constructed, which would constitute an indirect cumulative impact to historical resources. For significant historical resources—including built environment, and archaeological—for which setting, feeling and association are aspects of integrity that are critical to conveying the historical significance of the resource, the construction of thousands of acres of industrial and solar facilities could adversely affect

the setting, feeling, or association of such resources, which would adversely alter those characteristics of such resources that convey their historical significance, thus constituting a substantial adverse change in their significance. There are many historical resources of this kind, such as prehistoric trails and rock art, within the Palo Verde Valley.

As Dudek found the 2024 site conditions to be consistent with previous recordation and concurred with the 2012 eligibility findings, the cumulative impacts analysis in the 2017 EIR is still relative. Such indirect impacts from past, present, and reasonably foreseeable projects in the geographic area of analysis would, when taken together in combination, create a cumulatively significant impact on historical resources. However, consistent with Palo Verde Mesa Solar Project, impacts to cultural resources would not be cumulatively considerable with the incorporation of mitigation. As mentioned, mitigation measures have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

## 3.6.5 Applicant Proposed Measures, Conservation and Management Actions, and Mitigation Measures

### Applicant Proposed Measures

The following APM is considered as part of the project description (see Chapter 2, Project Description) and would be incorporated into the design of the Project within the Project APE (privately owned lands).

**APM-CUL-1:** A cultural resources monitoring, and discovery plan will be prepared prior to construction of the Project. The plan will include a description of areas to be monitored during construction, a discovery plan that will address unanticipated cultural resources, and provisions for the education of construction workers, similar to the WEAP.

### CMA Mitigation Measure

The following list of DRECP CMAs related to cultural resources have been identified as potentially applicable to the Project on BLM-administered lands, and the Project's conformance with these potentially applicable cultural resource CMAs would be determined by BLM. The full text of each CMA is provided in the Project Plan of Development and the DRECP (BLM 2016).

| | |
|---|---|
| **LUPA-CUL-2** | Field Inventory |
| **LUPA-CUL-3** | Places of Traditional Cultural and Religious Importance |
| **LUPA-CUL-4** | Minimization of Impacts |
| **LUPA-CUL-7** | Landmarks of Cultural Significance |
| **LUPA-CUL-8** | Tribal Consultation |
| **LUPA-CUL-9** | Avoiding DRECP Desert Vegetation Types/Communities |
| **LUPA-CUL-11** | Desert Microphyll Woodland Vegetation Type/Communities |
| **LUPA-TRANS-CUL-1** | Applicant Funding |
| **LUPA-TRANS-CUL-2** | Requirement of Compensatory Mitigation Fee within LUPA Decision Area |
| **LUPA-TRANS-CUL-3** | Management Fee Rate |
| **LUPA-TRANS-CUL-4** | Cultural Resources Sensitivity |

| | |
|---|---|
| **LUPA-TRANS-CUL-5** | Sample Survey |
| **LUPA-TRANS-CUL-6** | Project Justification |
| **LUPA-TRANS-CUL- 7** | NHPA Section 106 |
| **DFA-VPL-CUL-1** | Applicant Costs |
| **DFA-VPL-CUL-2** | Compensatory Mitigation Within LUPA Decision Area |
| **DFA-VPL-CUL-3** | Management Fee Rate Through Section 106 |
| **DFA-VPL-CUL-4** | Cultural Resources Sensitivity |
| **DFA-VPL-CUL-5** | Sample Survey |
| **DFA-VPL-CUL-6** | Project Footprint |
| **DFA-VPL-CUL-7** | NHPA Section 106 |

## Mitigation Measures

The following MMs were developed to substantially lessen the potentially significant effects to cultural resources that could result in the event of an unanticipated discovery of cultural or archaeological resources or human remains within the Project APE (privately owned lands).

**MM-CUL-1** Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall be invited to attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be invited to be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site (on-site and off-site work associated with this project) including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. Activities will be documented in Tribal Monitoring Notes which will be required to be submitted to the County Archaeologist prior to grading final inspection. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.

**MM-CUL-2** The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the ~~Project archaeologist~~ applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the

appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

* A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other. ~~Tribal Cultural Resources are also considered cultural resources.~~

** If not already employed by the project developer, a County approved archaeologist ~~and a Native American Monitor from the consulting tribe(s)~~ shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary.

**MM-CUL-3** Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program (CRMP). A Cultural Resource Monitoring Plan shall be developed in consultation with the monitoring tribe(s) that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural, tribal cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval~~. If feasible, and as agreed upon by agency staff, a combined CRMP will be prepared covering work both on private and BLM lands. This will be intended to ensure consistency, where possible, in cultural resources management strategies.~~ Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.

**MM-CUL-4** Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources ~~Monitoring~~ Management Plan.

**MM-CUL-5** If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further

disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. There will be no photography of human remains or associated resources.

**MM-CUL-6** Temporary fencing shall be required for the protection of cultural site(s) P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33-020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951-during grading activities. Prior to commencement of grading or brushing, the project archaeologist shall confirm the site boundaries and determine an adequate buffer for protection of the site(s). The applicant shall direct the installation of fencing under the supervision of the project archaeologist and Native American Monitor. The fencing can be removed only after grading operations have been completed.

**MM-CUL-7** Prior to issuance of grading permits: the developer/ applicant shall provide evidence to the Riverside County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate an area chosen in collaboration with the consulting tribes, that will be used, if needed, for reburial of any artifacts that have been identified during grading and cannot be avoided. This area will be protected and not disturbed in the future. This is confidential information and the exact nature of this area will not be called out on the grading plans.

**MM-CUL-8** At the conclusion of all construction activities, the Project proponent and landowner shall record a deed restriction on the avoidance areas, P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33-020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951 (and the reburial location, if used) with the County to restrict development of these areas in the future. Deed restrictions shall not disclose the nature of the avoidance areas. A copy of the deed restriction(s) shall be submitted to the County planning staff as proof of compliance prior to the issuance of certificates of occupancy for the Project.

**MM-CUL-9** Prior to Grading Permit Final Inspection. In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and Human Remains) and Provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through the following methods.

Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, a Riverside County curation facility that meets State Resources

Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines.

Desert Training Center related resources- any artifacts related to Desert Training Activities shall be curated with the General Patton Memorial Museum.

Pre-contact resources-A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be included in the Phase IV Report. The details of any disposition of artifacts shall be documented in the Phase IV report.

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# 3.7 Energy

This section includes an analysis of the impacts on energy that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the Grace Solar Center project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions that influence energy, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts to energy.

Information contained in this section is based on publicly available data and reports from the California Energy Commission (CEC) and the U.S. Energy Information Administration (EIA).

## 3.7.1 Regulatory Framework

For more information on federal and state laws, regulations and policies, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

### Federal Laws, Regulations, and Policies

#### *Infrastructure Investment and Jobs Act of 2021*

The Infrastructure Investment and Jobs Act included $65 billion in funding to support the development and deployment of clean energy technologies and to construct thousands of miles of new transmission lines needed for the expansion of renewables and clean energy in order to speed the transition to a zero-carbon electricity sector.

#### *Federal Renewable Energy Mandates*

**Executive Order (EO) 13212** (May 18, 2001) mandated that "agencies act expediently and in a manner consistent with applicable laws to increase the production and transmission of energy in a safe and environmentally sound manner."

**EO 13783** (March 28, 2017) promoted "clean and safe development of our Nation's vast energy resources, while at the same time avoiding regulatory burdens that unnecessarily encumber energy production, constrain economic growth, and prevent job creation."

**EO 13807** (August 15, 2017) and **Secretary's Order 3355** (August 31, 2017) established policy to prioritize infrastructure projects and streamline the environmental review process.

**EO 14008** (January 27, 2021) established the goal to achieve a carbon pollution-free electricity sector no later than 2035.

### State Laws, Regulations, and Policies

#### *CEQA*

In accordance with the CEQA Guidelines and Appendix F, Energy Conservation, of the CEQA Guidelines, in order to ensure that energy implications are considered in project decisions, environmental impact reports must include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Appendix F of the CEQA Guidelines provides a list of energy-related topics that should be analyzed in an environmental impact report. In addition, while not described as significance thresholds for

determining the significance of impacts related to energy, Appendix F of the CEQA Guidelines provides the following topics that the lead agency may consider in the energy analysis in an environmental impact report, where topics are applicable or relevant to the project:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and,
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

***Renewable Energy Sources***

SB 1078 established the California RPS Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 set a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% had to come from renewables.

SB 350 (2015) expanded the RPS because it requires retail seller and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030, with interim goals of 40% by 2024 and 45% by 2027.

SB 100 (2018) accelerated and expanded the standards set forth in SB 350 by establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030 be secured from qualifying renewable energy sources. SB 100 also states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be accomplished through resource shuffling.

Consequently, utility energy generation from nonrenewable resources is expected to be reduced based on implementation of the 60% RPS in 2030. Therefore, any project's reliance on nonrenewable energy sources would also be reduced.

### *SB 1368*

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368 (Perata, Chapter 598, Statutes of 2006). The law limits long-term investments in baseload generation (minimum level of demand on an electrical grid over a span of time) by the state's utilities to those power plants that meet an emissions performance standard jointly established by CEC and CPUC.

CEC has designed regulations that:

- Establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities of 1,100 pounds carbon dioxide ($CO_2$) per megawatt-hour (MWh). This would encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This would facilitate public awareness of utility efforts to meet customer needs for energy over the long term while meeting the state's standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (Perata, Chapter 598, Statutes of 2006).

## Local Laws, Regulations, and Policies

### *Riverside County General Plan*

The County's General Plan includes policies to encourage development of renewable energy in the Land Use Element and Air Quality Element. The Land Use Element encourages the development of renewable energy resources and related infrastructure, including but not limited to, the development of solar power plants (County of Riverside 2021). The following policies are applicable to the Project.

- **Policy LU 17.1.** Permit and encourage solar energy systems as an accessory use to any residential, commercial, industrial, mining, agricultural or public use.
- **Policy LU 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.

The County's General Plan Air Quality Element includes policies to encourage energy efficiency and conservation of energy sources. The relevant policies associated with energy from the General Plan are provided below (County of Riverside 2018).

- **Policy AQ 5.2.** Adopt incentives and/or regulations to enact energy conservation requirements for private and public developments.
- **Policy AQ 5.3.** Update, when necessary, the County's Policy Manual for Energy Conservation to reflect revisions to the County Energy Conservation Program.

### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan (County of Riverside 2021) does not state any additional goals and policies related to energy.

## 3.7.2 Environmental Setting

### Electricity

According to the U.S. Energy Information Administration, California used approximately 6,851.9 trillion British thermal units (Btu) of electricity in 2022 (EIA 2024). By sector in 2022, transportation uses utilized 42.6% of the state's electricity and commercial uses utilized 17.4% of the state's electricity, followed by 17.6% for residential uses and 22.5% for industrial uses (EIA 2024). Electricity usage in California for different land uses varies substantially by the types of uses in a building, types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2024).

Southern California Edison (SCE) is the electricity provider for the region of the Project site. In 2022, SCE provided approximately 85,869 total GWh of electricity within its 50,000-square-mile service area (CEC 2024).

### Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,130.9 trillion Btu of natural gas in 2022 (EIA 2024). Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. In 2022, the Southern California Gas Company, which is the natural gas provider to the Project area, delivered approximately 5,000 million therms of natural gas to its service territory (CEC 2024). Natural gas is not anticipated to be required during Project construction, decommissioning, or operation activities and no impact is anticipated to natural gas resources. Therefore, natural gas is not discussed further in the analysis.

### Petroleum

According to the U.S. Energy Information Administration, California used approximately 628.1 million barrels of petroleum in 2022, with the majority (534 million barrels) used for the transportation sector (EIA 2024). The Project is a solar facility and would not increase demand for petroleum. Quantities of petroleum required for the Project would be de minimis.

## 3.7.3 Impact Analysis

The Project's potential impacts to energy consumption are evaluated in this section. This section includes a description of the methodology of the impact analysis and criteria for determining the significance of the Project's impacts and cumulative impacts.

### Methodology

All construction-, operation-, and decommissioning-related activities would involve use of energy-consuming equipment and processes. This analysis presents a primarily qualitative discussion of the Project's energy use for all phases and components, based on the quantitative analysis presented in Section 3.9, Greenhouse Gas Emissions. As set forth in the 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
- Increasing reliance on renewable energy sources

Lead agency actions that are consistent with these goals would not be likely to cause an energy-related impact. The energy impact analysis emphasizes avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy resources. It also considers whether a project would result in a potentially significant environmental impact due to inefficient, wasteful, and unnecessary consumption of energy. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Section VI of Appendix G to the State CEQA Guidelines addresses typical adverse effects due to energy consumption and includes the following questions to evaluate a project's impacts on energy resources. Would the project:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section VI of Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact on energy resources if the Project or any Project-related component would:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

## Environmental Impacts

This section includes an examination of the Project's energy impacts per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

**Summary of Previous Impact Analysis**

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that there would not be a wasteful, inefficient, or unnecessary use of energy during construction of the Project, and there would be a beneficial effect on energy resources during operation. Upon decommissioning, energy consumption would return to baseline conditions. Thus, there would be a less than significant impact on energy resources and no mitigation would be required.

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

Implementation of the Project would increase the demand for electricity, gasoline, and diesel consumption at the Project site during construction, operation, and decommissioning, which are evaluated below.

***Construction***

Electricity

*LESS THAN SIGNIFICANT.* Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be required for Project construction and decommissioning activities. Electricity would be provided by SCE via the Project's distribution line. Any

electricity used for such activities would be temporary, would be substantially less than that required for Project operation, and would therefore have a negligible contribution to the Project's overall energy consumption. Project construction would not result in wasteful, inefficient, or unnecessary consumption of electricity and impacts would be **less than significant** consistent with Palo Verde Mesa Solar Project.

Petroleum

*LESS THAN SIGNIFICANT.* Heavy-duty equipment associated with construction would rely on diesel fuel, as would vendor and haul trucks involved in delivery of materials to the Project site. Construction workers would travel to and from the Project site in passenger vehicles throughout the duration of construction. In addition, as discussed above, construction trailers and backup generators would likely use diesel generators to power lighting and electronic equipment.

Fuel consumption from construction equipment was estimated by converting the total $CO_2$ emissions from each construction phase to gallons using the conversion factors for $CO_2$ to gallons of gasoline or diesel[1]. Construction is estimated to occur in 28 months. The estimated diesel fuel usage from construction equipment, haul trucks, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles, is shown in Table 3.7-1.

**Table 3.7-1. Total Project Construction Petroleum Demand**

| Off-Road Equipment (diesel) | Haul Trucks (diesel) | Vendor Trucks (diesel) | Worker Vehicles (gasoline) |
|---|---|---|---|
| | | **Gallons** | |
| 1,108,737 | 187,410 | 364,445 | 927,376 |

**Source:** See Appendix G for outputs.

In summary, construction of the Project is conservatively anticipated to consume 927,376 gallons of gasoline from worker vehicles and 1,660,592 gallons of diesel for off-road equipment, haul trucks, vendor trucks, and on-site trucks. By comparison, in 2022 the County consumed approximately 981 million gallons of gasoline and 173 million gallons of diesel (CEC 2024). The Project's construction-related petroleum consumption would be short-term, and would only account for approximately 0.1% and 0.7% of the County's gasoline and diesel demand, respectively. Therefore, the Project would have a nominal effect on local and regional energy supplies during construction. As such, the Project would not substantially affect regional energy consumption during construction. and would not result in the inefficient, wasteful, or unnecessary consumption of petroleum. Impacts would be **less than significant**.

Per preliminary Project details, the solar facility is anticipated to operate for up to 40 years, after which the Applicant may choose to update site technology and recommission or decommission the site and remove the systems and their components. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, state, and County regulations in effect at that time.

It is anticipated that equipment and activities similar to Project construction would be required during decommissioning of the site. While similar equipment use and activities are anticipated, impacts related to energy use would be less than those during construction given that equipment and vehicles are expected to be cleaner and more fuel-efficient in the future. However, to provide a conservative analysis,

[1] The conversion factor for gasoline is 8.78 kilograms per metric ton $CO_2$ per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton $CO_2$ per gallon (The Climate Registry 2024).

it is assumed that decommissioning impacts are equal to construction impacts. Therefore, consistent with construction impacts, decommissioning would not result in wasteful, inefficient, or unnecessary consumption of energy and impacts would be **less than significant** consistent with Palo Verde Mesa Solar Project.

***Operational Use***

Electricity

*LESS THAN SIGNIFICANT.* Project operation would require electricity primarily for the O&M building and the BESS including, but not limited to, building heating and cooling, water heating, lighting, appliances, and electronics. The O&M facility and BESS were assumed to require approximately 46,750 MWh per year of electricity (Appendix G).

For comparison, in 2022, the nonresidential electricity demand was 8,720,016,764 kWh (8,720 GWh) for the County (CEC 2024). Compliance with California Title 24 building standards would further ensure that the energy demands would not be inefficient, wasteful, or unnecessary.

The Project's anticipated operational energy demand represents a minute fraction of SCE's annual electricity sales.

Furthermore, while Project operation would involve some electricity consumption, the Project would be a significant net producer of clean electricity. The Project is estimated to produce 1,565,391 MWh per year of renewable energy from the 500 MW solar system. Thus, Project operation would not result in wasteful, inefficient, or unnecessary energy consumption and impacts would be **less than significant** consistent with Palo Verde Mesa Solar Project.

Petroleum

*LESS THAN SIGNIFICANT.* During operations, the majority of fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site, onsite maintenance activities, including employee trips and use of diesel-powered pressure washers annually for panel washing, backup emergency generators, and may also include water deliveries.

The estimated diesel fuel usage from off-road equipment, emergency generators, and water haul trucks, as well as estimated gasoline fuel usage from worker vehicles during operation, is shown in Table 3.7-2[2].

**Table 3.7-2. Total Project Operational Petroleum Demand**

| Off-Road Equipment (diesel) | Emergency Generators (diesel) | Water Trucks (diesel) | Worker Vehicles (gasoline) | Total |
|---|---|---|---|---|
| | | Gallons | | |
| 152 | 175,025 | 5,523 | 7,195 | 187,895 |

**Source:** See Appendix G for outputs.

[2] Similar to construction, fuel consumption from worker and vendor trips and use of off-road equipment is estimated by converting the total $CO_2$ emissions from operation of the Project to gallons using the conversion factors for $CO_2$ to gallons of gasoline or diesel. Haul trucks for water deliveries and off-road equipment are assumed to be diesel, while worker vehicles are assumed to be gasoline.

As shown in Table 3.7-2, the annual petroleum consumption for the Project is estimated to be approximately 187,373 gallons per year. By comparison, California as a whole consumes approximately 23.1 billion gallons of petroleum per year, and in 2022 the County consumed approximately 981 million gallons of gasoline and 173 million gallons of diesel (CEC 2022). The Project's operational petroleum consumption would account for approximately 0.02% of the County's total petroleum demand, which would have a nominal effect on local and regional energy supplies. As such, Project operation would not result in wasteful, inefficient, or unnecessary consumption of petroleum and impacts would be **less than significant** consistent with Palo Verde Mesa Solar Project.

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

***Construction and Decommissioning***

*LESS THAN SIGNIFICANT.* During construction and decommissioning, the Project would utilize contractors that must demonstrate compliance with applicable regulations. Off-road equipment would be required to comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, EPA and NHTSA have adopted fuel-efficiency standards for medium- and heavy-duty trucks that will be phased in over time. The energy modeling for trucks does not consider specific fuel reductions from these regulations because they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards. In addition, construction equipment used would be consistent with the energy standards applicable to construction equipment, including surpassing idling fuel consumption limits and using contractors that comply with applicable CARB regulatory standards that affect energy efficiency. For example, off-road equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of 5 minutes per occurrence. Although these requirements are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction- and decommissioning-related energy. Thus, based on the information above, construction and decommissioning of the Project would comply with state or local plans for renewable energy or energy efficiency. Additionally, the proposed project includes implementation of **MM-AQ-1**, which would reduce idling time of heavy-duty trucks by either shutting them off when not in use or reducing the time of idling to no more than 3 minutes, thereby improving the 5-minute idling limit required by CARB regulations. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency during Project construction or decommissioning, and impacts would be **less than significant**. While the applicable energy standards have changed over time, Palo Verde Mesa Solar Project also determined that there would be no adverse impacts during construction and decommissioning.

***Operation***

*LESS THAN SIGNIFICANT.* The County's Climate Action Plan sets targets and strategies to reduce GHG emissions and associated climate change by supporting use of renewable energy within the County. The Project would directly support the County's Climate Action Plan by encouraging the use of clean energy to reduce Countywide GHG emission reductions. The Project's BESS would also support the storage of renewable energy as SCE increases its portfolio of renewable energy sources in support of SB 100's goal of carbon-free electricity by 2045. At a minimum, the Project would be subject to and would comply with the 2022 California Building Code Title 24 (24 CCR, Part 6), which establishes energy efficiency standards for residential and nonresidential buildings constructed in the State of California in order to reduce energy demand and consumption. Additionally, Title 24, Part 11, contains voluntary and mandatory energy

measures that are applicable to the Project under the CALGreen Code, including diversion of construction and demolition waste material, and periodic inspection of energy systems, among others. In accordance with Title 24, Part 11, mandatory compliance, the Project would decrease the consumption of electricity, natural gas, and petroleum. Because the Project would comply with Title 24, Part 6 and Part 11, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be **less than significant**. While the applicable energy standards have changed over time, Palo Verde Mesa Solar Project also determined that there would be no adverse impacts during operation.

### Cumulative Impacts

**Geographic Scope.** The geographic scope of the cumulative analysis for energy consumption would be all cumulative projects identified in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario. This geographic area was selected because all cumulative projects have the potential to temporarily or permanently utilize energy resources or have the potential to conflict with plans and policies related to increasing renewable energy and energy efficiency. The County General Plan EIR determined that the General Plan would contribute to a cumulatively substantial impact to energy resources by increasing demand (County of Riverside 2015).

**Cumulative Impacts.** As discussed under Threshold "a," the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during Project construction, operation or decommissioning. The Project would increase the use of renewable energy, thus reducing the use of fossil fuel for electrical generation by conventional power plants. A number of cumulative projects identified in Tables 3.1-1 and 3.1-2 are also renewable energy facilities. While construction activities associated with cumulative projects identified in Tables 3.1-1 and 3.1-2 would require the use of fossil fuels, it is assumed each project would initiate best management practices and other methods as part of project approval to reduce wasteful, inefficient, or unnecessary use of energy resources. Therefore, the Project would not contribute to a cumulatively significant impact related to renewable energy and energy efficiency consistent with Palo Verde Mesa Solar Project.

As discussed under Threshold "b," the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project would not contribute to a cumulatively significant impact related to the obstruction of a state or local plan for renewable energy or energy efficiency consistent with Palo Verde Mesa Solar Project.

## 3.7.4 Mitigation Measures

No mitigation would be required.

The proposed project includes implementation of **MM-AQ-1**, as a mitigation measure for air quality impacts, as described in Section 3.4. Compliance with **MM-AQ-1** would reduce idling time of heavy-duty trucks by either shutting them off when not in use or reducing the time of idling to no more than 3 minutes, thereby improving the 5-minute idling limit required by CARB regulations. However, impacts would be less than significant without mitigation because the Project would already be required to comply with CARB's anti-idling regulation.

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# 3.8 Geology and Soils

This section includes an analysis of the impacts to geology and soils resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions in and surrounding the Project area, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to geology and soils, and lists mitigation measures (MM) that would be incorporated into the Project to avoid and or substantially lessen to the extent feasible potentially significant impacts.

The information in this section is based on the geotechnical engineering report prepared by Terracon (2026), which is provided in Appendix B1, Transmission Line Geotechnical Engineering Report prepared by Terracon (2025), which is provided in Appendix B2, and BESS and Substation Geotechnical Report prepared by Terracon (2025), which is provided in Appendix B3.

## 3.8.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Federal Earthquake Hazards Reduction Act*

In 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes, through the establishment and maintenance of an effective earthquake hazards and reduction program. To accomplish this, the act established the National Earthquake Hazards Reduction Program. The agencies responsible for coordinating this program are the Federal Emergency Management Agency, the National Institute of Standards and Technology, the National Science Foundation, and the U.S. Geological Survey. In 1990, the National Earthquake Hazards Reduction Program was amended by the National Earthquake Hazards Reduction Program Act, which refined the description of the agency responsibilities, program goals, and objectives. The four goals of this act are (1) develop effective practices and policies for earthquake loss-reduction and accelerate their implementation, (2) improve techniques to reduce seismic vulnerability of facilities and systems, (3) improve seismic hazards identification and risk-assessment methods and their use, and (4) improve the understanding of earthquakes and their effects.

#### *International Building Code (IBC)*

Published by the International Code Council, the purpose of the IBC is to establish minimum structural requirements to provide a reasonable level of safety, public health, and general welfare, through structural strength, and safety to life and property from fire and other hazards attributed to the built environment. The provisions of the IBC apply to the construction, alteration, relocation, enlargement, replacement, repair, 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 International Code Council codes, including the International Energy Conservation Code, the International Existing Building Code, the International Fire Code, and the International Fuel Gas Code. The IBC is in use or adopted in all 50 states of the United States and is updated every 3 years to ensure that new construction methods and technologies are incorporated into existing codes. The IBC has replaced the Uniform Building Code as the basis for the California Building Code (CBC).

### *Clean Water Act*

The Clean Water Act (33 USC 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 United States. The Clean Water Act 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 Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source and non-point-source discharges of pollutants into waters of the United States. Discharges or construction activities that disturb 1 or more acres—including the Project—are regulated under the NPDES stormwater program and are required to obtain coverage under an NPDES Construction General Permit. The Construction General Permit establishes limits and other requirements, such as the implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would further specify best management practices and other measures designed to avoid or eliminate pollution discharges in waters of the United States. The NPDES program is a federal program that has been delegated to the State of California for implementation through the State Water Resources Control Board and the nine Regional Water Quality Control Boards. The State Water Resources Control Board and Regional Water Quality Control Boards have the responsibility of granting NPDES permits and setting waste discharge requirements for stormwater runoff from construction sites.

### *Institute of Electrical and Electronics Engineers (IEEE) 693*

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. IEEE 693 provides detailed test and analysis methods for each type of major equipment or component utilized 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. In addition, IEEE 693 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.

## State Laws, Regulations, and Policies

### *California Building Code*

The CBC is promulgated under Title 24, Parts 1 through 12of the California Code of Regulations (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 (County) Building Department is responsible for implementing the CBC for the Project, which would comply with applicable seismic design and construction criteria of the most recent CBC. The most recent version of the CBC, the 2022 CBC, became effective January 1, 2023, and is updated triennially.

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 F (very high seismic vulnerability and near a major fault). For SDCs D, E, and F, Chapter 18 of the CBC 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. Chapter 18 of the CBC also addresses 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*

Chapter 12, Section 1207, of the 2022 California Fire Code provides provisions related to the installation, operation, and maintenance of electrical energy storage systems. Subsection 1207.4.4, Seismic and Structural Design, states that "Stationary ESS [Electrical Energy Storage 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, California 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. The Project does not include any residences but does include 6 employees that would work in the Operations and Maintenance (O&M) building. 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. Jurisdictions 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 of 1990 (California Public Resources Code, Sections 2690–2699) was established 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 called the California Geological Survey) to delineate Seismic Hazard Zones or Zones of Required Investigation. Zones of Required Investigation, referred to as "Seismic Hazard Zones" in Title 14 California Code of Regulations 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 measures incorporated into the project design before development permits may be granted. A geotechnical engineering report has been prepared for the Project included in Appendix

B1, a geotechnical engineering report has been prepared for the Project on Bureau of Land Management (BLM)-administered land included in Appendix B2, and a geotechnical engineering report has been prepared for the BESS and Substation components of the Project included in Appendix B3. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by the California Geological Survey 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.

## Local Laws, Regulations, and Policies

### *Riverside County General Plan*

The Safety Element of the County's General Plan (County of Riverside 2021) addresses seismic hazards related to fault rupture and seismically induced liquefaction, landslides, and rockfalls, as well as soil instability hazards related to subsidence, expansive and collapsible soils, wind erosion, landslides, rockfalls, and debris flows. General plan policies applicable to the provided are as follows:

- **Policy S 1.1**. Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.
- **Policy 2.10.** Identify and request mitigation of on-site slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements, particularly during the entitlement or permitting process.
- **Policy 2.11.** Request grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, to ensure the adequate demonstration of a project's ability to mitigate the potential of slop and erosion hazards and loss of native vegetation.
- **Policy S 2.20.** Request buildings to be designed to resist wind loads as appropriate for their form and location.

### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan is an Area Plan within the General Plan (County of Riverside 2021). The Palo Verde Valley Area Plan contains policies regarding seismic and slope hazards. The following policy is applicable to the Project.

- **Policy PVVAP 15.1 and 16.2**. Protect life and property from seismic related incidents through adherence to the policies in the Seismic Hazards and Geologic Hazards section of the General Plan Safety Element.

### *Riverside County Ordinances*

Title 15 of the Riverside County Ordinances regulates buildings and construction by adopting reference to the CBC, in addition to County-specific amendments that are equal to or more stringent than the provisions of the CBC.

### *Riverside County Department of Environmental Health*

The County's Department of Environmental Health oversees on-site wastewater treatment system permits and projects, and reviews and approves septic system plans. To obtain a construction permit for the installation of a new septic system, a building permit is required from the local building and safety

agency. A Land Use Application (On-Site Wastewater Treatment System Construction Application) must be submitted, along with supporting documentation and fees, at the Downtown Riverside or Indio Office, depending on the location of the project. After submission and evaluation, additional information may be required. Supporting documentation includes the following:

- A percolation report, including three sets of detailed plans, signed by a Professional of Record registered with the Department of Environmental Health.
- A floor plan, drawn to scale, of the dwellings or structures that the septic system will service.
- Documentation of water service, such as a will-serve letter or water bill. If an existing water well will be used to supply potable water, a well evaluation may be required. If a new well will be constructed, a County Environmental Health Permit for construction, reconstruction, or destruction of the well is required throughout the County.

## 3.8.2 Environmental Setting

The Project site is located within the Palo Verde Mesa, which is part of the Mojave Desert Geomorphic Province, in Riverside County. This province is characterized by isolated mountain ranges separated by expansive desert plains (CGS 2002). The province has an enclosed interior drainage with numerous playas. Seismically, there are two important fault trends that orient most of the topography into a prominent northwest-southeast trend. The Mojave province is wedged in a sharp angle between the Garlock Fault (southern boundary of the Sierra Nevada Mountain range) and the San Andreas Fault, where it bends east from its northwest trend.

### Seismicity, Geology, and Soils

#### *Seismicity*

The Project site is located in Southern California, which is considered a seismically active area. The type and magnitude of seismic hazards affecting the site are dependent on a number of different factors that include the distance to the source of seismic activity, typically a Holocene-active fault[1], the intensity, durations of shaking, characteristics of the underlying materials, and the magnitude of the seismic event. The site is not located within an Alquist-Priolo Earthquake Fault Zone, as shown on the State Fault Hazard Maps (Appendices B1 and B2). Regional Holocene-active faults in the area include the Elsinore, San Jacinto, and San Andreas fault zones with the closest to the Project site being the San Andreas at approximately 34 miles west of the site (Appendix B1).

Ground shaking is the movement of the earth's surface as a result of seismic event (i.e., an earthquake). Ground motion produced by seismic waves emanates from slow or sudden slip on a fault. The degree of ground shaking felt at a given site depends on a number of factors including the distance from the earthquake source, the magnitude of the earthquake, the type of subsurface material on which the site is situated, and topography. Generally, ground shaking is less severe on bedrock than on loose alluvium or fill materials. Ground shaking can produce significant damage to structures not equipped to withstand such ground motion.

Additionally, the preliminary geotechnical reports (Appendix B1 and B2) identified the Project area, as experiencing a high enough horizontal peak ground acceleration (a measure of the amount of ground shaking) to cause low to moderate damage in structures that are not designed appropriately.

[1] A Holocene-active fault is defined as a fault where there is evidence of displacement within the last 11,700 years.

Liquefaction occurs when loose sand and silt that is saturated with water behaves like a liquid when shaken by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid. Three factors are required for liquefaction to occur: (1) loose, granular sediment; (2) groundwater saturation of the sediment (water fills the spaces between sand and silt grains); and (3) strong shaking. The soil can then lose its ability to support structures, flow down even very gentle slopes, and erupt to the ground surface to form sand boils, for example. Steep slopes, in conjunction with certain soil types, can be prone to landslides. Some of the natural causes of this instability are earthquakes, weak soils, erosion, heavy rainfall, and fire. Human activities such as poor grading that undercuts steep slopes or overloads them with fill, excessive irrigation, and removal of vegetation can also contribute to landslides. Landslides typically occur on slopes greater than 15%, and most new landslides occur in areas that have experienced previous landslides. The topography of the Project site is relatively level with elevations ranging from approximately 310 feet above mean sea level (amsl) in the southeastern end of the site to 430 feet amsl near the northwestern end of the site (Appendix B1).

***Geologic Conditions***

Based on a review of published geologic maps, surficial geologic materials are mapped as recent alluvium of valley plains and wash areas and Pleistocene age alluvium of Palo Verde Mesa that underlie the majority of the site (Appendix B1). Alluvium in the area is generally derived from the adjacent McCoy Mountains and also younger recent wash deposits. Materials encountered in site explorations conducted as part of the preliminary geotechnical investigation include gravel layers and caliche horizons (an accumulation of carbonate derived from precipitation) typical of the arid Mojave environment. Caliche-rich and reddish soils typically reflect pre-Holocene age sediments consistent with published geologic mapping (Appendix B1). The materials at the proposed transmission lines were described as medium dense silty sands that become dense to very dense with depth (Appendix B2).

Groundwater depths in the area of the Project is likely deeper than 150 feet below ground surface (Appendix B1 and B2). Fluctuations of groundwater levels are anticipated due to varying conditions such as precipitation, irrigation practices, groundwater pumping, and others.

***Soils***

Regarding geologic hazards, the following were identified in the preliminary geotechnical report (Appendix B1 - additional information regarding the geologic hazards is provided in the report):

- Surface fault rupture—The site is not located within an Alquist-Priolo Special Study Zone and no Holocene-active faults are known to intersect the Project site, as noted above.
- Ground shaking potential—There is a moderate potential for the Project site to experience ground motions due to earthquakes on regional faults that could produce ground shaking during the life span of the Project.
- Liquefaction potential—Saturated cohesionless soils, typically sandy soils, within 50 feet of ground surface are generally the most susceptible to liquefaction hazards associated with strong ground shaking. Based on the anticipated depth to groundwater (greater than 150 feet below the ground surface), the potential for liquefaction at the site is low. Other hazards related to liquefaction, such as lateral spreading, are also considered low.
- Collapsible and/or expansive soils—Collapsible soils consist of loose, dry, low-density materials that collapse, compact, and change in settlement under the addition of water (also known as hydrocompaction) or excessive loading, often resulting in severe damage to structures. These soils are

distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits. Expansive soils contain clay types capable of absorbing water in a manner that results in volumetric changes. Over long-term periods of cyclical changes in water content, these volumetric changes can cause damage to foundations, retaining walls, sidewalks, and roadways. Near-surface collapsible soils were encountered at the site within the proposed substation area. The hazards of collapsible soils can be addressed through over-excavation and re-compaction in accordance with building code requirements. Expansive soils were not observed at the site.

- Subsidence—Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to removal or displacement of subsurface earth materials. Subsidence can also occur naturally when moisture-deficient soils are exposed to water or by human activities including the extraction of oil and gas and the withdrawal of groundwater. Based on mapping compiled by the USGS, the nearest mapped area of subsidence associated with groundwater pumping is located approximately 90 miles west of the Project site near Indio.
- Slope stability and landslide hazards—Landslides generally occur where slopes are steep and/or soils lack cohesiveness and can be created by earthquakes. The site is within a gentle slope area; geologic hazards associated with slope instability and landslide hazards may be considered low.

### Sand Transport

West of the project site, the Chuckwalla Valley is a region of active windblown sand migration and deposition. San migration plays a major role in the creation and establishment of sand dune formations and habitat in arid regions of eastern California. The sand-transport migration and deposition occur throughout the Chuckwalla Valley but do not extend close to the Project site (BLM 2024).

According to mapping compiled by the BLM, the solar field portion of the Project site, which is located on private land, is not located within an active sand transport area; however, the Phase 2 transmission line, which is located on BLM-administered land, does extend into an identified sand transport area south of Interstate 10 (BLM 2024).

## 3.8.3 Impact Analysis

### Methodology

The following analysis of potential geologic and soil-related impacts was based on the preliminary geotechnical investigation report prepared for the Project (Appendix B1) and the geotechnical engineering report prepared for the Project on BLM-administered lands (Appendix B2). It is assumed that geotechnical considerations for future structures are designed in accordance with applicable requirements of the most recent CBC and the County Municipal Code and any applicable building and seismic codes in effect at the time grading plans are approved. It is also assumed that the Applicant would include a geotechnical engineering review of the Project engineering plans by a California licensed geotechnical engineer or engineering geologist prior to construction, as recommended in a final design-level geotechnical report that includes site-specific analysis of on-site conditions in accordance with state and County building code requirements. The evaluation of Project impacts to soils and geologic hazards is based on these considerations. The evaluation of paleontological resources is included in Section 3.15, Paleontological Resources. For the purposes of the analysis, the Project site includes two components: the Phase 2 transmission line and the solar facilities (which includes the photovoltaic (PV) solar panels, inverters/transformers, on-site battery storage system, substation, O&M building, Phase 1 transmission line,

and other appurtenances). Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Section VII of Appendix G of the California Environmental Quality Act (CEQA) Guidelines addresses typical adverse effects due to geologic conditions and includes the following questions to evaluate a project's impacts associated with underlying geologic, seismic or soil conditions. Would the project:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving:
    i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    ii. Strong seismic ground shaking?
    iii. Seismic-related ground failure, including liquefaction?
    iv. Landslides?
b. Result in substantial soil erosion or the loss of topsoil?
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) [Section 1803.5.3 of the California Building Code (2019)], creating substantial direct or indirect risks to life and property?
e. 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?
f. Directly or indirectly destroy a unique site or unique geologic feature?[2]

Significance thresholds set forth in the County's Environmental Assessment Checklist are derived from Section VII of Appendix G to the State CEQA Guidelines (listed above) and state that the Project would have a significant impact on geologic resources if the Project or any Project-related component would:

a. Be subject to 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?
b. Be subject to seismic-related ground failure, including liquefaction?
c. Be subject to strong seismic ground shaking?
d. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?

[2] See Section 3.15, Paleontological Resources.

e. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

f. Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?

g. Change topography or ground surface relief features[3]?

h. Create cut or fill slopes greater than 2:1 or higher than 10 feet?

i. Result in grading that affects or negates subsurface sewage disposal systems?

j. Result in substantial soil erosion or the loss of topsoil?

k. Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?

l. Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

m. Be impacted by or result in an increase in wind erosion and blow sand, either on or off site?

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Earthquake Faults*

The Project site is not located within an Alquist-Priolo Special Study Zone based on the State Fault Hazard Maps; therefore, the risk of a rupture of a known fault at the site and any resulting adverse effects is unlikely. The closest active fault to the Project site is the San Andreas at approximately 34 miles west of the site. The Project would comply with state and County building codes included in the CBC and would follow any building recommendations of the state licensed geotechnical engineer on record. As a result, there would be no impact, and this issue is not discussed further in this document.

### *Create Cut or Fill Slopes*

The Project site is relatively level and does not require cut and fill activities that could create slopes greater than 2:1 (horizontal to vertical) or higher than 10 feet. There would be no impact, and this issue is not discussed further in this document.

### *Landslides and Rockfalls*

The Project site is located in an area of relatively gentle topography and has a relatively low potential for slope instability or landslide hazards including rockfalls. Therefore, there would be no impact related to landslides or rockfalls, and this issue is not discussed further in this document.

### *Seiche, Mudflow, and Volcanic Hazard*

The Project is not located beside an enclosed or semi-enclosed body of water and is approximately 60 miles northeast of the nearest volcanic hazard (USGS 2024). Thus, none of the Project elements are located near seiche or volcanic hazards. Further, the Project site is located on relatively gentle topography and potential for mudflows is relatively low. Therefore, there would be no impact related to seiche, mudflow, and volcanic hazards, and this issue is not discussed further in this document.

[3] Ground surface relief feature could include a mound, hill, cliff, bluff, or other distinctive feature that is readily identifiable visually.

***Expansive soils***

While expansive soils would be addressed through adherence to the geotechnical recommendations provided by a licensed geotechnical engineer in accordance with building code requirements, expansive soils were not observed at the Project site according to the preliminary geotechnical report (Appendix B1). Therefore, there is no impact to expansive soils, and this issue is not further discussed in this document.

## Environmental Impacts

This section includes an examination of the Project's geology and soils impacts per the County's Environmental Assessment Checklist and Appendix G to the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the project is not located on or near a designated Alquist-Priolo Fault Zone, and therefore the potential for surface ground rupture and lurching or cracking of the ground surface at the solar facility and transmission line is considered very low and impacts would be less than significant. The Palo Verde Mesa Solar Project EIR identified that the project would result in potential impacts regarding exposing people or structures to adverse effects involving seismic ground shaking, liquefaction, erosion, subsidence, and unstable soils. However, with the implementation of MM-GEO-1 through MM-GEO-4, along with applicable best management practices (BMPs), impacts would be reduced to less than significant.

***Threshold b: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be subject to seismic-related ground failure, including liquefaction?***

*LESS THAN SIGNIFICANT*. As noted in the preliminary geotechnical report, the depth to groundwater at the project site is anticipated to be greater than 150 feet below the ground surface which indicates that the potential for liquefaction at the site is low (Appendix B1). However, all proposed improvements (e.g., solar panel arrays, O&M building, collector substation, and battery storage facility) would be required to adhere to the seismic requirements of the County Building Code and most recent CBC, which include requirements for site preparation and foundation design measures to ensure that any liquefaction hazards are minimized. Therefore, considering the anticipated groundwater conditions (i.e., depth to groundwater) at the site and adherence to the seismic design requirements of the County and CBC, the potential for the Project to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be subject to impacts associated with seismic-related ground failure including liquefaction would be less than significant. Whereas the Palo Verde Mesa Solar Project concluded that mitigation measures would be necessary to reduce impacts to less than significant, these mitigation measures only included adherence to regulatory requirements (California Building Code and Alquist Priolo Earthquake Fault Zoning Act (AP Act). As a result, a conclusion of less than significant without mitigation is still appropriate for the Proposed Project.

***Threshold c: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be subject to strong seismic ground shaking?***

*LESS THAN SIGNIFICANT*. Although no known Holocene-active or non-active faults underlie the Project area, moderate ground shaking resulting from a seismic event on a regional fault could occur.

According to the preliminary geotechnical reports, the Project site could experience horizontal peak ground accelerations of up to 0.22g to 0.24 (Appendix B1 and B2). Ground shaking of this magnitude could result in

damage to Project structures, including the PV solar panels, inverters/transformers, collection lines, on-site battery storage system, O&M building, transmission lines, and other appurtenances, if not designed and engineered appropriately.

Potential impacts related to ground shaking would be reduced through compliance with state and local regulations and standards, and established engineering procedures. Future structures would be designed in accordance with the County Building Code and the most recent CBC and would be consistent with the recommendations outlined in a final design-level geotechnical report prepared in accordance with County and CBC requirements. The regulatory requirements put in place seismic design requirements that must be developed prior to final Project design, and implementation would minimize any potential impacts related to secondary or indirect seismic effects during operation and maintenance activities. Engineering of the Project would take into consideration the seismic design requirements, which would be provided in the final design-level geotechnical report including any seismic concerns during the final map review process that would be completed prior to issuance of a building permit. Therefore, due to the existing regulatory requirements and with adherence to seismic design specifications, the potential for the Project to directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death, involving or be subject to strong seismic ground shaking would be less than significant. As mentioned, the Palo Verde Mesa Solar Project EIR concluded that additional mitigation measures were necessary to reduce impacts to less than significant, however these measures consisted of adherence to existing regulatory requirements including the California Building Code and the AP Act. As a result, a conclusion of less than significant without mitigation is still appropriate for the Proposed Project.

***Threshold d: 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 lateral spreading or collapse?***

*LESS THAN SIGNIFICANT*. Lateral spreading, a hazard associated with liquefaction where liquefiable materials move as a block toward an open slope face, would also have a low probability at the site due to the topography, depth to groundwater, and low liquefaction potential, as discussed under threshold "b".

Arid soils are in general more susceptible to collapse, and the hazard is considered potential in some of the near-surface soils at the site (Appendix B1). In accordance with County and CBC building code requirements, a final design-level geotechnical report is required and would include an evaluation of collapsible soils with recommendations to address these hazards through site preparation methods (e.g., grading, recompaction of soils, or use of engineered fill materials).

Overall, soils in the Project site have a low to moderate risk of becoming unstable and resulting in geologic impacts. Engineering of the Project would take into consideration the results and recommendations provided in a required design-level geotechnical report in accordance with building code requirements.

Compliance with the existing regulatory requirements and with implementation of a design-level geotechnical report, the potential impact of on- or off-site, lateral spreading or collapse, would be less than significant. While not included as mitigation, as done for the Palo Verde Mesa Solar Project, compliance with existing regulatory requirements would still be adhered to. Thus, the Proposed Project compares favorably with the Palo Verde Mesa Solar Project.

***Threshold e: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?***

*LESS THAN SIGNIFICANT*. Based on the Preliminary geotechnical report, there is an area of documented subsidence located approximately 90 miles west of the Project site. However, subsidence has not been reported in the Palo Verde Mesa and is not considered to be a substantive design consideration (Appendix

B1). Subsidence tends to occur where there is sustained regional groundwater pumping that substantively depresses the groundwater table and geologic conditions are conducive to changes from the lowered groundwater. Water for construction and operation would be supplied to the site by either groundwater wells or an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. If necessary, the Project would use existing wells or in the event that wells are not in an adequate condition for use, then new wells would be constructed. The Project would require up to 600 AF of water for construction, 100 AF per year (AFY) for operation and maintenance, and 300 AF for decommissioning. If groundwater were to be used, there would be sufficient groundwater in the Palo Verde Mesa Groundwater Basin (PVMGB) to satisfy water demand of the Project without adverse effects to groundwater levels (Appendix F).

Adherence to building code requirements including the preparation of a design-level geotechnical report that would include recommendations for site preparations (e.g., grading and recompaction of surface soils or placement of engineered fill materials) would ensure that subsurface soils could adequately support all proposed improvements.

As a result, the potential for subsidence to occur due to groundwater withdrawal is not likely and the potential impact would be less than significant. While not included as mitigation, as done for the Palo Verde Mesa Solar Project, compliance with existing regulatory requirements would still be adhered to. Thus, the Proposed Project compares favorably with the Palo Verde Mesa Solar Project.

***Threshold g: Change topography or ground surface relief features?***

*LESS THAN SIGNIFICANT*. The Project site is primarily undeveloped but does include unpaved access roads, an agricultural area near the center of the site, and is surrounded by other solar facilities as well as the Blythe Airport, south of the site (Appendix B1). Several parcels within the Project site were previously used for agriculture purposes but are now fallow. The Project would include limited grading due to the generally flat topography with the majority of grading required for access roads, inverter pad locations, the collector substation, the O&M building, transmission tower foundations, internal roadway, the laydown yard, and work areas. Construction methods, such as “drive and crush,” “disc and roll,” and “isolated cut and fill and roll,” would be used to minimize the required volume of earth movement. These construction methods would be employed during Project construction to the extent feasible.

As noted above, the only portion of the project site that is located within a sand transport area is the southern end of the Phase 2 transmission line. The Project proposes to use the existing Arlington transmission line but would require the construction of some new transmission line towers at the Colorado Substation which would be located within a sand transport area. The entire Phase 2transmission line on BLM-administered land is located within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects, as designated by the Desert Renewable Energy Conservation Plan (DRECP), which also discusses the impacts of transmission tower construction as related to soil and sand erosion. As discussed in the DRECP Final Environmental Impact Statement (FEIS) Chapter IV.4 (p. 16), the towers would have a relatively narrow profile, spaced apart, and as a result would not impede natural sand transport. Therefore, based on the approach of minimizing earth disturbances, the level topography at the site, and the Project characteristics, the Project would not substantively change topography or the ground surface relief features. As a result, any impact on topography or ground surface relief features would be less than significant. This would be different from the Palo Verde Mesa Solar Project , which did not evaluate impacts to the sand transport areas and determined that there would be no impacts.

***Threshold i: Result in grading that affects or negates subsurface sewage disposal systems?***

*LESS THAN SIGNIFICANT IMPACT*. The Project includes only relatively minor grading activities and would also include construction of a septic wastewater system for the O&M building Installation of a new septic system requires a permit from the local building and safety agency. A Land Use Application (On-Site Wastewater Treatment System Construction Application) must be submitted, along with supporting documentation by a Professional of Record registered with the Department of Environmental Health that a septic system or alternative wastewater disposal system (in the event that site soils cannot accommodate the septic system) is feasible in accordance with County requirements. Therefore, with adherence to existing County requirements, the potential impacts of grading on subsurface sewage disposal systems would be less than significant. The Palo Verde Mesa Solar Project determined that impacts would be less than significant with mitigation incorporated. However, the mitigation included adherence to the same County requirements as noted above for the Proposed Project. While not included as mitigation, as done for the Palo Verde Mesa Solar Project, compliance with existing regulatory requirements would still be adhered to. Thus, the Proposed Project compares favorably with the Palo Verde Mesa Solar Project.

***Threshold j: Result in substantial soil erosion or the loss of topsoil?***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. The topography of the Project site is nearly level to gently sloping. Construction would involve relatively minor earth-disturbing activities that could expose soils to the effects of wind or water erosion. Although the Project site consists of relatively flat topography and substantial cut and fill operations would not be required, earthmoving and construction activities could loosen soil, and the removal of existing minimal vegetation could contribute to soil loss and erosion. A stormwater pollution prevention program (SWPPP) would be prepared and implemented as part of the Project, per the requirements of the County (APM-WAT-1). The SWPPP would detail that existing vegetation and topography are to be preserved to the maximum extent possible. The SWPPP would also specify various types of BMPs including erosion control BMPs to prevent soil from moving off site; all temporary erosion control measures required by the County would be incorporated into the SWPPP.

Construction activities could also potentially damage any existing occurrences of desert pavement,[4] if present within proposed areas of disturbance. Vehicle traffic or grading activities can damage the armoring function of desert pavement and increase the likelihood of soil erosion from surface runoff. Implementation of **MM-GEO-1** would ensure that construction activities assess areas proposed for disturbance of any presence of desert pavement with measures to avoid and protect to avoid any sustained damage. The impacts to desert pavement are primarily along the Phase 2 transmission line, which was not included in the Palo Verde Mesa Solar Project. The Palo Verde Mesa Solar Project did not identify significant impact or mitigation related to desert pavement.

The Project also includes preparation of a Fugitive Dust Control Plan (**APM-AIR-1**) which 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, which are also effective in minimizing erosion. In addition, as described in **MM-BIO-12** (Stream Protection and Compensation), existing hydrologic patterns would be maintained with respect to runoff, and washes, stream beds, and stream banks would be avoided to the extent possible during construction and decommissioning. Once constructed, the solar site would maintain sheet flow where possible, with water

[4] Desert pavement is a naturally formed desert surface covered with closely packed, interlocking angular or rounded rock fragments of pebble and cobble size. Desert Pavement can be extremely old, taking thousands of years to develop and typically has little to no vegetation cover. It is a common non-erodible surface material in its natural form.

exiting the site consistent with the natural contours and flows that currently exist at the site. With implementation of these MMs, impacts related to soil erosion would be less than significant.

Project operations could include the periodic cleaning of the panels with water, as deemed necessary, however long term operations will typically not require it. However, this is not expected to result in soil erosion because of the infrequency of these activities and the limited volumes of water involved; water is expected to infiltrate into the ground and not generate substantial erosion or soil loss. Project operations would not entail ground disturbance of area which has not previously been subjected to disturbance. As a result, Project operation would have a less-than-significant impact with relation to soil erosion.

Therefore, even though site soils are susceptible to erosion, with implementation of dust control measures **APM-AIR-1** and **APM-WAT-1**, combined with erosion control requirements required as part of **MM-BIO-12** and **MM-GEO-1**, ground-disturbing activities would have a less-than-significant impact related to erosion and loss of topsoil. Therefore, impacts would be less than significant with mitigation incorporated. While the Palo Verde Mesa Solar Project incorporated different mitigation measures, there was similarly a less than significant impact with mitigation incorporated. Similar to the Palo Verde Mesa Solar Project, the Proposed Project would adhere to existing regulatory requirements and would include the implementation of similar erosion control measures.

***Threshold l: Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?***

*LESS THAN SIGNIFICANT IMPACT*. The Project does include construction of a septic system for disposal of wastewater at the Operation and Maintenance building. As noted above, construction of a septic system requires fulfilling County requirements which include site specific soil testing by a licensed professional to ensure that site soils can accommodate the proposed system. In the event that site conditions are not conducive to a septic system, there are alternative systems that can be implemented instead. Therefore, with adherence to existing County requirements, the potential impact from septic or alternative waste systems would be less than significant. The Palo Verde Mesa Solar Project determined that impacts would be less than significant with mitigation incorporated. However, the mitigation included adherence to the same County requirements. While not included as mitigation, as done for the Palo Verde Mesa Solar Project, compliance with existing regulatory requirements would still be adhered to. This compares favorably with the Palo Verde Mesa Solar Project.

***Threshold m: Be impacted by or result in an increase in wind erosion and blow sand, either on or off site?***

*LESS THAN SIGNIFICANT*. As noted above, known sand transport areas are located west of the site within the Chuckwalla Valley. According to BLM mapping for the DRECP, the solar facilities would be located outside of a sand transport area (BLM 2024). In addition, the solar panels would be mounted on relatively unobtrusive steel support posts that would not substantively increase wind erosion or blow sand on or off site. The O&M building and other proposed improvements would also represent relatively minor aboveground improvements. Any buildup of windblown sand on any of the proposed aboveground improvements (e.g., solar panels, O&M building, battery storage area, etc.) may require some minor maintenance that would be included as part of anticipated maintenance activities but is not likely to be substantively impacted by wind erosion or blow sand.

However, as noted above, construction of the new Phase 2 transmission towers at the Colorado Substation is in an area identified as a sand transport area. As described in the DRCEP FEIS Chapter IV.4 (p. 16), the placement of these towers would not impede the transport of sand and thus would not have substantive effect on wind erosion or cause any increase in blow sand. As a result, any impact from wind erosion and blown sand would be less than significant. This would be different from the Palo Verde Mesa Solar Project,

which did not evaluate impacts to the sand transport areas, concluded that implementation of BMPs would be sufficient to minimize wind erosion, and determined there would be no impact.

## Cumulative Impacts

**Geographic Scope.** Cumulative projects listed in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, would be subject to relatively similar seismic hazards as that of the Project. However, the effects of these projects are not of a nature to cause cumulatively significant effects from geologic impacts or on soils because such impacts are site specific and would only have the potential to combine with impacts of the Project if they occurred in the same location as the Project.

**Cumulative Impacts.**

As discussed above, the Project would not impact earthquake faults, landslides, rockfalls, cut and fill slopes greater than 2:1, expansive soils, seiches, mudflow, or volcanic hazards. Therefore, the Project would not contribute to cumulative impacts associated with these issues.

As discussed in Threshold "b" above, development of the Project, with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exposing persons or structures to seismic hazards including ground failure and liquefaction. Although the entire region is a seismically active area, geologic and soil conditions vary widely within a short distance, making the cumulative context for potential impacts resulting from exposing people and structures to related risks one that is more localized or even site-specific. Therefore, since potential seismic hazards are site specific, it could not combine with other cumulative projects to become cumulatively considerable and there would be no cumulative impact.

As discussed in Thresholds "c" above, development of the Project, with implementation of the regulatory requirements discussed above, would result in less-than-significant impacts related to exposing persons or structures to strong seismic ground shaking. As stated above, the entire region is a seismically active area where conditions vary widely within a short distance, making the cumulative context for potential impacts resulting from ground shaking hazards more localized or even site-specific. Therefore, since potential seismic hazards are site specific, it could not combine with other cumulative projects to become cumulatively considerable and there would be no cumulative impact.

As discussed in Threshold "d" above, with implementation of the regulatory requirements, the Project would result in less-than-significant impacts related to exposing persons or structures to adverse effects due to unstable soils such as lateral spreading or collapse. Therefore, since potential seismic hazards due to unstable soils are site specific, it could not combine with other cumulative projects to become cumulatively considerable and there would be no cumulative impact.

As discussed in Threshold "e" above, adherence to building code requirements combined with the Project not requiring use of any groundwater that could result in subsidence, make the potential for unstable soils and subsidence less-than-significant impact. Therefore, since the potential for subsidence is site specific, it could not combine with other cumulative projects to become cumulatively considerable and there would be no cumulative impact.

As discussed above in Threshold "g," changes in topography or ground surface features can become cumulatively significant if cumulative projects each contribute to grading that results in a significant change in topography. However, as noted above, the Project site and large expansive surrounding areas of the site are relatively level. Considering the minor grading involved on the largely flat existing

topography, implementation of the Project would not result in a cumulatively considerable contribution to this impact.

As discussed above in Threshold "i," the project would include construction of a septic system, however just as is the case for all cumulative projects, they are permitted by the County which ensures that septic systems do not contribute to a cumulative effect. Therefore, the Project would not result in a cumulatively considerable contribution to this impact.

As discussed above in Threshold "j," with implementation of dust control measures required by **APM-AIR-1** and **APM-WAT-1**, combined with erosion control requirements required as part of **MM-BIO-12** and **MM-GEO-1**, ground-disturbing activities would have a less-than-significant impact related to erosion and loss of topsoil. While each cumulative project's soil disturbance could result in off-site water and wind erosion, each project has or would undergo an environmental review under the National Environmental Policy Act and/or CEQA as well as also be subject to existing regulatory requirements. As a result, each cumulative project would be required to abide by existing regulations such that they would have an erosion control plan, Drainage Plan, and SWPPP that would reduce wind and water erosion and prevent dust and soil from leaving each project's site., Therefore, because the BMPs that would be included in the SWPPP would minimize the potential for wind and water erosion and prevent any substantive off-site transport, the Project would not result in a cumulatively considerable contribution to this impact.

As discussed above in Threshold "l," the Project does include the construction of a septic system but would adhere to all County permit requirements similar to what is required of all cumulative projects. Therefore, there would be a less than significant cumulative impact related to this criterion.

Related to Threshold "m," development of the Project would not include the construction of substantive above ground improvements that could significantly affect any migration of sand currently occurring. With typical maintenance activities, the impact related to increased wind erosion and blow sand would be less than significant. The cumulative projects listed in Tables 3.1-1 and 3.1-2 have or could impact the regional sand migration zone through directly or indirectly impeding sand transport, especially for those projects located in known sand transport areas such as the Chuckwalla Valley. For cumulative projects that have already undergone environmental review (i.e., Desert Sunlight, Desert Harvest, and Palen Solar Project), these documents were reviewed for any effects to sand transport; for cumulative projects that have not undergone environmental review, the cumulative projects were mapped against the geomorphic layer for sand from the DRECP. As noted in the DRECP, which amends the California Desert Conservation Area Plan, project-specific mapping may change the determination of effects on sand transport. Fencing and other infrastructure associated with the projects would impede sand transport and affect valuable habitat within this corridor, resulting in a cumulative blocking of the corridor along the western sides. While mitigation for existing projects or the Project under review and Conservation and Management Actions from the DRECP Land Use Plan Amendment for future projects would reduce the effects of each individual project permitted to the extent practicable, there would likely be a cumulatively significant impact. According to mapping compiled by the Bureau of Land Management, the Project site is not located within an aeolian and sand transport area (BLM 2024). Because the design of the Project would allow continued sheet flow and is proposed at least partly on former agricultural lands not located within an aeolian and sand transport area, the Project would not result in a cumulatively considerable contribution to this impact. Similar to Palo Verde Mesa Solar Project, cumulative impacts would be less than significant with implementation of the site specific mitigation measures.

## 3.8.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following Applicant Proposed Measures (APM) is considered as part of the project description and would be incorporated into the design of the Project.

**APM-AIR-1** *See full text in Chapter 2, Project Description.*

**APM-WAT-1** *See full text in Chapter 2, Project Description.*

## Mitigation Measures

The following MMs were developed to substantially less the significant effects to geology and soils resources expected to result from the construction, operation, maintenance, and decommissioning of the Project.

**MM-BIO-12** **Stream Protection and Compensation.** *See full text in Section 3.5, Biological Resources.*

**MM-GEO-1** Grading for new access roads or work areas in areas covered by desert pavement shall be avoided or minimized. If avoidance of these areas is not possible, the desert pavement surface shall be protected from damage or disturbance from construction vehicles temporary surface mats. A plan to identify and avoid damaging sensitive desert pavement shall be prepared and submitted to the lead agency (Riverside County) for review and approval prior to construction. This plan shall include:

- Defining all locations of surface disturbance including new access roads and grading locations.
- Developing specific measures to protect desert pavement from damage or disturbance by using temporary mats.
- Applying a nontoxic soil stabilizer before Project operation. The applicant shall develop, for review and approval by Riverside County, a plan that outlines the frequency of nontoxic soil stabilizer applications, based on the specifications of the selected soil stabilizer.
- Evaluating the potential for replacement of desert pavement with a similar gravel-sized layer where required.

### *Significance after Implementation*

Compliance with **MM-GEO-1** would ensure that construction activities assess areas proposed for disturbance of any presence of desert pavement with measures to avoid and protect any sustained damage, and **MM-BIO-10** would maintain existing hydrologic patterns to the extent possible; therefore, the impact would be reduced to less than significant.

## 3.8.5 References

BLM (Bureau of Land Management). 2024. "Figure H-3 Aeolian and Sand Transport Areas." Desert Renewable Energy Conservation Plan (DRECP). Accessed June 25, 2024. https://drecp.databasin.org/maps/42ad2936223d480fbf658557b9f16d03/active/.

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County of Riverside. 2021. "Safety Element." Chapter 6 in *County of Riverside General Plan*. Revised September 28, 2021. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-2021-elements-Ch06-Safety-092821.pdf.

USGS. 2024. "California Has Active and Hazardous Volcanoes." California Volcano Observatory. Accessed June 25, 2024. https://www.usgs.gov/observatories/california-volcano-observatory/california-has-active-and-hazardous-volcanoes.

# 3.9 Greenhouse Gas Emissions

This section includes an analysis of impacts associated with greenhouse gas (GHG) emissions that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions, identifies the criteria used for determining the significance of environmental impacts, and describes the potential impacts from the Project's GHG emissions.

Information contained in this section is based on publicly available data and reports from the California Air Resources Board (CARB), U.S. Environmental Protection Agency (EPA), Intergovernmental Panel on Climate Change (IPCC), and Mojave Desert Air Quality Management District (MDAQMD), as well as the following:

**Appendix G** Air Quality and Greenhouse Gas Emissions for the Grace Solar Project, Riverside County, California, prepared by Dudek.

## 3.9.1 Regulatory Framework

The key federal, state, and local laws and regulations applicable to GHG emissions are identified and summarized in this section. For more information on federal and state laws, regulations and policies, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

### Federal Laws, Regulations, and Policies

#### Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the EPA administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The EPA administrator found that elevated concentrations of GHGs—carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$)—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The EPA administrator further found that the combined emissions of GHGs—$CO_2$, $CH_4$, $N_2O$, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act (42 USC Section 7401).

#### Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (Public Law 110-140), among other key measures, included the following measures to aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022

- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances

**Federal Vehicle Standards**

In 2007, in response to the *Massachusetts v. EPA* U.S. Supreme Court ruling, the Bush Administration issued Executive Order (EO) 13432 directing EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, the Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of $CO_2$ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624–63200). On January 12, 2017, EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for $CO_2$ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles (76 FR 57106–57513). According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines (76 Fed. Reg. 57106–57513).

In August 2016, EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all sizes of buses and work trucks. The final standards are expected to lower $CO_2$ emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

On April 2, 2018, EPA, under administrator Scott Pruitt, reconsidered the final determination for light-duty vehicles and withdrew its previous 2017 determination, stating that the current standards may be too stringent and therefore should be revised as appropriate (EPA 2018).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards then in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2% to 3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1°C by

2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives.

In 2019, EPA and NHTSA published the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program (SAFE-1) (84 FR 51310), which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle (ZEV) mandates in California. In March 2020, Part Two was issued, which set $CO_2$ emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. In March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

**Executive Order 13990**

On January 20, 2021, President Biden issued Executive Order (EO) 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis." Section 7(e) of this EO directs the White House Council on Environmental Quality (CEQ) to rescind the 2019 Draft GHG Guidance and review, revise, and update its 2016 GHG Guidance. Among its key provisions, the order directed federal agencies to review and potentially revise a range of policies, regulations, and actions that were inconsistent with the Biden administration's commitment to combatting climate change and promoting environmental sustainability. The order also sought to reestablish interagency working groups and committees that had been disbanded or sidelined during the previous administration, with a focus on restoring evidence-based decision-making processes.

The Interagency Working Group on the Social Cost of Greenhouse Gases (IWG) is a collaborative effort involving multiple U.S. federal agencies with the goal of providing scientifically sound estimates for the social cost of greenhouse gases (SC-GHG). This metric assigns a monetary value to the long-term damages caused by the emission of carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$) emissions, considering their impacts on climate change, public health, ecosystems, and the economy. The IWG under the authority of Executive Order 13990 released the "Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990" in February 2021. The Technical Support Document contains methodologies, data and analyses used by the IWG to develop interim estimates for the social cost of carbon (SC-$CO_2$), methane (SC-$CH_4$), and nitrous oxide (SC-$N_20$) emissions under EO 13990.

**Inflation Reduction Act of 2022**

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40% as compared to 2005 levels by 2030. The bill allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles (EVs), and includes measures that will make homes more energy efficient.

**40 CFR Part 98, Mandatory Reporting of Greenhouse Gases Rule**

This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 MT $CO_2e$ emissions per year. Additionally, reporting of emissions is required for owners of SF6- and PFC-insulated equipment when the total nameplate capacity of these insulating gases is above 17,280 pounds. The Project would not be expected to trigger GHG reporting according to the rule.

### 40 CFR Part 52, Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule

The EPA mandated to apply Prevention of Significant Deterioration (PSD) requirements to facilities whose stationary source $CO_2e$ emissions exceed 75,000 tons per year. The Project would not be expected to trigger PSD permitting as required by this regulation; however, GHG emissions of the Project are quantified in this EIR.

### Fuel Efficiency Standards for Construction Equipment

The federal government sets fuel efficiency standards for off-road diesel engines that are used in construction equipment. The regulations, contained in 40 CFR Parts 1039, 1065, and 1068, include multiple tiers of emission standards. Most recently, the EPA adopted a comprehensive national program to reduce emissions from off-road diesel engines by integrating engine and fuel controls as a system to gain the greatest reductions.

## Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change

In January 2023, the CEQ released new guidance to disclose climate impacts in environmental reviews under NEPA. The guidance replaces 2016 emissions guidance that was withdrawn by the previous Administration. CEQ's new climate change guidance recommends that agencies account for GHG emissions in NEPA reviews. It provides federal agencies a common approach for assessing their proposed actions, while recognizing each agency's unique circumstances and authorities (CEQ 2023).

The CEQ Guidance recognizes that global climate change is a cumulative impact and that a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are no federal numeric thresholds that delineate when a proposed action may have an adverse impact. As discussed in the interim CEQ Guidance when conducting climate change analyses in NEPA, agencies should consider: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts. The CEQ guidance recommends quantifying GHG emissions, understanding that GHG are a cumulative impact and not project-only impacts, including indirect emissions when relevant to the project, such as for fossil fuel supply or transport projects, and providing context for GHG emissions using the best available social cost of GHG (SC-GHG) estimates to translate climate impacts into the more accessible metric of dollars.

## State Laws, Regulations, and Policies

The statewide GHG emissions regulatory framework is summarized in this subsection by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, water, solid waste, and other state actions. The following text describes EOs, Assembly Bills (ABs), Senate Bills (SBs), and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

### State Climate Change Targets

*Assembly Bill 32*

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006 (California Health and Safety Code Sections 38500-38599 et seq.). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG

emissions at 1990 levels by 2020, and initiate the transformations required to achieve the state's long-range climate objectives.

*Senate Bill 32 and Assembly Bill 197*

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions-reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions-reduction measures when updating the scoping plan.

*Executive Order S-3-05*

EO S-3-05 (June 2005) established California's GHG emissions-reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80% below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry.

*Executive Order B-30-15*

EO B-30-15 (April 2015) identified an interim GHG-reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050, as set forth in S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of million metric tons (MMT) of carbon dioxide equivalent ($CO_2e$). The EO also called for state agencies to continue to develop and implement GHG emission-reduction programs in support of the reduction targets.

*Executive Order B-55-18*

EO B-55-18 (September 2018) establishes a statewide policy for the state to achieve carbon neutrality as soon as possible (no later than 2045) and achieve and maintain net negative emissions thereafter. The goal is an addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

*California Air Resources Board's Climate Change Scoping Plan*

One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan—The Climate Change Proposed Scoping Plan: A Framework for Change (Scoping Plan). The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission-reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EOs S-3-05 and B-16-2012 (CARB 2014). The First Update concluded that California was on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050, including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

In December 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017). The Second Update built upon the successful framework established in the initial Scoping Plan and First Update, while identifying new technologically feasible and cost-effective strategies that served as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' "known commitments" included implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard (LCFS), measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the Second Update recommended continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%. The Second Update was approved by CARB's Governing Board on December 14, 2017.

In December 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality, which outlines the state's plan to reduce anthropogenic emissions to 85% below 1990 levels by 2045 and achieve carbon neutrality by 2045 or earlier. The plan also assesses the progress the state is making toward reducing GHG emissions by at least 40% below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing use of chemicals and refrigerants with high global warming potential (GWP); providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy

alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen[1]. The 2022 Scoping Plan for Achieving Carbon Neutrality also introduces stringent per capita vehicle miles traveled reductions of 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045 (CARB 2022a).

The 2022 Scoping Plan for Achieving Carbon Neutrality also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration and, to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage from anthropogenic point sources, where $CO_2$ is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal from ambient air, through mechanical (e.g., direct air capture with sequestration) or nature-based (e.g., management of natural and working lands) applications.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, AB 1279, and the EOs; it also establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it would meet the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and would not impede attainment of those goals.

*Executive Order B-18-12*

EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

*Senate Bill 605 and Senate Bill 1383*

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCPs) in the state (California Health and Safety Code Section 39730); and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018 (California Public Resources Code [PRC], Sections 42652–43654). SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for $CH_4$ and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy in March 2017, which establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases (CARB 2017).

*Assembly Bill 1279*

The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter.

Although AB 1279 establishes an overall policy to achieve net zero GHG emissions as soon as possible, but no later than 2045, recognizing the need to implement carbon dioxide removal and carbon capture,

[1] Green hydrogen refers to hydrogen that is generated by renewable energy or from low-carbon power, and has significantly lower associated carbon emissions than grey hydrogen, which is produced using natural gas and makes up the majority of hydrogen production. For the purposes of the Draft 2022 Scoping Plan, the term "green hydrogen" is not limited to only electrolytic hydrogen produced from renewables.

utilization, and storage technologies, the Legislature established a specific target of 85% below 1990 levels by 2045 for anthropogenic GHG emissions. Therefore, the net zero target does not directly apply to development projects, but the 2045 target of 85% below 1990 levels represents the reductions required to accomplish the state's overall net zero policy.

*Assembly Bill 1757*

AB 1757 (September 2022) requires the CNRA to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2024, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

**Building Energy**

*California Code of Regulations, Title 24, Part 6*

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every 3 years by the Building Standards Commission and the California Energy Commission (CEC) and revised if necessary (PRC Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, to "reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402(d)) and cost effectiveness (PRC Section 25402(b)(2–3)). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24, Part 6 standards, referred to as the 2022 Title 24 building energy efficiency standards, which became effective January 1, 2023. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses quality (CEC 2021):

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and electric vehicle (EV) charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available on site and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

**Renewable Energy and Energy Procurement**

*Senate Bill 1078*

SB 1078 (2002) (California Public Utilities Code Section 399.11 et seq.) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and EO S21-09).

*Senate Bill 1368*

SB 1368 (2006) required CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities (California Public Utilities Code Section 8340-8341 et seq.). These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

*Executive Order S-14-08*

EO S-14-08 (2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with CEC and the California Department of Fish and Wildlife, was directed to lead this effort.

*Executive Order S-21-09 and Senate Bill X1-2*

EO S-21-09 (2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health, and those that can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard; however, this regulation was not finalized because of subsequent legislation (SB X1-2) signed by Governor Brown in April 2011.

SB X1-2 expanded RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 MW or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All these entities must meet the renewable energy goals listed above.

*Senate Bill 350*

SB 350 (2015) further expanded the RPS program by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires CPUC, in consultation with CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

*Senate Bill 100*

SB 100 (2018) increased the standards set forth in SB 350, requiring that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be accomplished through resource shuffling.

*Senate Bill 1020*

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources:

- 90% by December 31, 2035
- 95% by December 31, 2040
- 100% by December 31, 2045

**Mobile Sources**

*State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12)*

AB 1493 (July 2002) was enacted in response to the transportation sector accounting for more than half of California's $CO_2$ emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve goals established for 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. As the EPA rule is the subject of pending legal challenges, this analysis continues to utilize the best available information at this time, as set forth in EMFAC.

*Heavy-Duty Diesel*

CARB adopted the final Heavy-Duty Truck and Bus Regulation on December 31, 2014, to reduce diesel particulate matter, a major source of black carbon, and oxides of nitrogen emissions from heavy-duty diesel vehicles (CCR Title 13, Section 2025). The rule requires diesel particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (CCR Title 13, Section 2485).

*Executive Order S-1-07*

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in $CO_2e$ grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (CCR Title 17, Section 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the life cycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered.

*Senate Bill 375*

SB 375 (California Government Code Section 65080 amendment, 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG-reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG-reduction targets set by CARB. If an MPO is unable to devise an SCS to achieve the GHG-reduction target, then the MPO must prepare an Alternative Planning Strategy demonstrating how the GHG-reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

An SCS does not: (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it (California Government Code Section 65080[b][2][K]). Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

*Advanced Clean Cars Program and Zero-Emissions Vehicle Program*

The Advanced Clean Cars (ACC) I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle regulation for criteria air pollutant and GHG emissions, and a technology forcing regulation for ZEVs that contributes to both types of emission reductions (CARB 2022). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program

by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years. The ACC II program is currently in development to establish the next set of low-emission vehicle and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2022). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions
2. Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use

An ACC II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, was presented to CARB for consideration in June and August 2022. However, EPA and NHTSA published the SAFE Vehicles Rule, which revokes California's authority to set its own GHG emissions standards and set ZEV mandates in California. Since California and 22 other states, as well as the District of Columbia and four cities, filed suit against the EPA and a petition for reconsideration of the SAFE Rule, the ACC II rulemaking's course may vary depending on the results of this ongoing litigation.

*Executive Order N-79-20*

EO N-79-20 (September 2020) requires CARB to develop regulations as follows: (1) passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the state toward the target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the state toward the target of 100% of the fleet transitioning to ZEVs by 2045 everywhere feasible and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other state agencies, EPA and local air districts, to achieve 100% zero-emission from off-road vehicles and equipment operations in the state by 2035. EO N-79-20 called for the development of a Zero-Emissions Vehicle Market Development Strategy, which was released February 2021, to be updated every 3 years, that ensures coordination and implementation of the EO and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions and investment strategies to improve clean transportation, sustainable freight, and transit options; and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the state transitions to a carbon-neutral economy.

*Advanced Clean Trucks Regulation*

The Advanced Clean Trucks Regulation was also approved by CARB in 2020. The purpose of the regulation is to accelerate the market for ZEVs in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021). The regulation has two components, including (1) a manufacturer sales requirement and (2) a reporting requirement:

- Zero-emission truck sales: Manufacturers who certify Class 2b–8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b–3 truck sales, 75% of Class 4–8 straight truck sales, and 40% of truck tractor sales.
- Company and fleet reporting: Large employers, including retailers, manufacturers, brokers, and others, will be required to report information about shipments and shuttle services. Fleet owners, with 50 or

more trucks, will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

**Other State Actions**

*Senate Bill 97*

SB 97 (2007) directed the Governor's Office of Planning and Research and CNRA to develop guidelines under the California Environmental Quality Act (CEQA) for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory, which was updated most recently in 2018, indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2018). The advisory further recommended that the lead agency determine the significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (CCR Title 14, Section 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (CCR Title 14, Section 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures (CCR Title 14, Section 15126.4[c]). The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledged that a lead agency could consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a), as subsequently amended in 2018, states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines now note that an agency "shall have discretion to determine, in the context of a particular project, whether to: (1) [q]uantify GHG emissions resulting from a project; and/or (2) [r]ely on a qualitative analysis or performance-based standards" (CCR Title 14, Section 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (CCR Title 14, Section 15064.4[b]).

*Executive Order S-13-08*

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to

assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency.

## Local Laws, Regulations, and Policies

*County of Riverside*

**Riverside County General Plan**

Riverside County (County) is committed to providing a more livable, equitable, and economically vibrant community through the incorporation of sustainability features and reduction of GHG emissions. In response to the growing regulatory requirements from both state and federal governments, a GHG reduction strategy was developed for the County to establish specific goals and policies that incorporate environmental responsibility into its daily management. The GHG reduction strategies outlined in the Air Quality Element of the General Plan establish that County activities and approvals ensure individual actions do not emit significant amounts of GHGs and that the emissions from the individual actions do not contribute to cumulatively significant GHG emissions (County of Riverside 2018). The Air Quality Element lists 62 individual action items aimed at reducing GHG emissions within the County, including development and incorporation of a Climate Action Plan (CAP). General Plan policies relevant to the Project are provided below (County of Riverside 2018):

- **Policy AQ 20.18.** Encourage the installation of solar panels and other energy efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.). (AI 147)
- **Policy AQ 20.19.** Facilitate development and sitting of renewable energy facilities and transmission lines in appropriate locations. (AI 147)
- **Policy AQ 26.1.** The County shall implement programs and requirements to achieve the following objectives related to reducing greenhouse gas emissions derived from energy generation (AI 146, 147):
  a) Encourage the installation of solar panels and other energy-efficient improvements.
  b) Facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).
  c) Facilitate development of renewable energy facilities and transmission lines in appropriate locations.
  d) Facilitate renewable energy facilities and transmission line siting.

**Climate Action Plan**

The General Plan includes the County's CAP, adopted on December 8, 2015, which contains further guidance on the County's GHG Inventory reduction goals, thresholds, policies, guidelines, and implementation programs. The most recent update was adopted in November 2019 (CAP Update - County

of Riverside 2019). In particular, the CAP elaborates on the General Plan goals and policies relative to GHG emissions and provides a specific implementation tool to guide future decisions of the County.

Per the CAP Update, the County's 2017 GHG emissions totaled 4,905,518 MT $CO_2e$ for that year. Under the business-as-usual (BAU) forecast, emissions will be 5,158,305 MT $CO_2e$ in 2020; 6,368,781 MT $CO_2e$ in 2030; and 11,305,026 $MT_2e$ in 2050. These emissions levels are 5.1% higher in 2020 than 2017, 29.8% higher in 2030 than 2017, and more than double 2017 emissions by 2050. Under the adjusted BAU forecast (which represents state efforts in reducing GHG emissions within the County), emissions will be 4,861,256 MT $CO_2e$ in 2020; 4,102,109 MT $CO_2e$ in 2030; and 4,175,146 MT $CO_2e$ in 2050. Compared to 2017, these emissions levels are 0.9% lower in 2020, 16.0% lower in 2030, and 14.8% lower in 2050.

The CAP Update assesses the previous GHG reduction targets identified in the 2015 CAP and proposes new targets that are consistent with the state policies to meet the requirements of SB 32. The state recommends a 15% reduction below 2005–2008 baseline levels by 2020, a 49% reduction below 2008 levels by 2030, and an 80% reduction below 2008 levels by 2050.

The County's CAP is a qualified GHG reduction plan under CEQA Guidelines Section 15183.5, and thus it can be used in a cumulative impacts analysis to determine significance. This is further discussed under the subheading "Criteria for Determining Significance" in Section 3.9.3, below.

**Palo Verde Valley Area Plan**

The Palo Verde Valley Area Plan (County of Riverside 2021) does not include any goals and policies related to GHG emissions.

## 3.9.2 Environmental Setting

### Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (i.e., decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2023).

The greenhouse effect is the trapping and buildup of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human

activities have been the dominant cause of that warming since the mid-twentieth century and are the most significant driver of observed climate change (IPCC 2013; EPA 2023). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further under the subheading "Potential Effects of Climate Change".

**Greenhouse Gases**

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include $CO_2$, $CH_4$, $N_2O$, HFCs, PFCs, $SF_6$, and nitrogen trifluoride ($NF_3$). (See also CEQA Guidelines, Section 15364.5.) Some GHGs, such as $CO_2$, $CH_4$, and $N_2O$, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, $CO_2$ and $CH_4$ are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than $CO_2$, include fluorinated gases, such as HFCs, PFCs, and $SF_6$, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the applicable GHGs and their sources.[2] For more information on GHGs, including detailed descriptions of Ozone ($O_3$), water vapor, aerosols, black carbon, fluorinated gases, chlorofluorocarbons (CFCs), and hydrochlorofluorocarbons (HCFCs), please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

**Carbon Dioxide.** $CO_2$ is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of $CO_2$ include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate $CO_2$ include combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

**Methane.** $CH_4$ is produced through both natural and human activities. $CH_4$ is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

**Nitrous Oxide.** $N_2O$ is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create $N_2O$. Sources of $N_2O$ include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using $N_2O$ as a propellant (e.g., rockets, racecars, and aerosol sprays).

**Global Warming Potential**

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Air Pollution Terms" (2023), and EPA's "Glossary of Climate Change Terms" (2016).

the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2023). IPCC developed the GWP concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is $CO_2$; therefore, GWP-weighted emissions are measured in metric tons of $CO_2$ equivalent (MT $CO_2e$).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2022.1.1.28) assumes that the GWP for $CH_4$ is 25 (so emissions of 1 MT of $CH_4$ are equivalent to emissions of 25 MT of $CO_2$), and the GWP for $N_2O$ is 298, based on IPCC's Fourth Assessment Report (IPCC 2007).

**Greenhouse Gas Inventories and Climate Change Conditions**

*Global Inventory*

Anthropogenic GHG emissions worldwide in 2020 (the most recent year for which data are available) totaled approximately 49,800 MMT of $CO_2e$, excluding land use change and forestry (PBL 2022). The top six GHG emitters include China, the United States, the Russian Federation, India, Japan, and the European Union, which accounted for approximately 60% of the total global emissions, or approximately 30,270 MMT $CO_2e$ (PBL 2022). Table 3.9-1 presents the top GHG-emissions-producing countries.

**Table 3.9-1. Six Top GHG Producer Countries**

| Emitting Countries | 2020 GHG Emissions (MMT CO2e)[a,b] |
|---|---|
| China | 14,300 |
| United States | 5,640 |
| European Union | 3,440 |
| India | 3,520 |
| Russian Federation | 2,210 |
| Japan | 1,160 |
| **Total** | **30,270** |

**Source:** PBL 2022.
**Notes:** MMT $CO_2e$ = million metric tons of carbon dioxide equivalent.
[a] GHG emissions do not include land use change and forestry-related GHG emissions.
[b] Column may not add due to rounding

*National Inventory*

Per the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 to 2021, total U. S. GHG emissions were approximately 6,340.2 MMT $CO_2e$ in 2021 (EPA 2023). Total U.S. emissions have decreased by 2.3% from 1990 to 2021, down from a high of 15.8% above 1990 levels in 2007. Emissions increased from 2020 to 2021 by 5.2% (314.3 MMT $CO_2e$). Net emissions (i.e., including sinks) were 5,586.0 MMT $CO_2e$ in 2021. Overall, net emissions increased 6.4% from 2020 to 2021 and decreased 16.6% from 2005 levels Between 2020 and 2021, the increase in total GHG emissions was driven largely by an increase in $CO_2$ emissions from fossil fuel combustion due to economic activity rebounding after the height of the COVID-19 pandemic. The $CO_2$ emissions from fossil fuel combustion increased by 6.8% from 2020 to 2021, including a 11.4% increase in transportation sector emissions and a 7.0% increase in electric power sector emissions. The increase in electric power sector emissions was due in part to an increase in electricity demand of 2.4% since 2020. Overall, there has been a decrease in electric power sector emissions from 1990 through 2021, which reflects the combined impacts of long-term trends in many factors, including

population, economic growth, energy markets, technological changes including energy efficiency, and the carbon intensity of energy fuel choices (EPA 2023).

*State Inventory*

According to California's 2000–2021 GHG emissions inventory (2023 edition), California emitted approximately 381.3 MMT $CO_2e$ in 2021, including emissions resulting from out-of-state electrical generation (CARB 2023). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high-GWP substances, and recycling and waste. Table 3.9-2 presents California GHG emission source categories and their relative contributions to the emissions inventory in 2021.

Per-capita GHG emissions in California have dropped from a 2001 peak of 13.8 MT per person to 9.7 MT per person in 2021, a 30% decrease. In 2016, statewide GHG emissions dropped below the 2020 GHG limit of 431 MMT $CO_2e$ and have remained below that level since that time (CARB 2023).

**Table 3.9-2. GHG Emissions Sources in California**

| Source Category | Annual GHG Emissions[c] (MMT $CO_2e$) | Percent of Total[a] |
|---|---|---|
| Transportation | 145.6 | 38.2% |
| Industrial uses | 73.9 | 19.4% |
| Electricity generation[b] | 62.4 | 16.4% |
| Residential and commercial uses | 38.8 | 10.2% |
| Agriculture and Forestry | 30.9 | 8.1% |
| High GWP substances | 21.3 | 5.6% |
| Recycling and waste | 8.4 | 2.2% |
| **Total** | 381.3 | 100% |

**Source:** CARB 2023.
**Notes:** GHG = greenhouse gas; MMT $CO_2e$ = million metric tons of carbon dioxide equivalent.
[a] Column may not add due to rounding.
[b] Includes emissions associated with imported electricity, which account for 19.82 MMT $CO_2e$.
[c] Emissions reflect 2020 California GHG inventory

*Local Inventory*

The County developed a GHG emission inventory as part of its CAP (County of Riverside 2019). The GHG inventory includes all major sources of emissions attributable directly or indirectly to the County's government operations or activities within the community the County serves. Government GHG inventories include emissions resulting from County government operations. Community-wide GHG inventories include a broader range of emissions associated with both the activities within the community the County serves and the government operations.

Sources of emissions include on-road transportation from trips attributable to activities taking place within the County; off-road transportation from equipment related to agricultural, construction, industrial, lawn and garden, light commercial, and recreational activities; energy, including emissions from electricity and natural gas use; water supply, which includes indirect emissions from electrical consumption to pump and treat water imported to the County, and the energy used to collect, treat, convey, and distribute water within the County; wastewater, including sewage, urban runoff, and industrial or manufacturing runoff that requires electricity to pump and treat; solid waste management, which includes emissions from transportation to the landfill, operation of equipment at the landfill, and fugitive emissions from waste decomposition; aviation, including fuel for aircraft trips within the County;

and agriculture, including emissions from enteric fermentation in livestock, manure management, crop cultivation, and field burning.

Table 3.9-3 shows the 2017 community-wide emissions as provided in the CAP.

**Table 3.9-3. County of Riverside GHG Emissions by Source**

| Source | Annual GHG Emissions (MT $CO_2e$) | Percent of Total |
|---|---|---|
| On-road transportation | 1,766,784 | 36% |
| Agriculture | 1,670,954 | 34% |
| Energy (electricity and natural gas) | 1,188,138 | 24% |
| Solid waste | 204,365 | 4% |
| Water and wastewater | 44,606 | 1% |
| Aviation | 26,786 | 1% |
| Off-road sources | 3,883 | 0% |
| **Total** | **4,905,518** | **100%** |

**Source:** County of Riverside 2019.
**Notes**: MT $CO_2e$ = metric tons of carbon dioxide equivalent per year.

### Potential Effects of Climate Change

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Changes in the state's climate have been observed, including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days[3], and an increase in variability of statewide precipitation (OEHHA 2018).

For more information on the potential effects of climate change, please see the Air Quality and Greenhouse Gas Technical Report included in Appendix G.

## 3.9.3 Impact Analysis

### Methodology

#### Construction and Decommissioning

Construction of the Project would result in GHG emissions primarily associated with the use of off-road construction equipment, on-road haul and vendor (material delivery) truck trips, and worker vehicle trips. Emissions from construction of the Project were estimated using CalEEMod Version 2022.1.1.30[4] using a

[3] "Degree days" measure the difference between the average daily temperature and the reference temperature of 65°F. "Cooling" degree days refers to temperatures higher than 65 °F, while "heating" degree days refers to temperatures lower than 65°F (OEHHA 2018).

[4] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform to calculate construction and operational emissions from land use development projects. The model was developed for the California Air Pollution Control Officers Association in collaboration with multiple air districts across the state. Numerous lead agencies in the state, including the MDAQMD, use CalEEMod to estimate GHG emissions in accordance with CEQA Guidelines Section 15064.4(a)(1).

combination of CalEEMod default assumptions and Project-specific information provided by the Applicant where available. All details for construction criteria air pollutants are discussed in Section 3.4, Air Quality or in Appendix G and are also applicable for the estimation of construction-related GHG emissions. See Section 3.4, Air Quality, for a discussion of construction emissions calculation methodology and assumptions.

*Water Use*

In addition to the sources discussed in Section 3.4, Air Quality, the supply, conveyance, treatment, and distribution of water for Project construction would require use of electricity, which would result in associated indirect GHG emissions. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod because criteria pollutant emissions occur at the site of the power plant where the energy is generated, which is typically off site.

Per the Water Supply Assessment prepared for the Project (Appendix F), approximately 600 acre-feet of water would be required during construction. CalEEMod default values for electricity intensity factors (i.e., kilowatt-hours per million gallons) together with the default emission factors for Southern California Edison (SCE) electricity (pounds $CO_2e$/megawatt-hours [MWh]) were applied to estimate the emissions associated with water supply during construction.

*Refrigerants*

Refrigerants from air conditioning systems in vehicles would also result in GHG emissions from worker, haul, and vendor mobile trips during construction. Refrigerant emissions were estimated in CalEEMod based on default assumptions for on-road mobile refrigerant leakage from air conditioning usage. Refrigerant assumptions used in CalEEMod are based on information provided by CARB, which uses a "top-down" approach from total emission inventory estimates and activity data to estimate average (i.e., statewide) leakage rates for light-duty and heavy-duty vehicles (CAPCOA 2022).

Per EPA's Significant New Alternatives Policy, certain refrigerants with high GWPs (e.g., HFC-134a) must be replaced with lower GWP alternatives. Starting in 2021, HFC-134a is forbidden in new light-duty vehicles and will be forbidden in all vehicles after 2026. Given this phaseout of high GWP refrigerants, the emissions associated with refrigerant leakage from on-road vehicles are expected to decrease over time as new vehicles are introduced and older vehicles are retired from the fleet (CAPCOA 2022).

*Decommissioning*

The Project has an anticipated Project life of 40 years, at which time the Applicant may choose to update site technology and recommission or decommission the site and remove the systems and their components. Given that decommissioning activities would be similar the construction activities (i.e., use of the same types of equipment and same general activities), the quantified emissions from construction are used as a proxy for decommissioning activities. However, it would be anticipated that the decommissioning activities would be reduced from those estimated for the construction activities as the efficiencies of the construction equipment and on-road vehicles would be consistent with the future decommissioning year, which would require full compliance with stringent emissions standards for heavy-duty construction equipment resulting in anticipated substantial reductions in emissions from what is presented for construction activities.

### Operation

CalEEMod was used to estimate potential Project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (natural gas and electricity), mobile sources, solid waste, and water supply and wastewater treatment. All details for operational criteria air pollutants, discussed in Section 3.4, Air Quality and Section 2.4.2.2 of Appendix G, are also applicable for the estimation of operational-related GHG emissions.

*Energy Use*

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth) for the operations and maintenance (O&M) building. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant where the energy is generated, which is typically off site. CalEEMod default values for energy consumption were applied for the Project analysis. The energy use from nonresidential land uses is calculated in CalEEMod based on the Commercial Appliance Saturation Study (CAPCOA 2022).

In addition to the GHG emissions related to energy use for operation of the O&M building, there would also be energy used to keep the battery energy storage system (BESS) at optimal operating temperatures. It was assumed that approximately 31 kilowatt-hours of energy per day would be required for ventilation and air conditioning systems for the battery storage containers. The O&M facility and BESS was assumed to require approximately 46,750 MWh per year of electricity. GHG emissions of the O&M facility electricity use were estimated using the CalEEMod default projected emission factors (i.e., MT CO2e/MWh) for SCE for operational year 2027.

*Water Use*

Per the Water Supply Assessment prepared for the Project, up to 2 acre-feet of water would be required for the annual panel washing and for operation of the O&M building. Emission estimates for Project operational water use conservatively assume that up to 9 AF of water per year would be delivered by truck from the City of Blythe, approximately 4.5 miles from the Project site, however the default distance of 20 miles was utilized which also accounts for movement around the Project site. Given that actual water for Project operation (2 AF per year) would be much less than the 9 AF per year used for emission estimates, emissions associated with water use during O&M are likely to be overestimated. Furthermore, it was assumed that 16 pressure washers would operate 8 hours per day which would occur once annually. No wastewater requiring treatment would be generated during panel washing as water would be absorbed into the surrounding soil or evaporate. As with construction water use, CalEEMod default values for electricity intensity factors together with the default emission factors for SCE electricity were applied to estimate the emissions associated with water supply during operation.

*Solid Waste*

The Project would generate a small amount of solid waste and, therefore, result in $CO_2e$ emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

*Refrigerants*

Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), and an operational refrigerant leak rate, and each refrigerant has a GWP that is specific to that refrigerant. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime, and then derives average annual emissions from the lifetime estimate.

*$SF_6$ Leakage*

During Project operations and maintenance, fugitive GHG emissions could also occur due to $SF_6$ gas leakage from the proposed substation and related electrical transmission and distribution equipment. $SF_6$ has a GWP of 23,900 using $CO_2$ at a reference value of 1 (IPCC 2007). The proposed substation would convert energy produced by the solar panels from 34.5 kilovolts (kV) to 230 kV, and would include transformers, breakers, switchers, meters, and other related equipment that would contain $SF_6$ gas. It is estimated that the Project would maintain a total of 240 pounds of $SF_6$ gas at the substation. Although leakage is unlikely, for the purposes of the Project's emissions inventory, it was assumed that the breakers would have a maximum annual leak rate of 0.5% in accordance with the Institute of Electrical and Electronics Engineers' CC37.122 - Standard for High-Voltage Gas-Insulated Substations Rated Above 52 kV (IEEE 2021). Emissions from $SF_6$ gas are included as part of area source emissions.

Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Section VIII of Appendix G to the State CEQA Guidelines addresses typical adverse environmental effects of GHG emissions and includes the following threshold questions to evaluate a project's impacts due to GHG emissions. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section VIII of Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact due to GHG emissions if construction and/or operation of the Project would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the Project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project level under CEQA.

The County's CAP includes measures developed to reduce emissions to 525,511 MT $CO_2e$ by 2030 and 2,982,947 MT $CO_2e$ by 2050 as compared to the adjusted BAU forecast (County of Riverside 2019). Mitigation of GHG emissions impacts during the development review process of projects provides a cost-effective way of implementing the GHG reduction strategies for reducing community-wide emissions associated with new development (County of Riverside 2019). The development review process procedures for evaluating GHG impacts and determining significance for CEQA purposes will be streamlined by (1) applying an emissions level that is determined to be less than significant for small projects, and (2) utilizing the Screening Tables to mitigate project GHG emissions that exceed the threshold level.

Projects have an option of preparing a project-specific technical analysis to quantify and mitigate GHG emissions. The CAP determined that the 90th percentile of projects ranged from 2,983 MT to 3,143 MT $CO_2e$ per year. The 3,000 MT $CO_2e$ per-year value is the low-end value within that range rounded to the nearest hundred tons of emissions and is used in defining small projects that are considered less than significant and do not need to use the Screening Tables. A threshold level above 3,000 MT $CO_2e$ per year is used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions. Projects that are found to produce less than the 3,000 MT $CO_2e$ per-year value would be found to be less than significant when combined with the efficiency measures below:

- Energy efficiency matching or exceeding the Title 24 requirements in effect as of January 2017
- Water conservation measures that match the CALGreen standards in effect as of January 2017

## Environmental Impacts

This section includes an examination of the Project's environmental effects of GHG emissions per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### Summary of Previous Environmental Impacts

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the total amortized GHG emissions from the project over a 30-year period including construction, operation, and decommissioning activities are approximately 404 metric tons of $CO_2e$ annually, which is less than that MDAQMD-recommended threshold of 100,000 metric tons per year of $CO_2e$. Additionally, the Palo Verde Mesa Solar Project EIR determined that the project would result in a net GHG displacement through the replacement of fossil fuel generated electricity with solar electricity from 450,454 to 1,287,763 metric tons of $CO_2e$. Therefore, the project would result in less than significant impacts and no mitigation would be required.

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

*LESS THAN SIGNIFICANT.*

### Construction and Decommissioning Emissions

Construction of the Project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 2.4.2.1 of Appendix G. Construction of the Project t is assumed to commence in July 2025 and

would last approximately 28 months. On-site sources of GHG emissions include off-road equipment, and off-site sources include vendor trucks and worker vehicles. Table 3.9-4 presents construction emissions for the Project from on-site and off-site emission sources.

**Table 3.9-4. Estimated Annual Construction Greenhouse Gas Emissions – Unmitigated**

| | $CO_2$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|
| **Year** | | | **Metric Tons Per Year** | | |
| 2026 | 1,565.52 | 0.03 | 0.11 | 1.09 | 1,601.01 |
| 2027 | 9,025.31 | 0.27 | 0.42 | 5.65 | 9,163.47 |
| 2028 | 3,029.83 | 0.05 | 0.15 | 2.13 | 3,077.07 |
| **Total** | **13,620.66** | **0.35** | **0.68** | **8.87** | **13,841.55** |
| | | | *Amortized (40-year Project life)* | | *346.04* |

**Source**: See Appendix G.
**Notes:** $CO_2$ = carbon dioxide; $CH_4$ = methane; $N_2O$ = nitrous oxide; R = refrigerants; $CO_2e$ = carbon dioxide equivalent; <0.01 = reported value less than 0.01.
The values shown are the annual emissions reflect California Emissions Estimator Model "mitigated" output.
Totals may not add due to rounding.

As shown in Table 3.9-4, the estimated total GHG emissions during construction would be approximately 13,842 MT $CO_2e$ over the construction period. Estimated Project-generated construction emissions amortized over 40 years would be approximately 346 MT $CO_2e$ per year. As discussed previously, to provide a conservative analysis, it is assumed that decommissioning impacts are equal to construction impacts. As with Project-generated construction criteria air pollutant emissions, GHG emissions generated during construction and decommissioning of the Project would be short-term in nature, lasting only for the duration of the decommissioning period, and would not represent a long-term source of GHG emissions. Therefore, GHG emissions associated with the construction and decommissioning of the Project are not anticipated to directly or indirectly create a significant impact on the environment. Impacts would be **less than significant**.

### Operational Emissions

Once operational, the Project would result in minimal GHG emissions from daily operation including annual panel washing, and mobile trips for worker travel and water delivery. However, operation of the Project as a source of renewable energy would also offset GHG emissions from displaced nonrenewable energy generation. Therefore, the total GHG emissions related to the Project would be the net of direct GHG emissions generated from operational activities and the GHG emissions displaced by the Project.

The Project's proposed 500 MW facility is expected to generate approximately 1,565,391 MWh of renewable energy per year, which would displace GHG emissions from nonrenewable energy that would otherwise be generated to satisfy demand in the region. Given that the penetration of renewable energy resources would increase overtime due to the state's RPS goals, the displacement of GHG emissions related to the Project would decrease as a function of time (related to the improvement in emissions intensity [i.e., MT $CO_2e$ per MWh] as the grid introduces more renewable sources).

The GHG emissions benefit related to the Project was quantified over the lifetime of the Project (i.e., 40 years per preliminary Project information) using linear integration of additional renewable resources entering the SCE resource mix per the SB 100 RPS goals of 100% carbon-free energy by 2045. Over its expected lifetime, the proposed Project would generate approximately 63,015,633 MWh of renewable energy, which would displace approximately 2,587,748 MT of $CO_2e$, or 64,694 MT $CO_2e$ annually. The annual Project-generated operational

GHG emissions are summarized in Table 3.9-5, including the amortized construction and decommissioning GHG emissions, and the net emissions from annual displaced GHG emissions.

**Table 3.9-5. Estimated Annual Operational Greenhouse Gas Emissions**

| | $CO_2$ | $CH_4$ | $N_2O$ | R | $CO_2e$ |
|---|---|---|---|---|---|
| **Emission Source** | | | **Metric Tons Per Year** | | |
| Mobile | 63.64 | <0.01 | <0.01 | 0.08 | 64.08 |
| Area[1] | 0.04 | <0.01 | <0.01 | N/A | 0.04 |
| Energy[2] | 7,347.52 | 0.70 | 0.08 | N/A | 7,390.31 |
| Water[3] | 2.16 | 0.02 | 0.00 | N/A | 2.83 |
| Waste | 0.30 | 0.03 | 0.00 | N/A | 1.06 |
| Refrigerants | N/A | N/A | N/A | 0.12 | 0.12 |
| Off-Road | 1.55 | 0.00 | <0.01 | N/A | 1.56 |
| Stationary | 1,787.01 | 0.07 | 0.01 | 0.00 | 1,792.97 |
| **Total Annual Operational Emissions** | **9,202.22** | **0.82** | **0.09** | **0.20** | **9,252.97** |
| *Amortized 40-Year Construction and Decommissioning Emissions* | | | | | 346.04 |
| ***Total Annual Project Emissions*** | | | | | **9,599.01** |
| *Annual Displaced Emissions* | | | | | -64,694 |
| **Annual Net Project Emissions** | | | | | **-55,094.99** |
| **Threshold** | | | | | **3,000** |
| **Threshold Exceeded?** | | | | | **No** |

**Source:** Appendix G.
**Notes:** $CO_2$ = carbon dioxide; $CH_4$ = methane; $N_2O$ = nitrous oxide; $CO_2e$ = carbon dioxide equivalent; <0.01 = reported emissions less than 0.01. Totals may not add due to rounding.
[1] Includes $CO_2e$ emissions from $SF_6$ leakage from the substation.
[2] Includes energy loss from ventilation and air conditioning for BESS.
[3] Includes emissions from water deliveries for panel washing.
[4] Includes amortized emissions from both construction and decommissioning.

As shown in Table 3.9-5, annual operation of the Project would result in approximately 9,253 MT $CO_2e$ per year. Combined with amortized construction and decommissioning emissions, the total annual GHG emissions resulting from Project implementation would be 9,599 MT $CO_2e$ per year. The GHG emissions displaced from operation of the Project would offset these annual emissions by 64,694 MT $CO_2e$ per year over the Project lifetime, resulting in an overall net emissions of -55,095 MT $CO_2e$, which represents a net decrease of $CO_2e$ emissions with implementation of the Project. Given this decrease, impacts related to generation of GHG emissions either directly or indirectly would be **less than significant** consistent with Palo Verde Mesa Solar Project.

### Social Cost of GHGs

The social cost of GHG (SC-GHG) is an economic concept used to quantify the monetary value of the long-term societal damages caused by the emission of GHGs into the atmosphere. This metric seeks to capture the various adverse impacts associated with GHG emissions, such as climate change, health problems, ecosystem damage, and economic losses. By assigning a dollar value to these damages, the SC-GHG provides a tool for policymakers, businesses, and governments to assess the true costs of emitting $CO_2$, $CH_4$, and $N_2O$. Table 3.9-6 provides the SC-GHGs for implementation of the Project. There is no established dollar-value threshold for the SC-GHGs. However, by assigning a dollar value to the damages associated with GHG emissions, policymakers and decision-makers can better evaluate the costs and benefits of actions aimed at reducing emissions. The SC-GHGs provides a tool to make more informed choices about climate-related policies, regulations, and investments.

**Table 3.9-6. Project Social Cost of Greenhouse Gases**

| | GHG Emissions (metric tons per year) | | | Total Cost of GHGs, MT $CO_2e$ (in 2020 dollars) | | |
|---|---|---|---|---|---|---|
| **Emission Source** | **$CO_2$** | **$CH_4$** | **$N_2O$** | **5.00%** | **3.00%** | **2.50%** |
| Total Construction (28 months*) | 13,620.66 | 0.35 | 0.68 | 231,569 | 762,815 | 1,130,600 |
| Total Operations (40 years) | 368,088.80 | 32.80 | 3.60 | 6,258,128 | 20,615,011 | 30,554,392 |
| Total Displaced Emissions | -2,587,488.00 | -231.47 | -27.56 | -43,991,700 | -144,913,834 | -214,783,003 |
| Total Decommissioning (28 months*) | 13,620.66 | 0.35 | 0.68 | 231,569 | 762,815 | 1,130,600 |
| | | | **Total** | **-37,270,434** | **-122,773,193** | **-181,967,411** |

*Duration captures potential overlap of phases and does not match the total 28-month construction duration.

***Threshold b: 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.*

**Potential to Conflict with the County of Riverside Climate Action Plan (CAP)**

As discussed in Section 3.9.1, Regulatory Framework, the County's CAP is a qualified GHG reduction plan according to CEQA Guidelines Section 15183.5 and thus can be used in a cumulative impacts analysis to determine significance. As shown in response to Threshold "a," the Project would not exceed the 3,000 MT $CO_2e$ threshold established by the CAP. In addition, the Project would be consistent with the energy efficiency requirements of the most recent Title 24 standards, and the water conservation measures required by the current California Green Building Standards Code. Per the County's CAP guidance, given that the Project is below the 3,000 MT $CO_2e$ threshold, and applies the additional efficiency measures required of small projects, the Project would not conflict with the goals of the CAP and the impact is **less than significant.**

**Potential to Conflict with the SCAG's 2024–2005 Regional Transportation Plan/Sustainable Communities Strategy**

On April 4, 2024, the Regional Council of SCAG formally adopted the 2024–2050 RTP/SCS as a regional growth management strategy, which targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California Region pursuant SB 375. In addition to demonstrating the Region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2024–2050 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands (SCAG 2024). Thus, successful implementation of the 2024–2050 RTP/SCS would result in more complete communities with various transportation and housing choices while reducing automobile use.

The primary objective of the RTP/SCS is to provide guidance for future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region, as stipulated under SB 375. Given that the proposed Project involves construction and operation of a renewable energy solar facility, the goals and strategies of the RTP/SCS are not directly applicable. However, implementation of the Project would provide over 63 million MWh of renewable energy to the region over the Project lifetime, displacing GHG emissions from fossil fuel-fired electrical generation. The

transition to renewable energy, as provided by the Project, would improve air quality and decrease GHG emissions within the region, in alignment with SCAG's overall goals to reduce GHG emissions, improve air quality, and adapt to a changing climate. As such, the Project would not conflict with the goals and policies of the RTP/SCS and the impact is **less than significant**.

**Potential to Conflict with CARB's Scoping Plan**

The California State Legislature passed the Global Warming Solutions Act of 2006 (AB 32) to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range climate objectives. Since the passage of AB 32, the State of California has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. For the Project, the relevant GHG emissions reduction targets include those established by SB 32 and AB 1279, which require GHG emissions be reduced to 40% below 1990 levels by 2030, and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 requires the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter.

As defined by AB 32, CARB is required to develop the Scoping Plan, which provides the framework for actions to achieve the state's GHG emission targets. The Scoping Plan is required to be updated every 5 years and requires CARB and other state agencies to adopt regulations and initiatives that will reduce GHG emissions statewide. The first Scoping Plan (Climate Change Proposed Scoping Plan: A Framework for Change) was adopted in 2008, and was updated in 2014, 2017, and most recently in 2022. The Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[5] However, given that the Scoping Plan establishes the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the adopted targets, a project would be found to not conflict with the statutes if it would meet the general policies in reducing GHG emissions in order to facilitate the achievement of the state's goals and would not impede attainment of those goals.

CARB's 2017 Scoping Plan update was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017), and the most recent CARB 2022 Scoping Plan update outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses progress made toward the 2030 SB 32 target (CARB 2022). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the 2017 and 2022 Scoping Plan updates that outline the strategy to achieve those targets are the most applicable to the Project.

To achieve the 2030 goal of 40% below 1990 GHG emission levels, the 2017 Climate Change Scoping Plan Update (Second Update) included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), measures to increase stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and measures to increase stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the Second Update recommended continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%. Many of these measures and programs would result in the reduction of Project-related GHG emissions with no action required at the Project level. These programs would benefit GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (LCFS),

[5] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy). Implementation of these statewide programs would result in a reduction of operational GHG emissions over the Project lifetime.

CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (Third Update) in December 2022 to outline the state's plan to reduce anthropogenic emissions to 85% below 1990 levels by 2045 and achieve carbon neutrality by 2045 or earlier. The Third Update also assesses the progress the state is making toward reducing GHG emissions by at least 40% below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update. The carbon reduction programs included in the Third Update build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). As with the Second Update, implementation of the measures and programs included in the Third Update are the responsibility of policymakers and would result in the reduction of Project-related GHG emissions with no action required at the Project level. Given that the Project intends to produce up to 500 MW of renewable electricity through new photovoltaic solar generation, implementation would support the Third Update's goals of displacing fossil-fuel fired electrical generation through use of renewable alternatives. As discussed above, over its expected lifetime, the Project is expected to generate approximately 63,015,633 MWh of renewable energy, which would displace approximately 2,587,748 MT $CO_2e$ due to the transition from fossil fuel-generated electricity.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the Third Update to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. The Project would support the state's carbon neutrality goals, as implementation would increase renewable, carbon-free electricity sources within the state, decreasing reliance on fossil fuels. While transitioning to renewable alternatives will support the state's overall climate goals, the Third Update indicates that achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). The specific path to neutrality will require development of technologies and programs that are not currently known or available, but the Project is not anticipated to conflict with research, development, or deployment of carbon capture and sequestration technologies generally.

Overall, the Project would comply will all regulations adopted in furtherance of CARB's Scoping Plan to the extent applicable and required by law. As mentioned above, several Scoping Plan measures would result in reductions of Project-related GHG emissions with no action required at the Project level, including those related to energy efficiency, reduced fossil fuel use, and renewable energy production. As demonstrated above, the Project would not conflict with CARB's 2017 or 2022 Scoping Plan updates, nor with the state's ability to achieve the 2030 and 2045 GHG reduction and carbon neutrality goals. Further, the Project's consistency with the applicable measures and programs would assist in meeting the County's contribution to GHG emission reduction targets in California.

Similar to the Palo Verde Mesa Solar Project, the Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. While the Palo Verde Mesa Solar Project determined that the effect would not be significant and excluded this from detailed impact analysis, the Proposed Project included detailed analysis consistent with current standards and determined that impacts would be **less than significant**. While the levels analysis are different, the conclusions are effectively consistent.

### Cumulative Impacts

**Geographic Scope.** The geographic scope for GHGs is global, encompassing the entire Earth and its atmosphere. GHGs, such as $CO_2$, $CH_4$, $N_2O$, and fluorinated gasses, trap heat in the atmosphere and contribute to climate change on a planetary scale. Human activities, including the burning of fossil fuels and land-use changes, have led to unprecedented increases in GHG concentrations, disrupting the Earth's radiative balance and causing the planet's surface temperature to rise. The impact of GHGs on climate extends far beyond specific regions, affecting weather patterns, sea levels, and ecosystems worldwide. Efforts to mitigate GHG emissions and address climate change require global cooperation and concerted actions from all nations.

**Cumulative Impacts.** This impact assessment describes the Project's contribution toward global climate change through GHG emissions that occur because of the Project. Because the direct environmental impact of GHG emissions is to influence global climate change, GHG emissions are 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 the Project analyzes cumulative global impacts, there is no separate cumulative impacts analysis for global climate change. Virtually all the cumulative projects would also contribute to global GHG concentrations due to the generation of short-term and/or long-term GHG emissions associated with their construction, operation, and decommissioning, if applicable. Utility-scale renewable energy development contributes relatively minor GHG emissions, generally from emissions from heavy equipment used during the construction phase and from vehicular emissions. However, utility-scale renewable energy production also reduces $CO_2e$ emissions from utilities by offsetting emissions from new or existing fossil fuel energy sources. Since GHG emissions are aggregated across the global atmosphere and cumulatively contribute to climate change, it is not possible to determine the specific impact on global climate change from GHG emissions associated with the Project or with the other cumulative projects. The thresholds adopted to analyze Project-level impacts are based on a need to determine the severity of Project-specific contributions to global atmospheric carbon concentrations. This analysis is consistent with that of Palo Verde Mesa Solar Project.

As discussed in Section 3.9.1, the County's CAP is a qualified GHG reduction plan according to CEQA Guidelines Section 15183.5 and thus can be used in a cumulative impacts analysis to determine significance. As shown in response to Threshold "a," the Project would not exceed the 3,000 MT $CO_2e$ threshold established by the CAP. In addition, the Project would be consistent with the energy efficiency requirements of the most recent Title 24 standards, and the water conservation measures required by the current California Green Building Standards Code. Per the County's CAP guidance, given that the Project is below the 3,000 MT $CO_2e$ threshold, and applies the additional efficiency measures required of small projects, the Project would not conflict with the goals of the CAP.

Additionally, the renewable energy generated during the 40 years of Project operation would offset an estimated 64,694 $MTCO_2e$ of grid-supplied electricity annually. These displaced emissions would result in a total net GHG reduction of approximately 54,822 $MTCO_2e$ over the Project life (40 years). Given that the Project would result in a net decrease of $CO_2e$ emissions, impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment would be considered less than cumulatively considerable; and therefore, less than significant. Therefore, the Project would not result in a cumulatively considerable impacts regarding the potential to generate GHG emissions that may have a significant impact on the environment or the potential to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

## 3.9.4 Mitigation Measures

No mitigation would be required.

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# 3.10 Hazards and Hazardous Materials

This section includes an analysis of the environmental impacts from hazards and hazardous materials that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning of the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing hazards and hazardous materials in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to hazards and hazardous materials, and lists mitigation measures that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

Information in this section is based on review of publicly available databases including the Department of Toxic Substances Control (DTSC) EnviroStor database in addition to the following reports:

**Appendix K1** Phase I Environmental Site Assessment (ESA) prepared by Dudek (2023)

**Appendix K2** Phase I Environmental Site Assessment (ESA) prepared by Dudek (2025)

**Appendix L** Limited Phase II ESA prepared by CBRE

**Appendix D** Visual Resources Report prepared by Dudek

## 3.10.1 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 those materials 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 in the California Code of Regulations (CCR), 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.

### Federal Laws, Regulations, and Policies

#### *Resource Conservation and Recovery Act (RCRA)*

The RCRA (42 USC 6901 et seq.) authorizes the U.S. Environmental Protection Agency (EPA) to control hazardous waste "from cradle to grave" (i.e., generation, transportation, treatment, storage, and disposal). RCRA Federal Hazardous and Solid Waste Amendments from 1984 include waste minimization and phasing out of land disposal of hazardous waste, as well as corrective action for releases. DTSC is the lead state agency for corrective action associated with RCRA facility investigations and remediation.

### *Toxic Substances Control Act*

The Toxic Substances Control Act (15 USC 2601-2692) authorizes EPA to require reporting, recordkeeping, testing requirements, and restrictions related to chemical substances and/or mixtures. This act also addresses production, importation, use, and disposal of specific chemicals, such as polychlorinated biphenyls, asbestos-containing materials, lead-based paint, and petroleum.

### *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*

CERCLA (42 USC 9601 et seq.), including the Superfund program, was enacted by Congress on December 11, 1980, and is administered by EPA. This law provides 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, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The National Contingency Plan also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

### *Clean Water Act/Spill Prevention, Control, and Countermeasure (SPCC) Rule*

As part of the Clean Water Act, EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the Code of Federal Regulations (CFR), Part 112, which is often referred to as the "SPCC Rule" because the regulations describe the requirements for facilities to prepare, amend, and implement 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; the total aboveground 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.

### *Emergency Planning and Community Right-to-Know Act/Emergency Planning and Notification*

As part of the Emergency Planning and Community Right-to-Know Act of 1986, EPA established emergency planning and notification requirements contained in Title 40 of the CFR, Part 335. A facility is required to provide information necessary for developing and implementing State and local chemical emergency response plans and provide emergency notification for chemical releases.

### *Occupational Safety and Health Administration*

The Occupational Safety and Health Administration is the agency responsible for ensuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in Title 29 of the CFR, as authorized in the Occupational Safety and Health Act of 1970. These regulations provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling.

### *National Fire Protection Association (NFPA)*

NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) provides minimum requirements for mitigation of hazards associated with energy storage systems (ESSs). The design, construction, and installation of ESSs and related equipment shall comply with NFPA 855 Chapter 4, 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. Underwriters Laboratories (UL) 9540 falls under 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 battery energy storage systems (BESSs).

#### *Federal Aviation Administration (FAA)*

The Federal Aviation Regulation (49 CFR Part 77) establishes standards and notification requirements for objects that may impact navigable airspace. Airports and navigable airspace that are not administered by the Department of Defense are under the jurisdiction of FAA. This regulation includes (1) FAA notification requirements for proposed construction, or the alteration of existing structures, that meet specific standards; (2) the standards used to determine obstructions to air navigation, and navigational and communication facilities; (3) 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 (4) the process to petition FAA for discretionary review of determinations, revisions, and extensions of determinations.

The FAA Advisory Circular 150/5200-33A provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports.

### State Laws, Regulations, and Policies

#### *California Environmental Protection Agency*

The California Environmental Protection Agency (CalEPA) was created in 1991, which unified California's environmental authority in a single cabinet-level agency and brought the California Air Resources Board, State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), Integrated Waste Management Board, DTSC, Office of Environmental Health Hazard Assessment, and Department of Pesticide Regulation under one agency. These agencies were placed within CalEPA 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 (HWCL)*

The HWCL is administered by CalEPA to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until 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 Substances Control*

DTSC is a department of CalEPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. DTSC revised its

hazardous waste regulations (revisions in 22 CCR Division 4.5, sections and articles in Chapters 10, 11, and 23) that allowed photovoltaic (PV) solar panels to be managed as "universal waste" as of January 1, 2021. By being classified as universal waste, PV solar panels are subject to a streamlined set of standards that are intended to ease regulatory burden and promote recycling.

### *California Fire Code (CFC)*

Chapter 12 of the CFC provides provisions related to the installation, operation, and maintenance of energy systems used for generating or storing energy to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Section 1206 of the 2019 CFC provides requirements for electrical ESSs. BESS greater than 600 kilowatt-hours are required by the CFC to be UL listed and have full-scale testing using the testing standard UL 9540A. UL 9540A tests a variety of fire and life safety features on the battery, including thermal runaway, gas venting, and fire propagation.

### *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act is a state law that provides a comprehensive water quality management system for the protection of California waters. The act designates SWRCB as the ultimate authority over state water rights and water quality policy and established nine RWQCBs to oversee water quality on a day-to-day basis at the local and regional level. The Colorado River Basin RWQCB is responsible for protecting the beneficial uses of surface water and groundwater resources in the Project's 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 (CRBRWQCB 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 (CalEPA) was mandated by Senate Bill 1082 (California 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 Program, Underground Storage Tank Program, Aboveground Petroleum Storage Act, Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, and California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements. The Unified Program is implemented at the local level by local government agencies certified by the Secretary of CalEPA. These agencies, known as Certified Unified Program Agencies (CUPAs), implement all the Unified Program elements and serve as a local contact for area businesses. The CUPA for the Project's area is the County of Riverside Department of Environmental Health (DEH) Hazardous Materials Branch. The CUPA also oversees the two Participating Agencies (Corona and Riverside Fire Departments) that implement hazardous materials programs within Riverside County (County).

### *California Public Resources Code, Sections 4292 and 4293*

California Public Resources Code, Sections 4292 and 4293, specify requirements related to fire protection and prevention in transmission line corridors. California Public Resources Code, Section 4292, states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas, and shall maintain around and adjacent to any pole or tower that supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole, a firebreak that consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower. California Public Resources Code, Section 4293, states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass covered land that has primary responsibility for the fire protection of such area, shall maintain a clearance of the respective distances.

### *California Department of Industrial Relations, Division of Occupational Safety and Health Administration*

The California Occupational Safety and Health Administration is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. California Occupational Safety and Health Administration 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 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

### *California Highway Patrol*

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol (CHP), is required by the laws and regulations of State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by State regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping greater amounts in the same manner.

### *Assembly Bill (AB) 203*

AB 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 worksites in counties where valley fever is highly endemic, including, but not limited to, the Counties of Fresno, Kern, Kings, Madera, Merced, Monterey, San Joaquin, San Luis Obispo, Santa Barbara, Tulare, and Ventura, where work activities disturb the soil. These activities include, but are not limited to, digging, grading, or other earth-moving operations, or vehicle operations 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 Section 6709 was required to 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 1 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. The 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 Project with respect to hazards and hazardous materials (County of Riverside 2021).

- **Policy S 5.1.** Enforce land use policies and existing criteria related to hazardous materials and waste through ongoing implementation of the programs identified in the County's Hazardous Waste Management Plan (CHWMP).
- **Policy S 5.2.** Review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the CHWMP. Such projects shall provide a buffer zone, to be determined by the County, between the installation and property boundaries sufficient to protect public safety.
- **Policy S 5.3.** Require that applications for discretionary development projects that will generate hazardous wastes or use hazardous materials include detailed information on hazardous waste reduction, recycling, and storage.
- **Policy S 5.4.** Ensure that industrial facilities are constructed and operated in accordance with current safety and environmental protection standards.
- **Policy S 5.5.** Regulate the storage of hazardous materials and wastes and require secondary containment and periodic examination for all such materials as necessary.
- **Policy S 5.6.** Require that any business that handles a hazardous material prepare a plan for emergency response to a release or threatened release of a hazardous material, including providing updated information to emergency responders on the type and quantity of hazardous materials kept on-site.
- **Policy S 5.7.** Identify sites that are inappropriate for hazardous material storage, maintenance, use, and disposal facilities due to the potential impacts on adjacent land uses and the surrounding natural environment. Prohibit the siting of new or expanded hazardous material facilities on such sites to the extent feasible.
- **Policy S 5.8.** Ensure that the use and disposal of hazardous materials in the County complies with local, state, and federal safety standards.
- **Policy S 5.9.** Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to install automatic fire and hazardous materials detection, reporting, and shut-off devices, and install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.

### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan is an Area Plan within the General Plan (County of Riverside 2021). The Palo Verde Valley Area Plan contains policies regarding the Blythe Airport Influence Area. The following policy is applicable to the Project.

- **Policy PVVAP 3.1**. To provide for the orderly development of Blythe Airport and the surrounding areas, comply with the Airport Land Use Compatibility Plan for Blythe Airport as fully set forth in Appendix K-1 and as summarized in Table 4, as well as any applicable policies related to airports in the Land Use, Circulation, Safety and Noise Elements of the Riverside County General Plan.

### *County of Riverside Department of Environmental Health (DEH)*

DEH is responsible for protecting the health and safety of the public and the environment of the County by ensuring that hazardous materials are properly handled and stored. DEH accomplishes this through inspection, emergency response, site remediation, and hazardous waste management services. DEH also acts as the CUPA for the County and is responsible for reviewing HMBPs. A CUPA is a local agency that has been certified by CalEPA to implement state environmental programs related to hazardous materials and waste. The specific responsibilities of 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 to protect the public and the environment from accidental releases and illegal activities
- Overseeing the investigation and remediation of environmental contamination due to releases from underground storage tanks, hazardous waste containers, chemical processes, or the transportation of hazardous materials
- Conducting investigations and taking enforcement action as necessary against anyone who disposes of hazardous waste illegally or otherwise manages hazardous materials or wastes in violation of federal, state, or local laws and regulations

### *Riverside County Emergency Operations Plan (EOP)*

The EOP is designed to help with County coordination during emergencies. The EOP outlines the functions, responsibilities, and regional risk assessments of the County for emergencies such as wildfire events and determines the planned response for managing these incidents. The plan addresses initial and extended emergency response and recovery processes (County of Riverside 2022).

### *Riverside County Ordinances*

The Riverside County Ordinances includes County legislation. Chapter 8.32 in the Riverside County Ordinances includes Fire Code. The County Fire Code adopts the California Fire Code and describes its applicability.

### *Riverside County Airport Land Use Compatibility Plan (RCALUCP)*

The RCALUCP sets forth the criteria and policies that the Riverside County Airport Land Use Commission uses in assessing the compatibility between the principal airports in the County and proposed land use development in the areas surrounding those airports (County of Riverside 2004). The RCALUCP primarily addresses reviews of local general plans, specific plans, zoning ordinances, and other land use documents covering broad geographic areas. Certain individual land use development proposals also may be reviewed by the Airport Land Use Commission as provided in the policies identified in the RCALUCP. The Airport Land Use Commission does not have authority over existing incompatible land uses or the operation of any airport.

The Airport Land Use Commission adopts Airport Land Use Compatibility Plans for the areas surrounding the airports within its jurisdiction. Local development approvals must be found consistent with the RCALUCP unless approved by a four-fifths supermajority vote. The RCALUCP identifies airport influence

areas to protect the public from the adverse effects of aircraft noise, ensure that facilities and people are not concentrated in areas susceptible to aircraft accidents, and ensure that no structures or activities adversely affect or encroach upon the use of navigable airspace. The Compatibility Plan for Blythe Airport is based upon the Airport Master Plan adopted by the County in 2001. The Blythe Airport area of influence, as defined in the October 2004 RCALUCP, extends north of the airport and intersects the Project site (County of Riverside 2004).

## 3.10.2 Environmental Setting

This section discusses the existing conditions related to hazards and hazardous materials in the Project site and surrounding area and describes the environmental setting for hazardous materials sites, airports, electromagnetic fields (EMFs), and wildfire hazards.

### Current and Historical Property 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 former and current industrial sites have soil or groundwater contaminated by hazardous substances. Other hazardous materials sources include leaking underground storage tanks in commercial and rural areas, contaminated surface runoff from polluted sites, and contaminated groundwater plumes. Current and former agricultural properties may be impacted by contamination from herbicides, pesticides, and/or fumigants.

The Project site is primarily vacant and undeveloped on BLM land, with fallow agricultural fields on private land. Agricultural land is present to the east and west of the site with undeveloped land to the south. A single residential property is located adjacent to the northern Project boundary. An inactive lemon orchard is surrounded by the Project, as shown on Figure 2-1 of the Project Description.

The two Phase I ESA reports noted the following conditions observed on the Project site (Appendices K1 and K2).

- One inactive groundwater well associated with former agricultural use was observed on the northwestern portion of the Project site.
- An irrigation reservoir was observed in the western-central portion of the Project site. A sulfur smell associated with this reservoir was detected during the site reconnaissance.
- Based on the former agricultural use of the subject property, soil sampling was conducted in 2020 to evaluate potential impacts to the subsurface as a result of the former property use. The results of the soil sampling did not indicate that pesticides in the soil were above regulatory screening levels. Arsenic was detected in one soil sample but at a concentration that was below naturally occurring background concentrations for California soils.
- Several concrete pads (formerly used for wind turbines) along with concrete pipelines, valves, and propane tanks were observed throughout the northern, western, and southeastern portions of the Project site.
- A single pole-mounted transformer was observed on the western-central portion of the Project site; however, no staining was observed beneath the transformer.
- A power transmission line was observed on the Project site, parallel to the Buck Boulevard.

- Multiple gasoline underground storage tanks (USTs) associated with former wind turbines were removed from the Project site in the early 1990s. Regulatory closure was granted for the USTs; however, residual gasoline-related compound impacts to soil were noted. Based on residual impacts to the soil presented in the regulatory closure documentation, additional soil sampling was conducted in 2020. Results of the 2020 soil sampling revealed no impacts to the subsurface on the northern half of the Project site.
- The Project site is located within the historical Desert Training Center/California-Arizona Maneuver Area that was used from 1942 to 1944 by Major General George Patton to acclimate soldiers for fighting in desert battlefields and to test desert equipment. According to a 2010 report published by the California Energy Commission, World War II-era unexploded ordnance (UXO) was observed at a nearby site. Although the quantity of UXO observed on the Project site was not presented in the California Energy Commission report, the site is not part of the nearby Formerly Used Defense Site at the Blythe Army Airfield. Since the Project site is not considered a Formerly Used Defense Site, the quantities of UXO, should they be present, would likely be small.
- Solid debris and areas of soil staining were observed all around the lemon orchard property boundary, with a concentration along the western border of the retention basin.
- Twenty-five 500-gallon propane tanks, installed in 1989, are stored on the subject property for wind machines. Concrete pads associated with the wind turbines and their associated fuel source (propane) potentially remain at locations throughout the subject property.
- Three 2,500-gallon water tanks, installed in 1989.

In summary, while historical uses of the Project site included agricultural use, and associated infrastructure (wind turbines, underground storage tanks), and military uses, results of soil sampling concluded there is no evidence of residual soil contamination associated with former pesticide and herbicide use or the former underground storage tanks (Appendices K1 and K2). No further soil sampling was recommended in the Phase I ESAs (Appendices K1 and K2).

## Valley Fever

Valley fever (coccidioidomycosis) is an illness caused by the inhalation of soil-dwelling *Coccidioides* fungus spores, which live in the top 2 to 12 inches of soil in many parts of California, most prevalently in the Central Valley and in desert/dry areas (CDPH 2013). When soil containing this fungus is disturbed by activities such as digging or vehicular driving, or by the wind, the fungal spores become airborne and can be inhaled. Valley fever is not transmitted directly from person to person.

Valley fever usually infects the lungs and can cause flu-like symptoms or pneumonia. Some people with valley fever may develop severe disease, which 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”) or be fatal (CDPH 2022). Many people who are exposed to the *Coccidioides* fungus spores never have symptoms, and numerous mild cases of valley fever likely go undiagnosed. However, valley fever can be serious and even fatal.

Valley fever is considered endemic in California, with cases in California increasing from less than 1,000 cases in 2000 to more than 9,000 cases in 2019 (CDPH 2019, 2023). However, Riverside County is not considered a highly endemic region for Valley Fever. Per the California Department of Public Health (CDPH), the range over 7 years (2016–2022) for coccidioidomycosis cases in the County is 14.3cases per 100,000 people per year. Statewide incidences in 2022 were 19.1 per 100,000 people (CDPH 2023).

The CDPH has conducted investigations of valley fever incidences at solar farms and provided recommendations that included improved worksite dust-control measures; using earth-moving equipment and trucks with high-efficiency particulate air filtered enclosed cabs to protect the operator; implementing and enforcing criteria for suspending work on the basis of wind and dust conditions; providing all outdoor workers access to National Institute for Occupational Safety and Health–approved respiratory protection for exposure to excessive wind-blown dust when conducting or in close proximity to soil-disturbing work; 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 the California Occupational Safety and Health Administration.

## Environmental Contamination

Government Code Section 65962.5 requires CalEPA to compile a list of hazardous waste and substances sites (Cortese List). While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements: Hazardous Waste and Substances Sites from the DTSC EnviroStor database (Health and Safety Codes 25220, 25242, 25356, and 116395), open and active LUST Sites by County and Fiscal Year from the SWRCB GeoTracker database (Health and Safety Code 25295), solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273[e] and 14 CCR Section 18051), "active" Cease and Desist Orders and Cleanup and Abatement Orders from SWRCB (Water Code Sections 13301 and 13304), and hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

In addition, other online databases provide environmental information on release and cleanup cases in the State of California. While not included on the Cortese List, these additional sources may provide additional information regarding potential environmental contamination on the Project site. The other online databases include CalEPA, DTSC, State Water Resources Control Board (SWRCB), National Pipeline Mapping System (NPMS), California Geologic Energy Management (CalGEM) Well Finder, and California Solid Waste Information System (SWIS). A search of these databases identified no Government Code Section 65962.5 sites within the Project site boundary (CalEPA 2024; DTSC 2024; SWRCB 2024; PHMSA 2024; CalGEM 2024; and CalRecycle 2024).

Based on the prior agricultural uses, a limited Phase II was conducted at the site to evaluate the potential presence of associated constituents of concern – pesticide/herbicide compounds and heavy metals (Appendix L). While the results of the limited assessment concluded a minimal presence of legacy contaminants at the site as a result of these prior agricultural activities (Appendix L), the Phase I ESA completed for the inactive lemon orchard parcel concluded that none of the constituents of concern detected exceeded regulatory screening levels or acceptable background concentrations. All of the USTs that were removed in 1991 were assigned a status of "completed-case closed" by the Regional Water Quality Control Board (SWQCB 2025b) between 1996 and 1997 (Appendix K2). Only one pesticide (dieldrin) was detected in surface soil samples, and the concentrations did not exceed regulatory limits. Arsenic was detected in several soil samples at concentrations that exceeded regulatory limits, but below the DTSC established standards. A total of 29 former UST locations were investigated for the presence of residual gasoline; however, only one compound (a volatile organic compound methyl ethyl ketone (MEK)) was detected at low concentrations, which were several orders of magnitude below the established regulatory limit (Appendix K2).

Naturally occurring hazardous materials include asbestos, which is one of several minerals that form very thin mineral fibers and fiber bundles, such as chrysotile, tremolite, and actinolite. Asbestos is considered a hazardous material because when inhaled. Soils containing naturally occurring asbestos minerals have not been identified on or near the Project site (USGS and CGS 2011). Asbestos associated with agricultural infrastructure (e.g., concrete water pipes) could be present on the site given that it was used for agricultural purposes since the 1970s when asbestos building materials were in use. The concrete agricultural infrastructure would be removed and crushed. As such, the Project would comply with MDAQMD requirements regarding asbestos, which require an asbestos survey prior to demolition. As the Project would comply with applicable MDAQMD requirements, no additional mitigation is necessary, and asbestos are not discussed further in this section.

### Wildfires

The presence of dense, dry fuels and a warm, arid climate characterizes Southern California as having one of the most fire-prone landscapes in the world. Factors influencing wildfire behavior and magnitude include (but are not limited to) forest structure, fuel conditions, terrain, climate, weather, and ignition sources. Weather is one of the most significant biophysical factors of wildfire behavior. Wet winters and dry summers with mild seasonal changes characterize the Southern California climate. The summer months of Southern California are arid and warm, with very little precipitation especially in the eastern desert regions. Dry vegetation, low humidity, and high air temperature can combine to produce large-scale fire events. Much of the County is considered to be at risk from wildfires (County of Riverside 2021). Section 3.22, Wildfire, provides a detailed discussion of potential impacts associated with wildfire.

### Schools

There are no existing or proposed K-12 schools located within 0.25 miles of the Project site (GreenInfo 2021; CDE 2023). The closest school is Palo Verde High School, located approximately one mile east of the Project site.

### Airports and Airstrips

The Blythe Airport is a public use airport located approximately 0.7 miles south of the Project site. The Project's proposed Phase 2transmission line would be located north, west, and southwest of the Blythe Airport. The Phase 2 transmission line would require a total of 40 new or replaced poles, with a maximum height of 140 feet tall. The Phase 1 transmission line would be located north and northeast of the Blythe Airport. The Phase 1 transmission line would require a total of approximately 52 new poles, with a maximum height of 140 feet tall. The new poles nearest to the collector substation would be a maximum of 70 feet tall. The Blythe Airport is a public airport owned by the County and leased to the City of Blythe. The Airport is classified in the National Plan of Integrated Airport Systems as a general aviation transport airport, designed to accommodate business jets, cargo-type aircraft, light private planes, and flight school training activities. Aircraft operations average 37 flights per day (AirNav 2024). The airport is also used for flight instruction, aircraft rental, air cargo, and air ambulance (RCALUC 2004). The Project is not in the vicinity of a private airstrip or heliport.

### Electromagnetic Fields

Electric voltage and electric current from transmission lines create electromagnetic fields (EMFs). Possible health effects associated with exposure to EMFs 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 identified as an environmental impact under the California Environmental Quality Act (CEQA). EMF

has not been recognized as an environmental impact to be analyzed in the context of CEQA because (1) there is no agreement among scientists that EMF creates a potential health risk, and (2) there are no defined or adopted CEQA standards for defining health risks from EMF.

## 3.10.3 Impact Analysis

### Methodology

The hazardous materials analyzed include those potentially existing on the Project site and those that would be used as part of construction, operation and maintenance (O&M), and future decommissioning. Potential existing hazards were assessed based on review of state hazard databases and the Phase I and II ESAs that evaluated the presence of existing hazards on the site. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section IX of Appendix G to the State CEQA Guidelines addresses typical adverse effects due to hazards and hazardous materials and includes the following questions to evaluate a project's impacts due to hazards and hazardous materials. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

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

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

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

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

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

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?[1]

Significance thresholds, set forth in Riverside County's Environmental Assessment Checklist, are derived from Section XVIII of Appendix G to the State CEQA Guidelines (listed above), and state that a project would have a significant impact due to hazards and hazardous materials if the project or any project-related component would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

[1] This threshold is analyzed in Section 3.22, Wildfire, of this SEIR, per Riverside County's Environmental Checklist.

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

c) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?

e) 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?

f) Result in an inconsistency with an Airport Master Plan?

g) Require review by the Airport Land Use Commission?

h) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

i) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Schools*

No existing or proposed K-12 schools are located within 0.25 miles of the Project site. The nearest school is Palo Verde College, located approximately one mile east of the Project site. Therefore, the Project would not result in potential emissions or handling of acutely hazardous materials, substances or wastes within ¼ mile pf an existing or proposes school. No impact would occur and this issue is not discussed further in this document.

### *Private Airstrips and Heliports*

The Project site is not located within 2 miles of a private airstrip or heliport. The closest airstrip is by Morris Ag Air Southwest located approximately 4.8 miles southwest of the Project site and the closest heliport is Blythe Service Center Heliport located approximately 4.5 miles southeast of the Project site. Therefore, the Project would not result in a safety hazards to people living near the site or future Project employees and no impact would occur. This issue is not discussed further in this document.

### *Safety Hazards Near Airports for Residents and Workers*

The Project is located within the Blythe Airport AIA and subject to all requirements mandated by the RCALUCP following review of submitted Project plans. Considering the limited number of employees during operation, dispersion of employees during construction, and adherence to all applicable airport safety requirements, there would be no impact to residents and workers in the Project area. This issue is not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts from hazards and hazardous materials per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the project would result in potential impacts relating to the routine transport, use, or disposal of hazardous materials, such as gasoline, oil, or other fluids during the operation and maintenance of construction equipment. Portions of the project site have a history of agricultural production, potentially leaving residual, low-level concentrations of pesticides and other agricultural chemicals in shallow soils and groundwater. With the implementation of MM-HAZ-1 through MM-HAZ-3 and the adoption of applicable BMP's, all impacts were determined to be reduced to a level less than significant.

***Threshold a: 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.*

***Construction and Decommissioning***

The Project site is undeveloped former agricultural land and open space area that includes the historical Desert Training Center/California-Arizona Maneuver Area that operated from 1942 to 1944 to acclimate soldiers for fighting in desert battlefields and to test desert equipment. According to a 2010 report published by the California Energy Commission, World War II-era unexploded ordnance (UXO) was observed at a nearby site. According to the Phase I ESA the Project site is not part of the nearby Formerly Used Defense Site at the Blythe Army Airfield and the report concluded that any UXO, that may be present, would not likely represent any environmental or health risks (Appendix K1).

A limited Phase II ESA was conducted at the site to determine the potential for legacy contaminants due to past agricultural land uses at the site. The results of the ESA determined that "minimal environmental impact" appeared to be present at the site as a result of previous agricultural activities (Appendix L). However, the Phase I ESA completed for the inactive lemon orchard parcel concluded that none of the constituents of concern detected exceeded regulatory screening levels or acceptable background concentrations. All of the USTs that were removed in 1991 were assigned a status of "completed-case closed" by the Regional Water Quality Control Board (SWQCB 2025b) between 1996 and 1997 (Appendix K2). In addition one pesticide (dieldrin) was detected in surface soil samples, and the concentrations did not exceed regulatory limits. Arsenic was detected in several soil samples at concentrations that exceeded regulatory limits, but below the DTSC established background concentration of 12 mg/kg. A total of 29 former UST locations were investigated for the presence of residual gasoline; however, only the VOC MEK was detected at low concentrations, which were several orders of magnitude below the established regulatory limit. The Phase II report did, however, recommend the preparation of a site-specific Soil Management Plan to ensure that no adverse effects would occur to construction workers during earth disturbing activities (Appendix L).

The Project would involve the use of small amounts of hazardous materials. Most of the hazardous materials use and hazardous waste generated by the Project would occur during the temporary construction period and would likely consist of liquid waste, including cleaning fluids, solvents, petroleum products, and herbicides. The fuels stored on site would be in a locked container within a fenced and secure temporary staging area. The Project would prepare a Hazardous Materials Business Plan (HBMP) and Hazardous Materials Management Plan (HMMP), as discussed in Chapter 2, Description of the Project (**APM-HAZ-1b and 1c**). Spill prevention measures and secondary containment would be implemented as part of the Project where warranted with appropriate spill containment and clean-up kits kept on site (**APM-HAZ-1a**). Some solid hazardous waste, such as welding materials and dried paint, may also be generated during construction. A Construction SPCC Plan will be prepared for the Project in accordance

with 40 CFR 112 (**APM-HAZ-1d**) which requires the prevention of, preparedness for, and response to oil discharges. Additionally, a Waste, Hazardous Materials Management, and Emergency Response Plan will be prepared in accordance with state requirements (California Safety Code Division 20, Chapter 6.95, Section 25505 and the California Integrated Waste Management Act and CALGreen Standards). Both plans outline requirements for storage, secondary containment, emergency and spill response, and training for the handling and storage of hazardous materials and petroleum products on the Project site. Safety Data Sheets for all applicable materials present on site would be made readily available to all personnel on site during construction and decommissioning of the Project. The use, storage, transport, and disposal of hazardous materials used in construction and decommissioning of the Project would be carried out in accordance with federal, state, and County regulations. No extremely hazardous substances (i.e., those governed pursuant to 40 CFR Part 335) are anticipated to be produced, used, stored, transported, or disposed of as a result of the Project's construction and decommissioning. 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, crystalline silicon panels or bifacial panels. None of the solar panels being considered contains materials that are classified as hazardous waste because the chemicals within PV modules are highly stable and would not be available for release to and interaction with the environment. If a solar panel is broken during construction, the pieces would be cleaned up completely and returned to the manufacturer for recycling. Throughout construction, waste materials would be sorted on site and transported to appropriate waste management facilities.

Decommissioning impacts are anticipated to be similar to those determined for construction, as described above. The actual impacts would depend on the proposed future decommissioning action and final use of the site. During the decommissioning and disposal process, it is anticipated that all Project structures would be fully removed from the ground. Aboveground equipment that would be removed would include the PV solar panels, electrical wiring, equipment on the inverter pads, and the interconnection transformer pad and associated equipment. Equipment would be de-energized prior to removal, salvaged (where possible), placed in appropriate shipping containers, and secured in a truck transport trailer for shipment off site.

Removal of the PV modules would include removal of the racks and piles on which the solar panels are attached, and their placement in secure transport crates and a trailer for storage, for ultimate transportation to an approved off-site disposal facility or to be recycled. Once the PV modules have been removed, the racks would be disassembled, and the piles supporting the racks would be removed. All other associated site infrastructure would be removed, including fences, concrete pads that may support the inverters, BESS units, transformers and related equipment, and underground conduit/electrical wiring. The fence and gates would be removed last, and all materials would be recycled to the extent feasible. Decommissioning of the site would remove all debris. As discussed above, most panel materials would be recycled, with minimal disposal to occur in landfills in compliance with all applicable laws.

During construction and decommissioning of the Project, herbicides may be applied to control weed growth. Use of herbicides on the Phase 2 transmission line would occur consistent with the requirements of BLM Integrated Weed Management Manual; Federal Noxious Weed Act of 1974; Executive Order 13112, Invasive Species; Plant Protection Act of 2000; National Invasive Species Management Plan; and Section 403 of the California Food and Agriculture Code. Chemical control of weeds on the Phase 2 transmission line would only use BLM-approved active herbicidal ingredients.

For the solar facility, 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 as well as under

the direct supervision of a licensed Certified Pesticide Applicator and all personnel associated with herbicides would be appropriately trained and certified, as required. The Project would not contain a residential or commercial component that would potentially expose people to pesticides or herbicides. As a result, application of herbicides during construction and decommissioning would have a less than significant impact. This differs from the Palo Verde Mesa Solar Project, which concluded that mitigation measures would be required to reduce impacts to less than significant. The Proposed Project does not specify mitigation measures as the incorporation of the APMs would help maintain a **less than significant** impact.

***Operation***

Operation and maintenance activities associated with PV solar facilities are relatively minor when compared to other land uses such as conventional power plants, and would require very limited use of hazardous materials and generation of hazardous waste. The O&M building would house the Project's electronic controls and communications systems; provide storage for tools, maintenance supplies, and spare parts; and provide on-site office and kitchen facilities for operations staff.

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. Project operations could require the use of transformer oil at the substation and other hazardous materials at the BESS, which could contain battery acids, as well as lithium ion, sodium sulfur, and sodium or nickel hydride. All transformers would be equipped with spill containment areas and battery storage would be in accordance with OSHA requirements such as inclusion of ventilation, acid resistant materials, and spill response supplies. Any hazardous materials that would be used would be stored on site and in designated areas in accordance with the HBMP and HMMP (**APM-HAZ-1b and 1c)**. A SPCC Plan would also be prepared (**APM-HAZ-1d**) for operations to prevent and prepare for potential oil spills.

Operational activities involve monitoring plant performance, conducting scheduled maintenance for on-site electrical equipment, and responding to utility needs for plant adjustment. No heavy equipment would be necessary during normal Project operation. O&M vehicles typically include trucks (pickup, flatbed) for routine and unscheduled maintenance, and water trucks for solar panel washing.

Long-term maintenance and equipment replacement would be scheduled in accordance with manufacturer recommendations. 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 conducted as necessary. Compliance with applicable laws and regulations governing the use, storage, transport, and disposal of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner and would minimize the potential for safety impacts.

During operation of the 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. 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 coolant that is biodegradable and contains no polychlorinated biphenyls or other toxic compounds. Best management practices would be employed in the use and storage of all hazardous materials within the Project site, including the use of containment systems in appropriate locations. Similar to construction, herbicides may be used for weed control. The required SPCC Plan, HMBP, HMMP and associated emergency response plan and inventory would be

implemented during operation. Compliance with the required SPCC Plan, HMBP, HMMP (**APM-HAZ-1b and APM-HAZ-1d)** 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 operations. This compares similarly to the Palo Verde Mesa Solar Project, which concluded less than significant impacts with adherence to regulatory requirements and applicable best management practices.

***Threshold b: 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 INCORPORATED (CONSTRUCTION AND DECOMMISSIONING); LESS THAN SIGNIFICANT (OPERATION)*

***Construction and Decommissioning***

Construction and future decommissioning of the Project would involve the use of small amounts of hazardous materials, such as fuels and greases to fuel and service construction equipment. Improper handling and storage of these hazardous materials could result in accidental release if not managed appropriately. The required SPCC Plan, HMMP and HMBP that would be prepared for the Project would include spill response and emergency response procedures and safety measures in the event of a spill or accidental release of any potentially hazardous materials, to reduce adverse effects in the event a release occurred (**APM-HAZ-1b, APM-HAZ-1c, and APM-HAZ-1d**). Any petroleum product storage would be required to include secondary containment (per Oil Pollution Prevention rules in 40 CFR 112).

Construction activities required for the Project would involve trenching, excavation, grading, and other ground-disturbing activities. As discussed in Section 3.10.2, Environmental Setting, soil contamination associated with former agricultural use and munitions from former military operations are not a concern at the Project site based on the findings of the Phase I and Phase II ESAs (Appendices K1, K2, and L). Construction activities would temporarily require use of equipment, such as trucks, excavators, and other powered equipment, and would use potentially hazardous materials such as fuels (gasoline and diesel) and lubricants (oils and greases). In addition, construction may use hazardous materials such as glues, solvents, paints, thinners, or other chemicals. Such materials would be used in quantities typically associated with construction of PV solar facilities and would be transported, handled, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions, as discussed under Threshold 'a', above.

During construction, the required Stormwater Pollution Prevention Plan (SWPPP) (**APM-WAT-1**) must include a list of potential pollutants (i.e., hazardous materials, fugitive dust, sediment, concrete waste), identify fueling areas, and include best management practices (BMPs) to prevent and limit pollutants from reaching stormwater runoff. Spill response plans would also be developed prior to Project construction, operation, and future decommissioning, and personnel would be made aware of the procedures for spill cleanup and the procedures to report a spill. Spill cleanup materials and equipment appropriate to the type and quantity of chemicals and petroleum products expected would be located on site (**APM-HAZ-1a**) and personnel would be made aware of their location.

Valley fever (coccidioidomycosis) is considered endemic in California and *Coccidioides* fungus are present in the arid desert regions of California, including Riverside County. Although the numbers of reported valley fever cases in the County is a fraction of that reported statewide in 2019 (9,004 cases reported statewide versus 255 cases in Riverside County), the number of cases in the County has increased since 2013 (34 cases). Although not in the County, valley fever has been documented to occur in some solar

farm construction workers. Although valley fever is not considered highly endemic (greater than 20 cases per 100,000 population) in the County, there has been a marked increase in the number of cases reported of the last several years. Therefore, 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 the risk of contracting valley fever. Ways to reduce the risk of valley fever include avoiding exposure to dusty air or dust storms, preventing dirt or dust from becoming airborne by wetting or use of palliatives, and, if working at a dusty site, using an N95 or equivalent mask. Construction activities for the Project would be subject to stringent dust control requirements (including Mojave Desert Air Quality Management District (MDAQMD) Rules 402 and 403). The Project includes preparation of a Health and Safety Plan, which would include measures to further reduce dust that would help provide protections from valley fever (**APM-HAZ-1e**). In addition to the Health and Safety Plan, compliance with mitigation measure (**MM)-HAZ-2** (Worker Environmental Awareness Program) would also address health and safety issues associated with the Project. As discussed in Section 3.4, Air Quality, MDAQMD Rule 402 does not allow dust that creates a nuisance to nearby populations, while Rule 403 requires dust control measures, such as wetting construction areas, wetting or covering stockpiles, monitoring fugitive dusts, limiting vehicle track-out, and for larger construction projects, monitoring.

While the Phase II ESA did not find substantive quantities of legacy contaminants, it is possible that earthwork activities during construction could encounter isolated areas with contaminants that exceed regulatory screening levels. Therefore, **MM-HAZ-1** would require implementation of a Soil Management Plan (SMP) which would address the potential exposure of agricultural-related chemicals to construction workers. The SMP will provide guidance for the use of appropriate personal protective equipment (PPE) and soil handling procedures to limit site worker exposure during activities that have the potential to create exposure routes.

As a result of conformance with applicable regulations, implementation of applicable BMPs, and incorporation of **APM-WAT-1, APM-HAZ-1a, APM-HAZ-1b, APM-HAZ-1c, and APM-HAZ-1d, MM-HAZ-1, and MM-HAZ-2**, Project construction would not directly or indirectly 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 impacts would be less than significant with mitigation. While the Palo Verde Mesa Solar Project concluded a less than significant impact, it did identify adherence to regulatory requirements and applicable best management practices to reduce impacts to less than significant levels. This is similar to the Proposed Project, which would also incorporate mitigation measures to reflect current best practices and site-specific needs. Impacts would be **less than significant with mitigation** incorporated.

***Operations***

As discussed under threshold "a", Project operation would require very limited use of hazardous materials and generation of hazardous waste. Similar to construction, any hazardous materials that would be used would be stored on site and in designated areas in accordance with the HBMP and HMMP (**APM-HAZ-1b and 1c)**. A SPCC Plan would also be prepared (**APM-HAZ-1d**) for operations to prevent and prepare for potential oil spills.

The Project would include a 500-megawatt, centralized BESS configuration, which would include batteries housed within containers in a centralized location near the proposed on-site collector substation. BESS design standards typically include lighting, monitoring equipment, cooling units, active exhaust venting, multiple fire detection units including gas/heat/smoke detectors, and fire suppression systems, which adequately address fire risk associated with the unit. The BESS would be designed, constructed, and operated in accordance with applicable industry best practices and regulatory requirements, including, but not limited to, NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) and

Section 1206 of the CFC and, if applicable, certified to UL 9540. Under normal operations, BESS facilities do not contain, store, or generate hazardous materials in quantities that would represent a risk to off-site receptors. Potential hazards associated with a BESS are primarily associated with the possibility of thermal runaway (similar to overheating) occurring from a malfunctioning or damaged battery. Newer battery technologies have minimized the occurrence of thermal runaway through a system of protections including internal cell monitoring and partitioning; use of nonflammable chemicals; container design and features; ventilation, and air-conditioning systems; and inert gas fire suppression systems. The Project includes preparation of a Fire Prevention Plan that would include a discussion of BESS risk reduction and fire prevention measures to reduce the risk of fires (**APM-HAZ-2**). Fire prevention measures would include requiring the use and storage of flammable materials away from areas containing ignition sources and the proper storage of chemicals that are incompatible (i.e., chemically reactive) to ensure substances are separated appropriately.

In all, the potential impact of hazards to the public or the environment arising from the routine use, storage, transport, and disposal of hazardous materials during the Project's operation would be less than significant with the exception of the potential to encounter legacy contaminants from past agricultural land uses.

In summary, as a result of conformance with applicable regulations, implementation of applicable BMPs, and incorporation of **APM-HAZ-1b, APM-HAZ-1c, and APM-HAZ-1d, and APM-HAZ-2.** , Project operation would not directly or indirectly 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. Impacts would be **less than significant**. This is consistent with the Palo Verde Mesa Solar Project, which also concluded a less than significant impact with adherence to regulatory requirements and applicable best management practices.

***Threshold c: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* There is no adopted emergency response plan or emergency evacuation plan that is applicable to the Project site; however, the County does have an adopted Emergency Operations Plan, which establishes a framework for implementing well-coordinated evacuations, and is in accordance with the State of California's Standardized Emergency Management System and the National Incident Command System. Additionally, the County's General Plan Safety Element identifies the Circulation Plan routes as the backbone routes for evacuation purposes (County of Riverside 2021). The Project does not propose to alter roadways identified as evacuation routes in the County's Circulation Plan. Additionally, the Project proposes to provide internal roads that would be constructed in accordance with Riverside County Fire Code (Chapter 8.32) to allow fire and maintenance vehicle access. Primary Project access roads would be up to 24 feet wide and all internal access roads within the Project site would be 20 feet wide and cleared, graded, and compacted in compliance with the County Code.

Potential for temporary lane closures associated with construction and future decommissioning are discussed in Section 3.19, Transportation. As noted in Section 3.19, to minimize impacts during construction, **MM-TRAF-1** (Construction Traffic Management Plan) is recommended. Once constructed, maintenance activities would occur as needed but are not expected to require any temporary travel lane closures that could restrict emergency vehicle movements. Refer to Section 3.19 for detailed discussions regarding access in and around the area.

Thus, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be **less than significant with mitigation**.

While the Palo Verde Mesa Solar Project identified a less than significant impact under Hazards, the EIR refers the reader to the Traffic and Transportation analysis for additional detail. As discussed in Section 3.16, Transportation, of this SEIR, the Palo Verde Mesa Solar Project determined a less than significant impact to emergency access plans due to no road closures being anticipated during construction. Despite the potential road closures for the Proposed Project, emergency access and access to nearby uses during construction activities would be maintained at all times, consistent with Palo Verde Mesa Solar Project. Additionally, Palo Verde Mesa Solar Project still includes a mitigation measure for a Traffic Management Plan.

***Threshold e: 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?***

*LESS THAN SIGNIFICANT.* As detailed in Section 3.10.2, the Project site is not located on or within proximity of a Cortese List site, and as such, would not create a significant hazard to the public or environment due to hazardous materials related to such a site.

The Project site is located within the historic World War II Desert Training Center/California-Arizona Maneuver Area where maneuvers for World War II included weapons training, firing exercises, and laying out and removing landmine fields between 1942 to 1944. However, according to the findings of the Phase I ESA, the site is not part of the nearby Formerly Used Defense Site and the potential for residual contamination due to the historic land uses of the region is low (Appendix K1). Therefore, potential impacts related to hazards from hazardous materials sites pursuant to Government Code Section 65962.5 would be **less than significant**. The Palo Verde Mesa Solar Project concluded no impact, as it did not include the findings from the 2023 Phase I ESA.

***Threshold f: Would the project result in an inconsistency with an Airport Master Plan?***

*LESS THAN SIGNIFICANT IMPACT.* The Project site is located within the Blythe Airport Area of Influence (AIA) for, as defined in the 2004 RCALUCP. The AIA boundary is defined by the outer edge of the FAR Part 77 conical surface. As discussed under Local Laws, Regulations, and Policies, in Section 3.10.1, Regulatory Framework, the Compatibility Plan for Blythe Airport is based upon the Airport Master Plan adopted by the Riverside County Board of Supervisors in 2001 and is included in the RCALUCP. The solar facilities are located in Compatibility Zones D and E. The Project boundary also overlaps Compatibility Zones C and B1, but there are no solar panels or other proposed facilities are in these zones, which are considered exclusion areas for the Project. The proposed Phase 2 transmission line would cross Compatibility Zones D and E while the existing Arlington transmission already crosses Compatibility Zones C, D, and E (See Figure 3.10-1). The proposed Phase 1 transmission line also crosses Compatibility Zones D and E. Under the basic compatibility criteria, Zone D has compatibility requirements that include residential densities, nonresidential intensity limitations of 100 people per acre, structures over 70 feet in height, and discourages the construction of schools and hospitals. Zone C compatibility requirements include residential densities, nonresidential intensity limitations of 75 people per acre, and prohibits the construction of schools, day cares, libraries, hospitals, and nursing homes. Zone E limits structures over 100 feet tall and discourages construction of stadiums.

***Construction***

The maximum worker densities for Compatibility Zone D are 100 people per acre or 300 people on a single acre. The maximum worker densities for Compatibility Zone C are 75 people per acre or 150 people on a single acre. There are no maximum worker densities identified for Compatibility Zone E. The proposed Project site is approximately 3,705 acres and up to 600 workers are anticipated onsite daily during peak

construction with an average onsite workforce of 50-100 individuals. During peak construction, the average daily density would be less than 1 worker per acre within the entire Project site. Even if all workers during peak construction were located in one of the approximately 100-acre, panel areas within Compatibility Zone D, the average daily density would be 6 workers per acre. If all workers during peak construction were located in the collector substation and BESS area, which is approximately 50 acres in Compatibility Zone D, the average daily density would be 12 workers per acre. Additionally, it is reasonable to assume that less than 150 workers would be on any one acre of the Project site at a time. Therefore, the Project would not exceed the RCALUCP maximum densities.

Per RCALUCP Section 4.3.6, flight hazards also include glare or distracting lights which could be mistaken for airport lights, sources of dust, steam, or smoke which may impair pilot visibility, sources of electrical interference with aircraft communications or navigation, or any proposed use, especially landfills and certain agricultural uses, that creates an increased attraction for large flocks of birds. During construction, the Project would include low elevation-controlled security lighting that is shielded so the light is directed downwards. A dust control plan would be followed to control fugitive dust during construction (**APM-AIR-1**). Therefore, construction of the Project would not cause flight hazards.

Based on the Project characteristics, the potential impacts of construction and decommissioning related to consistency with the RCALUCP and Blythe Airport Compatibility Plan would be **less than significant**.

***Operation***

The Palo Verde Mesa Solar Project determined that there would be no impacts as the RCALUC found the Palo Verde Mesa Solar Project consistent with the RCALUCP. However, the Proposed Project includes different components than the Palo Verde Mesa Solar Project and requires a new review by RCALUC. Therefore, this analysis relies on an analysis of the RCALUCP prior to RCALUC review.

The Project would not exceed the RCALUCP Compatibility Zone maximum densities, would exceed minimum open space requirement, and would comply with the RCALUCP land use restrictions. The Project would be consistent with FAA regulations including density and height restrictions and would be designed and constructed to industry design standards and County Building and Safety Department requirements.

Project operation would only require six onsite staff. Therefore, the Project would not exceed the RCALUCP maximum densities.

The RCALUCP also identifies open land requirements for development within Compatibility Zones. Open land can include areas without above-ground structure that are a minimum size of 300 feet by 75 feet. Roads also count as open land if the other requirements are met. The Project would exceed the RCALUCP minimum open land requirements in each Compatibility Zone, as shown in Table 3.10-1. Table 3.10-1 identifies Compatibility Zones that the Proposed Project is within, the acreages, and impact on open space.

**Table 3.10-1. Blythe Airport Compatibility Zones Relevant to the Proposed Project**

| Compatibility Zone | Project Acreage Within Each Zone* | Acreage of Open Land* | Percentage of Open Land | Minimum RCALUCP Open Land Requirement |
|---|---|---|---|---|
| Zone B1 | 22 | 22 | 100% | 30% |
| Zone C | 13 | 13 | 100% | 20% |
| Zone D | 1,047 | 265 | 25% | 10% |
| Zone E | 1,343 | 372 | 28% | None |

**Source:** Riverside County Airport Land Use Compatibility Plan (County of Riverside 2004)

**Note:** *The acreage calculations include the entire solar facility boundary rather than only the Project components. Also, the acreage calculations do not include the existing portion of the transmission line.

Regarding RCALUCP prohibited uses within the Compatibility Zones, the Project would not cause a hazard to aircraft using the airport. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. The tallest structures proposed include the transmission line structures. There are a total of 40 new structures or poles proposed under Phase 2 and approximately 52 proposed under Phase 1. The new transmission structures, nearest to the proposed onsite substation, would range from 65 feet to 70 feet tall located within Compatibility Zone D and would not exceed the ALUC threshold for review. The new transmission structures within Compatibility Zone E would range from 40 feet to 92 feet tall and would not exceed the ALUC threshold for review. Under Phase 2, four structures will be replaced along the existing, north to south portion of the existing Arlington transmission line and would include three structures within Compatibility Zone C and one structure within Compatibility Zone D. These four structures range from 70 feet to 75 feet tall and would be similar to the existing transmission line within the Blythe AIA. While the 75-foot tall structures exceed the 70-foot threshold for ALUC review in Compatibility Zone C, it is assumed that they are exempt from ALUC review because the existing poles are over 70-feet, as previously permitted as part of the Arlington Solar Project. Other transmission structures are either existing, not to be replaced within the Blythe AIA or outside the AIA. Additionally, in accordance with Title 14 CFR Part 77.9, certain structures are required to file with the FAA depending on a number of factors, including structure height and proximity to an airport or navigational equipment (Part 77 Notice Criteria). The structures were input into the FAA notice criteria tool to determine if the structures need to be filed with the FAA and most structures received a determination no hazard. Other structures have been filed with the FAA and a determination of no hazard is pending. The impact is determined to be less than significant.

Operation of the Project would not cause flight hazards per RCALUCP Section 4.3.6. The Project would include low elevation-controlled security lighting that is shielded so the light is directed downwards. Also, the Project would not use equipment that would interfere with aircraft communications.

Per RCALUCP Policy 1.5.3, glare in the eyes of pilots of aircrafts using the airport is considered a visual hazard to aircrafts in flight. A Glare Analysis was completed by Capital Airspace Group for the Project, dated October 27, 2025 (See Appendix C of Appendix D). The results of the analysis predict green glare occurrences for Blythe Airport as a result of the proposed solar facility. However, green glare is associated with a low potential for temporary after-image, which is an effect that the FAA has historically deemed acceptable. Currently, the FAA policies no longer consider the potential for glare impacts on aircrafts from solar projects. The RCALUCP does not specifically identify which types of glares are acceptable, but green glare has a low potential for impact to aircrafts, and was historically deemed acceptable by the FAA. Therefore, hazards associated with attracting glare or distracting lights to aircrafts in flight are considered less than significant with respect to consistency with the RCALUCP. Please see also Section 3.2, Aesthetics for an analysis of light and glare.

Land use development that may cause attraction of birds to increase is also prohibited in the AIA (RCALUC, 2004). Per Advisory Circular 150/5200-33A Section 2.6.2, solar is considered an alternative land use to agriculture that could help mitigate wildlife risks at airports provided that careful planning determines that proposed alternative energy production at airports does not create wildlife attractants of other hazards. Local thresholds are not defined for wildlife attraction as related to hazards to flight. Solar panels are both reflective and have a strong polarization, both elements thought to mimic water or suitable related habitat. As a result, some have theorized that solar panels can attract species that mistake the panels for bodies of water, potentially leading to increased collision-related and other risks. This phenomenon is colloquially referred to as the “lake effect.” Research on this topic is ongoing, but recent

research explains that solar facilities are unlikely to provide cues of a lake to all aquatic birds at all times, and is rather a nuanced process (Kosciuch, 2001; CEC, 2024). Also, transmission structures and fencing can provide increased perching opportunities for predatory birds, but perching would be discouraged through transmission design standards. It is anticipated that the Project would have similar effects as the existing solar projects in the area. Therefore, the hazards to flight are considered less than significant with respect to consistency with the RCALUCP.

Also, the Project would be designed and constructed to industry safety design standards and County Building and Safety Department requirements. Additionally, the Project would not include residential or commercial uses that would be affected by operations at Blythe Airport. Therefore, based on the Project characteristics and required adherence to FAA Part 77 regulations, the potential impacts of operation related to consistency with the RCALUCP and Blythe Airport Compatibility Plan would be **less than significant**.

***Threshold g: Would the project require review by the Airport Land Use Commission?***

*LESS THAN SIGNIFICANT IMPACT.* As noted above, the Project site is located within the Blythe Airport AIA. The new transmission structures, nearest to the proposed substation, would range from 65 feet to 70 feet tall within Compatibility Zone D and would not exceed the ALUC threshold for review, which is for structures over 70 feet. The new transmission structures within Compatibility Zone E would range from 40 feet to 92 feet tall and would not exceed the ALUC threshold for review, which is structures over 100 feet tall. Under Phase 2 four structures would be replaced along the existing, north to south portion of the existing Arlington transmission line and would include three structures within Compatibility Zone C and one structure within Compatibility Zone D. These four structures range from 70 feet to 75 feet tall and would be similar to the existing transmission line within the Blythe AIA. While the 75-foot structures exceed the 70-foot threshold for ALUC review in Compatibility Zone C, it is assumed that they are exempt from ALUC review because the existing poles are over 70-feet, as previously permitted as part of the Arlington Solar Project transmission line. Other transmission structures are either existing, not to be replaced within the Blythe AIA or outside the AIA. As a result, the Project would require review by the ALUC and be subject to any modifications required by the Commission as a result of that review, consistent with FAA Part 77 regulations. The Palo Verde Mesa Solar Project determined that there would be no impacts as the RCALUC found the Palo Verde Mesa Solar Project consistent with the RCALUCP. However, the Proposed Project includes different components than the Palo Verde Mesa Solar Project and requires a new review by RCALUC, as discussed. Therefore, because the Project would require review by the ALUC potential impacts related to review by the Riverside County ALUC would be **less than significant**.

## Cumulative Impacts

**Geographic Scope**. The geographic scope of impacts associated with hazardous materials generally encompasses the Project site including a 1-mile-radius area around the Project site. A 1-mile-radius area allows for a conservative cumulative analysis that ensures that all potential cumulative impacts would be assessed. Similar to other potential impacts, such as those related to geology and soils, risks related to hazards and hazardous materials are typically localized in nature since they tend to be related to on-site existing hazardous conditions and/or hazards caused by the Project's construction or operation. A geographic scope of a 1-mile-radius area is four times the distance used to determine whether hazardous emissions or materials would have a significant impact upon an existing or proposed school, as discussed above. Thus, the geographic scope considered for cumulative impacts from health, safety, and hazardous materials and fuels management is the area extending 1 mile from the boundary of the Project site. This standard coincides with the American Society of Testing and Materials standard search distance for hazardous materials, which is 1 mile. As discussed in Section 3.10.2, Environmental Setting, under

Environmental Contamination, no hazardous material release sites were identified within 1 mile of the Project site (Appendices K1 and K2).

**Cumulative Impacts**. Similar to Palo Verde Mesa Solar Project, the cumulative impacts of the Proposed Project would be **less than significant with mitigation**.

As discussed in Threshold "a," potential cumulative impacts from the transport, use, and disposal of hazardous materials during Project construction would be limited to the areas where concurrent cumulative Project construction is occurring or where concurrent roads are being used for construction traffic. An accident involving a hazardous material release during Project construction or operation through upset or accident conditions that may contain hazardous materials (i.e., petroleum-based lubricants, solvents, fuels, batteries, herbicides, and pesticides) to and from the Project site would typically be location specific. Implementation of the SPCC Plan, HMBP, Stormwater Pollution Prevention Plan, as well as 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. When considered in conjunction with other cumulative projects, multiple simultaneous releases of hazardous materials at cumulative project sites could result in cumulative impacts to environmental conditions (such as comingled groundwater plumes). However, existing regulations require immediate cleanup and reporting of release of reportable quantities of hazardous materials, which would reduce or eliminate the potential for cumulative environmental impacts related to routine use and/or accidental upset or accident conditions.

Cumulative projects would also be subject to the same existing agency regulations as the Project, which address the handling and accidental release of hazardous materials during construction and O&M. Similar to the Project, cumulative projects would include project-specific Worker Environmental Awareness Programs for construction and O&M. Therefore, existing regulations would ensure that the combined effects related to hazards and hazardous materials from the Project and the cumulative projects within the geographic scope of analysis would not result in a cumulatively significant impact with respect to the transport, use, and disposal of hazardous materials.

As discussed in Threshold "b," construction of the Project could result in mobilization of *Coccidioides* fungus spores in airborne dust, incrementally contributing to cumulative fungus spores in airborne dust in the area in combination with other cumulative projects' ground-disturbing activities. If inhaled, such mobilization could expose workers and the public to contracting valley fever. Incorporation of stringent dust control regulations and incorporation of **MM-HAZ-2** into the Project would minimize the risk of workers or the public contracting valley fever.

Past, present, and reasonably foreseeable future projects would also be subject to existing agency regulations that address fugitive dust and would likely have similar mitigation to prepare dust control and air quality plans. Therefore, existing regulations and MMs would minimize the combined effects related to contracting valley fever from the cumulative projects. Accordingly, the Project's incremental contribution to the cumulative valley fever risk would not be cumulatively considerable. The Project's incremental impacts, in combination with other past, present, and probable future projects would not be cumulatively significant.

Similar to the Project, cumulative projects may also have the potential to encounter legacy contaminants from past agricultural land uses. However, implementation of **MM-HAZ-1,** Soil Management Plan (SMP) would address the potential exposure of agricultural-related chemicals to construction workers and reduce or eliminate the potential for cumulative environmental impacts.

As discussed in Threshold "c," the Project would not alter roadways identified as evacuation routes in the County's Circulation Plan. Additionally, the Project's internal roads would be constructed in accordance with Riverside County Fire Code (Chapter 8.32) to allow fire and maintenance vehicle access. **MM-TRAF-1** (Construction Traffic Management Plan) would be implemented to minimize impacts during construction. Cumulative construction projects could result in multiple road closures and delays, cumulatively delaying emergency response or evacuation potential. However, traffic control implemented under **MM-TRAF-1** would reduce the Project's contribution to these impacts and cumulative projects would also be required to adhere to the County Fire Code and other existing regulations. Therefore, cumulative impacts to emergency evacuation would be less than significant with mitigation.

As discussed in Threshold "e," the Project site is not located on or within proximity of a Cortese List site. Although the Project is located within an area that historically was used as a _ historic World War II Desert Training Center/California-Arizona Maneuver Area where maneuvers for World War II included weapons training, firing exercises, and laying out and removing landmine fields between 1942 to 1944. However, the likelihood of encountering contamination related to those past activities is low (Appendices K1 and K2). Past, present, and reasonably foreseeable future projects with the potential to encounter military waste debris and ordnances would likely be required to implement precautionary measures such as performing a Phase I ESA and conducting a soil sampling program if deemed necessary as well as potentially implementing a soil management plan. However, regardless, the occurrences of any legacy contaminants would be site specific and are unlikely to combine to become cumulatively considerable. Therefore, cumulative impacts would be less than significant.

As discussed in Threshold "f", the Project site is located within the Blythe Airport AIA. However, the Project is subject to all FAA Part 77 and RCALUC requirements, just like any other current or future cumulative project would be. As a result, the Project could not combine with other cumulative projects to become cumulatively considerable, and the impact would be less than significant.

## 3.10.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following Applicant Proposed Measures (APMs) are considered as part of the project description and would be incorporated into the design of the Project.

**APM-HAZ-1a:** Appropriate spill containment and clean-up kits shall be kept on site during construction and maintained during the operation of the Project.

**APM-HAZ-1b:** In accordance with the Emergency Planning & Community Right to Know Act, the Applicant will supply the local emergency response agencies with a hazardous materials management plan and an associated emergency response plan and inventory specific to the site; the plan will be filed with the BLM and the County of Riverside and implemented.

**APM-HAZ-1c:** During construction of the Project, Best Management Practices for handling, storing, and disposing of hazardous materials and waste will be followed.

**APM-HAZ-1d:** A Spill Prevention Control and Countermeasure Plan will be developed and implemented that would identify primary and secondary containment for oil products stored on site as well as training in spill management in the event of an unexpected release. The plan will be filed with the BLM and County of Riverside.

**APM-HAZ-1e:** The Applicant will develop an environmental health and safety plan for the construction and operation of the Project to ensure it includes all activities and compliance to all local, state, and federal regulatory requirements. Illness and injury prevention programs will be developed for construction and operation.

**APM-HAZ-2:** Project facilities will be designed, constructed, and operated in accordance with applicable fire protection and other environmental, health and safety requirements. In compliance with County of Riverside requirements, a project-specific fire prevention plan for both construction and operation of the Project will be completed prior to initiation of construction.

**APM-WAT-1** *See full text in Chapter 2, Project Description.*

## Mitigation Measures

The following mitigation measures were developed to substantially lessen the potentially significant hazards impacts that could result from the construction, operation, maintenance, and decommissioning of the Project. Compliance with these measures would ensure impacts are reduced to less than significant.

**MM-HAZ-1** **Soil Management Plan.** Prior to the issuance of a grading permit and before earthwork activity or soil disturbance occurs, the Project applicant/developer or their designated contractor shall retain a qualified environmental consultant to prepare a soil management plan (SMP) that outlines the proper screening, handling, characterization, transportation, and disposal procedures for contaminated or potentially contaminated soils on site. Contaminated or potentially contaminated soils include those impacted by organochlorine pesticides from historical agricultural uses and fuels from former underground storage tanks as discussed in the Phase II ESA (CBRE 2020). Potential conditions and/or hazards that may be encountered during construction activities include but may not limited to buried piping, buried storage tanks, areas of soil staining, or other suspect conditions that can be identified visually and/or from odors within the Project's proposed disturbance area. The SMP shall include:

- Procedures for field screening, stockpiling, sampling, characterizing contaminated or potentially contaminated soils.
- Procedures and requirements for onsite soil reuse, offsite soil reuse, and offsite soil disposal (landfilling).
- Health and safety and training procedures for workers who may come in contact with contaminated soils.
- Onsite soil management requirements to avoid fugitive dust and stormwater runoff, including stockpile management.
- Response and reporting procedures in the event a release of contaminated soils or violation of air quality or water quality rules occurs (Mojave Desert Air Quality Management District and Colorado Regional Water Quality Control Board, respectively).
- Requirements if contaminated soil is identified during Project construction activities. These include, but are not limited to:
    - Stop work requirements for further evaluation of identified contamination;

  - Notification requirements;
  - Documentation requirements for sampling, analysis, and required actions in conformance with regulatory standards; and
  - Protocols for resuming earthwork activities.

- Procedures for the identification, notifications, permitting, handling, abandonment, and disposal of underground storage tanks, piping, sumps, or other features, should any be identified during demolition and construction activities.
- Procedures to meet all applicable federal, state, and local regulations (including Riverside County Department of Environmental Health and Mojave Desert Air Quality Management District) associated with handling, excavating, stockpiling, and disposing of contaminated soils
- The proposed disposal facility that will accept the contaminated soils and procedures for authorization and transportation.

The SMP will be implemented by the Project applicant or their designated contractor for all earthwork activities and activities that have the potential to encounter previously unidentified hazardous materials or wastes on the Project site and within off-site disturbance areas.

**MM-HAZ-2** **Worker Environmental Awareness Program.** A Worker Environmental Awareness Program shall be prepared, and all construction crews and contractors shall be briefed on the plan prior to starting work on the Project. The plan shall address health and safety issues associated with normal and unusual (emergency) conditions. The program shall include, but not be limited, to the following information and guidance:

- Environmental health and safety protocol (including, but not limited to, hazards of valley fever, including the symptoms, proper work procedures, when and how to use personal protective equipment, and informing supervisors of suspected symptoms of work-related valley fever)
- An emergency response plan
- Environmental awareness training, which shall include environmental, cultural, health, and safety training
- Noise/ear protection protocol
- First aid training
- Fire protection and extinguisher maintenance, guidance, and documentation
- Disposal of hazardous materials and waste guidance in accordance with local, state, and federal regulations

**MM-TRAF-1** **Construction Traffic Management Plan.** *See full text in Section 3.19, Transportation.*

## 3.10.5 References

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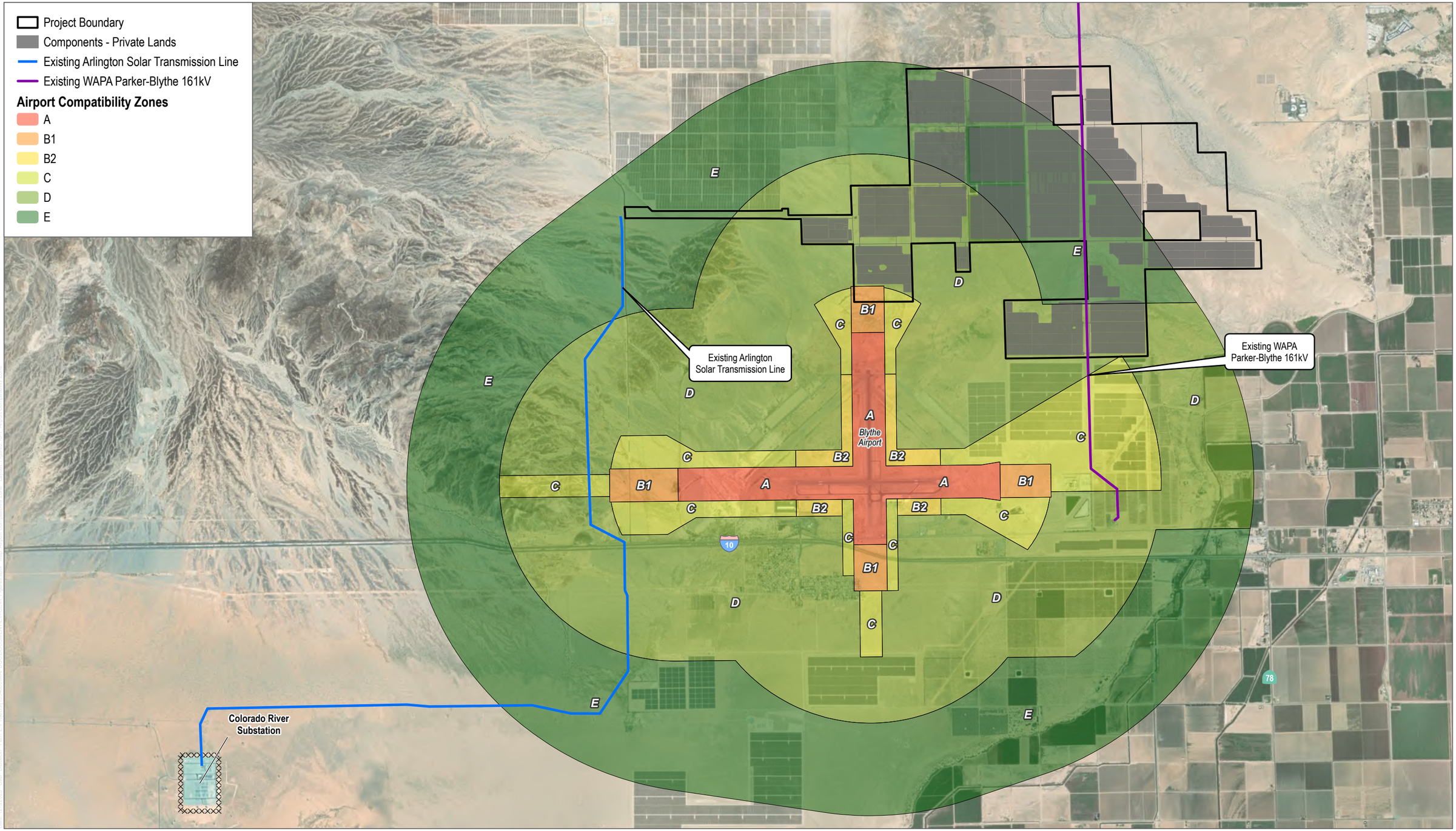
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SOURCE: Esri World Imagery (accessed 2025); Riverside County 2023; California Department of Conservation 2016

DUDEK

N

0 2,300 4,600 Feet

**FIGURE 3.10-1**

Airport Compatibility Zones

Grace Solar Energy Center

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# 3.11 Hydrology and Water Quality

This section includes an analysis of the impacts to hydrology and water quality that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions that influence hydrology and water quality in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to hydrology and water quality, and lists mitigation measures that avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The information in this section is based on multiple online sources and published documents, as well as the following:

**Appendix B1** Grace Solar Geotechnical Engineering and Pile Load Testing Services, prepared by Terracon (2026).

**Appendix B2** Grace Solar Transmission Line Geotechnical Engineering Report, prepared by Terracon (2025).

**Appendix B3** Grace Solar BESS and Substation Geotechnical Engineering Report, prepared by Terracon (2025).

**Appendix F** Water Supply Assessment for the Grace Solar Energy Center Project, Riverside County, prepared by Dudek (2025).

**Appendix N1** Hydrologic/Hydraulic Analysis, Grace Solar, Riverside County, prepared by JE Fuller (2025).

**Appendix N2** Grace Solar Energy Center Pre-Development Flood Study Report, prepared by Revamp Engineering Inc. (2025).

## 3.11.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Clean Water Act*

Formerly the Federal Water Pollution Control Act of 1972, the Clean Water Act (CWA - 33 USC Section 1251 et seq.) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA, enforced by the U.S. Environmental Protection Agency, 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 requires that direct and indirect discharges and stormwater discharges into waters of the United States be pursuant to a National Pollutant Discharge Elimination System (NPDES) permit for industrial or construction activities. NPDES permits contain industry-specific, technology-based limits and may include additional water quality-based limits and pollutant-monitoring requirements. An NPDES permit may include discharge limits based on federal or state water quality criteria or standards. NPDES permitting authority is delegated to, and administered by, the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the United States and adjacent wetlands. Discharges to waters of the United States must be avoided where possible and minimized and mitigated where avoidance is not possible. Permits are issued by the U.S. Army Corps of Engineers.

Section 401 of the CWA requires that any activity that may result in a discharge into waters of the United States be certified by RWQCB. This certification ensures that the proposed activity follows state and/or federal water quality standards.

***National Flood Insurance Act/Flood Disaster Protection Act***

The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws led to mapping of regulatory floodplains and to local management of floodplain areas according to federal guidelines, which include prohibiting or restricting development in flood hazard zones. The Project site is not within an area mapped by the Federal Emergency Management Agency (FEMA) and is therefore considered to be in Zone D, Area of Undetermined Flood Hazard.

***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 (USGS), in cooperation with the U.S. Bureau of Reclamation (USBR), to identify wells outside the floodplain of the lower Colorado River that yield water that will be replaced by water from the river. Wells within much of the Palo Verde Valley Groundwater Basin (PVGB) that includes the Project site are located within the flood plain of the lower Colorado River and thus groundwater beneath the site is considered to be Colorado River water (USGS 2009). Any extractions of water at the site are prohibited without an entitlement. Entitlements to extract and use the groundwater below the site are granted by USBR through its designated representative in California, the Colorado River Board of California. Entities in California are using California's full apportionment of Colorado River water, meaning that all water is already contracted, and no new water entitlements are available in California.

## State Laws, Regulations, and Policies

***California Streambed Alteration Agreement***

Sections 1600–1616 of the California Fish and Game Code require that any entity that proposes an activity that will substantially divert or obstruct the natural flow of any river, stream, or lake, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit material into any river, stream, or lake, must notify the California Department of Fish and Wildlife (CDFW). If the proposed alteration will impact a state jurisdictional river, stream, or lake, a Lake or Streambed Alteration Agreement is required to be prepared. The agreement applies to any stream, including ephemeral streams and desert washes.

***California Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act of 1967, California Water Code Section 13000 et seq., requires SWRCB to adopt water quality criteria to protect state waters. Each regional water quality control board (RWQCB) has developed a Water Quality Control Plan (Basin Plan) specifying water quality

objectives, beneficial uses, numerical standards of pollution concentrations, and implementation procedures for waters of the state. Waters of the state are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the State." General objectives of the Basin Plans state that all waters (of the state) shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. The Basin Plans are intended to protect designated beneficial uses of waters, avoid altering the sediment discharge rate of surface waters, and avoid introducing toxic pollutants to the water resource. The Porter-Cologne Water Quality Control Act requires anyone proposing to discharge waste that could affect the quality of the waters of the state to report the waste discharge to the appropriate RWQCB. The Project is located within Colorado River Basin Region (Region 7), which is under the jurisdiction of the Colorado River Basin RWQCB.

***SWRCB Storm Water Program Construction General Permit (Construction General Permit)***

The Construction General Permit, required by the federal CWA, regulates stormwater runoff from construction sites of 1 acre or more in size. The Construction General Permit is a statewide, standing permit. Qualifying construction activities must obtain coverage under the permit by filing a Notice of Intent with RWQCB and by developing and complying with a Stormwater Pollution Prevention Plan (SWPPP) describing best management practices (BMPs) the discharger will use to protect stormwater runoff. The SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the Section 303(d) list (described below) for sediment.

The Construction General Permit prohibits the discharge of pollutants other than stormwater and non-stormwater discharges authorized by the Construction General Permit or another NPDES permit and prohibits all discharges that contain a hazardous substance in excess of reportable quantities established in Title 40, Sections 117.3 and 302.4, of the Code of Federal Regulations (pursuant to Section 311 of the CWA), unless a separate NPDES permit has been issued to regulate those discharges. In addition, the Construction General Permit incorporates discharge prohibitions contained in Basin Plans. Discharges to Areas of Special Biological Significance are prohibited unless covered by an exception that SWRCB has approved.

The CWA provides definitions for BMPs, which may include runoff control, soil stabilization, sediment control, proper stream crossing techniques, waste management, spill prevention and control, and a wide variety of other measures depending on the site and situation.

***Water Rights***

California water law is embodied in the California Water Code and the Water Commission Act of 1914. There are two basic kinds of rights to surface water: riparian and appropriative. The Project is proposing the use of surface water via the Palo Verde Irrigation District (PVID) which sources raw water from the Colorado River through its existing senior water rights but may also opt to use 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 the city and county decision makers prior to approval of specified large development projects. SB 610 requires that a project be supported by a Water Supply Assessment (WSA) if the project is subject to the California Environmental Quality Act

(CEQA) and qualifies as a "project." Per California Water Code Section 10912(a), a "project" means any of the following:

1. A proposed residential development of more than 500 dwelling units
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
4. A proposed hotel or motel, or both, having more than 500 rooms
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
6. A mixed-use project that includes one or more of the projects specified in this subdivision
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project

SB 610 indicates that if the projected water demand associated with a proposed project was not accounted for in the most recently adopted urban water management plan, or the public water system has no urban water management plan, the WSA for the project shall include a discussion regarding whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years, over a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses.

***Sustainable Groundwater Management Act***

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739, SB 1168, and SB 1319—collectively known as the Sustainable Groundwater Management Act (SGMA), which requires local and regional Groundwater Sustainability Agencies with management authority over high- and medium-priority basins to manage their respective basins within their sustainable yield, in line with minimum thresholds to avoid undesirable results, including chronic lowering of groundwater levels. Under the SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over drafted basins, the agencies must develop planning goals and criteria to achieve sustainability by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through the SGMA, the California Department of Water Resources (DWR) provides ongoing support to local agencies through sustainability plan review, guidance, financial assistance, and technical assistance. The SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably and requires completion of Groundwater Sustainability Plans (GSPs) for crucial (i.e., medium- to high-priority) groundwater basins in California. Among other requirements, GSPs must consider the interests of all beneficial uses and users of groundwater, including environmental users of groundwater, and develop planning goals and criteria to avoid impacts such as significant and unreasonable depletions of interconnected surface water. GSPs must also identify and consider impacts to groundwater-dependent ecosystems within the basin. As trustee for California's fish and wildlife resources, CDFW engages as a stakeholder in groundwater planning processes where resources allow to represent the groundwater needs of groundwater-dependent ecosystems and fish and wildlife beneficial uses.

### *State Water Resources Control Board Policies*

**Antidegradation Policy (Resolution No. 68-16).** This policy requires the RWQCB, in regulating the discharge of waste, to (1) maintain existing high-quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in SWRCB or RWQCB policies; and (2) requires that any activity that produces or may produce a waste or increased volume or concentration of waste, and that discharges or proposes to discharge to existing high-quality waters, to meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to ensure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained.

**Sources of Drinking Water Policy (Resolution No. 88-63).** This policy designates all groundwater and surface waters of the state as potential sources of drinking water, worthy of protection for current or future beneficial uses except under certain specific exemptions.

**Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under California Water Code Section 13304 (Resolution No. 92-49).** This policy establishes requirements for investigation and cleanup and abatement of discharges. Under this policy, cleanup and abatement actions are to implement applicable provisions of Title 23 of the California Code of Regulations Chapter 15, to the extent feasible. The policy also requires the application of Section 2550.4 of Chapter 15 when approving any alternative cleanup levels less stringent than background. It requires remediation of the groundwater to the lowest concentration levels of constituents technically and economically feasible, which must at least protect the beneficial uses of groundwater, but need not be more stringent than is necessary to achieve background levels of the constituents in groundwater.

## Local Laws, Regulations, and Policies

### *Regional Water Quality Control Board NPDES MS4 Permit*

Riverside County (County) is a copermittee on the regional NPDES Municipal Separate Storm Sewer System (MS4) permit (Order No. R9-2015-0100). The MS4 permit establishes requirements for stormwater discharges to meet the technology-based standard of reducing pollutants in the discharge to the maximum extent practicable (MEP), a related iterative process to ensure MS4 discharges meet receiving water quality standards, and for non-storm water discharges to be effectively prohibited from entering the MS4.

### *Riverside County General Plan*

The Riverside County (County) General Land Use and Multipurpose Open Space Elements include policies to improve water quality through regional cooperation with other jurisdictions; compliance with federal, state, and regional regulations. The following General Plan policies relevant to the Project are provided below (County of Riverside 2015, County of Riverside 2021):

- **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 OS 3.3** Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.

- **Policy OS 3.4** Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Stormwater Pollution Prevention Program (SWPPP).

***Palo Verde Valley Area Plan***

The Project is located within the Palo Verde Valley Area Plan (County of Riverside 2021) which does not include any goals or policies related to water quality.

***Riverside County Ordinance No. 682***

Ordinance 682, as amended through 682.4, regulates groundwater wells and provides minimum standards for construction, reconstruction, abandonment, and destruction of all wells to (1) protect underground water resources and (2) provide safe water to persons within the County.

***Riverside County Ordinance No. 650***

Ordinance No. 650, as amended through 650.6, regulates the discharge of sewage in the unincorporated areas of the county and protects water quality and public health by establishing regulations for the installation, replacement, and performance of on-site wastewater treatment systems.

## 3.11.2 Environmental Setting

The Project site is within the Palo Verde Mesa area in Riverside County approximately 4.5 miles northwest of the City of Blythe. The Palo Verde Mesa is part of the Mojave Desert Geomorphic Province, which is characterized by isolated mountain ranges separated by expansive desert plains (CGS 2002). The province has an enclosed interior drainage with numerous playas. The Palo Verde Mesa is loosely bound on the west by the McCoy and Mule Mountains, on the north by the Big and Little Maria Mountains, the south and east by the Colorado River. The contributing watershed extends from the Little Maria Mountains, approximately 16 miles upstream of the Project to the southeastern boundary of the site. Generally, the terrain falls from northwest to southeast across the domain, with drainages contributing along the eastern and western boundaries (see Figure 3.11-1). Slopes range from over 8% to 0.16% throughout the area. The elevation of the Project site ranges from approximately 310 feet above mean sea level (amsl) in the southeastern end of the site to 430 feet amsl near the northwestern end of the site (Appendix B1).

### Climate and Precipitation

The Palo Verde Mesa, being part of the Sonoran Desert ecoregion, is characterized by high aridity, low precipitation, hot summers, and cool winters. Average maximum temperatures in July exceed 108°F with average minimum temperatures is 67°F in December (WRCC 2024). Average annual precipitation, based on the gauging station at Blythe Airport, is approximately 3.6 inches, with August recording the highest monthly average of 0.6 inches and June recording the lowest monthly average of 0.02 inches. Most rainfall occurs during the winter months, or in association with summer tropical storms, which tend to be of shorter duration and higher intensity than winter storms. Eastern Riverside County is currently (July 2024) classified by the National Drought Mitigation Center, National Oceanic and Atmospheric Administration, and U.S. Department of Agriculture as not being in a drought (U.S. Drought Monitor 2024).

### Surface Water

The surface water information presented below is based on information presented in the Hydrology and Hydraulics Report (Appendix N1), Flood Study (Appendix N2), and the Aquatic Resource Delineation

Report (Appendix I) prepared for the Project, as well as other published reports, as cited. The Project site crosses several washes and ephemeral channels. The McCoy Wash is located in the northeast corner of the Project boundary. There is another wash located through the southern portion of the Project site and many ephemeral and intermittent channels on the west side of the Project, primarily on BLM land, along the Phase 2 transmission line route (Appendix I). The drainages generally flow from northwest to southeast toward the Colorado River. There are no canals onsite, but there is existing water conveyance system in the southeast corner of the Project site that may provide water to the Project.

### *Watershed and Flooding*

The Project site is located within both the Southeast McCoy Mountains and Cinnabar Wash-Palo Verde Valley watersheds (EPA 2024). The McCoy Wash borders the site to the northeast. Much of the precipitation that falls in the region evaporates, is transpired by plants, or infiltrates into the ground. Perennial streams do not occur in the Palo Verde Mesa area. There are no existing natural surface water features on the Project site; the closest one to the site is the McCoy Wash. There is also another more minor drainage located farther west and characterized as a somewhat discontinuous drainage that is interrupted by areas that have been graded which altered preferential flow paths (Appendix N1). The majority of the Project site is on private land previously used for agriculture where stormwater drainage occurs as sheet flows.

The Project site is subject to storm flows due to its location on an active desert alluvial fan. Most flows in the region flow toward the southeast. The Project site is not within an area mapped by FEMA and is therefore considered to be in Zone D, Area of Undetermined Flood Hazard. The Project site, specifically the proposed solar array is, however, partially within a Department of Water Resources (DWR) Flood Hazard Awareness Zone which can show areas susceptible to the 100-year, 200-year, and 500-year flood hazards (DWR 2024b). A Flood Hazard Awareness Zone is defined as a 100-year flood hazard areas using approximate assessment procedures that differ from FEMAs approach. These floodplains generally reflect flood prone areas without specific depths and other flood hazard data.

For the hydrology and hydraulics analysis of the Project site, flow depth and velocity modeling was conducted for existing conditions based on guidance from the California Department of Transportation Highway Design Manual which considered the 25-year and 100-year storm events. Based upon these analyses, there are two significant flow paths in the vicinity of the Project site, namely the McCoy Wash which borders the site to the northeast and the second, more minor, drainage located farther west. While the southern portion of the Project is modeled to experience flood depths over 3 feet and velocities at approximately 1.8 feet per second, the remainder of the Project site experiences relatively low velocities and shallow flooding depths (Appendix N1).

### *Water Quality*

The Project is under the jurisdiction of the Colorado River Basin RWQCB. The Basin Plan developed by RWQCB for the Colorado River Basin establishes water quality objectives, including narrative and numerical standards, to protect the beneficial uses of surface waters and groundwaters in the region. The Basin Plan describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies, and documents comprehensive water quality planning.

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 2023).

The RWQCB Basin Plan (RWQCB 2023) lists specific beneficial uses for surface waters and groundwater. Jurisdictional surface waters on the Project site would be classified as washes (ephemeral streams) for which beneficial uses are as follows:

- Groundwater Recharge
- Non-Contact Water Recreation
- Warm Freshwater Habitat (to be established on a case-by-case basis)
- Wildlife Habitat

Beneficial uses of the PVMGB are as follows:

- Aquaculture
- Agriculture

Supply Surface water and groundwater in the Project site are considered suitable, or potentially suitable, for municipal or domestic water supply except under the following circumstances (RWQCB 2023):

- Surface water and groundwater where the total dissolved solids (TDS) exceed 3,000 milligrams per liter, and it is not reasonably expected by RWQCB to supply a public water system.
- There is contamination, either by natural process or by human activity, that cannot be treated for domestic use using either management practices or best economically achievable treatment practices.
- The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.
- Surface water in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, provided that the discharge from such systems is monitored to ensure compliance with all relevant water quality objectives, as required by RWQCB.

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 2023). RWQCB has objectives for groundwater overdraft for several specific groundwater basins, but the PVMGB is not listed among these.

Section 303(d) of the CWA requires states to assess surface water quality and prepare a list of waters (known as the Section 303[d] list of water quality limited segments) considered to be impaired by not meeting water quality standards and not supporting their beneficial uses. Impairment may result from point-source pollutants or non-point-source pollutants. None of the waters in or near the Project are currently listed as impaired (SWRCB 2022).

## Groundwater

The Project site overlies the Palo Verde Mesa Groundwater Basin (basin number 7-39), which covers an area of approximately 226,000 acres (353 square miles) in eastern Riverside County (DWR 2004). Located in California's Colorado River hydrologic region, the Palo Verde Mesa has been rated by the DWR as a very low priority basin (DWR 2024a). The basin is home to an estimated 9,231 people (2010 value) with approximately 278 wells, of which approximately 9 are water supply wells (Groundwater Exchange 2024). Groundwater accounts for approximately 1% of the basin's water supply with groundwater use that averages 2,815 acre-feet annually (DWR 2024a).

Groundwater in the basin is found primarily within alluvial deposits of Quaternary age (up to 2.58 million years old) that consist of sand, gravel, silt, and clay, except for areas near the mountains where the materials consist primarily of coarse-grained rock detritus (DWR 2004). The total storage capacity of the basin is estimated to be approximately 6,840,000 acre-feet (af). Natural recharge in the basin is estimated at about 800 af per year with an estimated recharge from the neighboring Chuckwalla Valley basin at 400 af per year (DWR 2004). According to data from DWR, the basin is not critically over-drafted and there is no documented groundwater level declines (Groundwater Exchange 2024 and DWR 2024a).

## 3.11.3 Impact Analysis

### Methodology

This section analyzes impacts on hydrology and water quality from implementation of the Project based on changes to the environmental setting as described above, identified drainage conditions in the Project site, and the current regulatory framework. The Project's potential impacts to hydrology and water quality were evaluated using the Water Supply Assessment (Appendix F), Hydrology and Hydraulics Report (Appendix N1), and Flood Study (Appendix N2) prepared for the Project, as well as a variety of resources, including multiple online sources and published documents. Using the aforementioned resources, impacts were analyzed according to the CEQA significance criteria described below. The analysis also considers the potential for incremental impacts of the Project to combine with impacts of other projects and activities to contribute to a hydrology and water quality cumulative impact. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section X of Appendix G to the State CEQA Guidelines addresses typical adverse effects to hydrology and water quality and includes the following questions to evaluate a project's impacts on hydrology and water quality. Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

    i) result in substantial erosion or siltation on- or off-site;

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

    iii) create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or

    iv) impede or redirect flood flows?

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The County's Environmental Assessment Checklist includes the same significance thresholds as Section X of Appendix G to the State CEQA Guidelines (listed above).

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Flood Hazard, Tsunami, or Seiche Zones*

The Project site is in an inland desert area and would not be subject to inundation by a tsunami. In addition, no enclosed or semi-enclosed water bodies (e.g., lake, reservoir, canal) capable of producing a seiche are present on or near the site. The Project site is also not located within the 100-year flood zone. Therefore, the Project would have no impact, and this issue is not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts to hydrology and water quality per Appendix G of the State CEQA Guidelines and the County's Environmental Assessment Checklist which is the same as Appendix G, listed above.

### *Summary of Previous Impact Analysis*

2017 Palo Verde Mesa Solar Project EIR: The Palo Verde Mesa Solar Project EIR determined that the project includes ground disturbing activities that would result in potential impacts regarding violation of water quality standards or waste discharge regulation, erosion, surface runoff, exceeding the capacity of stormwater drainage systems, water quality, and impede or redirect flood flows. Adherence to permit conditions under Nationwide Permit 12 would ensure that construction of transmission structures in aquatic features would not substantially alter the existing drainage pattern of the area, preventing flooding on or off-site. Further, the preparation of a SWPPP, implementation of applicable BMPs, and implementation of MM-HYD-1 through MM-HYD-6, would reduce impacts to less than significant.

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

*LESS THAN SIGNIFICANT*

#### Surface Water

Construction of the Project would require site clearing and grading for the solar panels, access roads, transmission lines, an operations and maintenance (O&M) building, substation, a battery energy storage system (BESS), and other Project components. Disturbance of soil during construction could result in soil erosion and temporarily lower water quality through increased turbidity and sediment deposition into local washes. Downstream beneficial uses (refer to Section 3.11.2, Environmental Setting) could be adversely affected through violation of RWQCB water quality standards and objectives for suspended solids, TDS, sediment, and turbidity.

Accidental spills or disposal of harmful materials used during construction activities could wash into and pollute surface waters or groundwater, if not managed appropriately. Materials that could contaminate the construction area or spill or leak include diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. Downstream beneficial uses could be adversely affected through violation of RWQCB water quality objectives for toxicity and chemical constituents.

The dry nature of most of the alluvial fan washes is such that should material spills occur during construction, it could likely easily be cleaned up prior to any possibility of water being contaminated.

Groundwater is well below the maximum depth of excavation, resulting in little likelihood that groundwater could be directly affected from spills during construction. While groundwater was not encountered during the geotechnical investigation, depth to groundwater is anticipated to be greater than 150 feet in the area (Appendix B1 and B2). The on-site groundwater wells range in depth from 250 feet to 585 feet (Appendix F). Fuel and greases for construction equipment would be stored in temporary aboveground storage tanks or sheds located on the Project site with secondary containment measures in place. The fuels stored on site would be in a locked container within a fenced and secure temporary laydown area. Hazardous materials, if present, would be stored in segregated storage with secondary containment as necessary, records of storage and inspections would be maintained, and proper off-site disposal would be provided. Please see Section 3.10, Hazards and Hazardous Materials for more information on spill prevention and procedures in the event of an accidental release of any hazardous materials in addition to the discussion below.

Potential impacts on water quality from erosion and sedimentation are expected to be localized and temporary during construction. Stormwater runoff from the Project site would not discharge into waters of the United States since the Project area is within a watershed that is not hydrologically connected to a navigable waterway. The Project would prepare and adhere to a stormwater pollution prevention plan (SWPPP) as noted in Chapter 2, Description of the Project under **Applicant Proposed Measures (APM) WAT-1,** in conformance with the California Construction General Permit (refer to Section 3.11.1, Regulatory Framework), which would require BMPs to prevent and control erosion and siltation during construction; prevent, contain, and mitigate accidental spills during construction; and prevent violation of water quality objectives or damage to beneficial uses identified in the RWQCB Colorado River Basin Plan.

Potential threats to surface water quality during operational activities include potential increases in erosion and associated sediment loads to adjacent washes, and accidental spills of hydrocarbon fuels, greases, and other materials associated with operation of equipment on site. As described for construction, hazardous materials use, storage, and disposal would be regulated on site in accordance with applicable regulatory requirements. These materials are not intended to be released to the environment, but if spilled or otherwise accidentally released, these substances could have the potential to contaminate surface water or groundwater. As discussed in Section 3.10, Hazards and Hazardous Materials, the required Hazardous Materials Business Plan (HMBP) and Hazardous Materials Management Plan (HMMP), per **APM-HAZ-1b** would delineate hazardous material and hazardous waste storage areas; describe proper handling, storage (including secondary containment), transport, and disposal techniques; describe methods to be used to avoid spills and minimize impacts in the event of a spill; describe procedures for handling and disposing of unanticipated hazardous materials encountered during construction and operation; and establish public and agency notification procedures for spills and other emergencies. In addition, **APM-HAZ-1a** would require spill containment and clean-up kits be kept on site during construction and operation.

These impacts would also be mitigated by compliance with the California General Construction Storm Water Permit described in Section 3.11.1, if applicable.

Decommissioning of the Project is expected to potentially result in adverse impacts related to hydrology and water quality, similar to construction impacts. Demolition, excavations, and site restoration grading could result in potential increases in sediment loads to adjacent washes and/or accidental spills of hydrocarbon fuels and greases and other materials associated with motorized equipment and construction work. A Site Restoration and Revegetation Plan would be prepared for the Project that would be designed to ensure public health and safety, environmental protection, and compliance with all

applicable laws, ordinances, regulations, and standards, including those related to water quality, as noted under subsection 2.6 in Chapter 2, Description of the Project.

Existing state and federal water quality regulations, including the preparation and implementation of a SWPPP, are intended to ensure that water quality standards and waste discharge standards would not be violated during construction, operations, and future decommissioning. The SWPPP would address and mitigate site-specific erosion impacts during construction, operation, and future decommissioning. With implementation of the SWPPP, the Project would not violate any surface water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality. Therefore, with incorporation of the HMBP; HMMP; SWPPP; and Site Restoration and Revegetation Plan, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and impacts would be **less than significant**.

This conclusion differs from the Palo Verde Mesa Solar Project, which in addition to the application of best management practices, required mitigation to maximize the use of existing drainage crossings. However, this would be required as part of the project-specific SWPPP, which would be implemented for the Proposed Project as APM-WAT-1. Thus, the Proposed Project impact would be comparable to the Palo Verde Mesa Solar Project despite the change in mitigation.

**Groundwater**

In the event of incidental spills of petroleum products and hazardous materials during construction, operation, or future decommissioning, groundwater quality impacts could occur if those substances were allowed to migrate to the groundwater table. The potential for groundwater quality impacts would be minimized with adherence to the required Hazardous Materials Business Plan and the NPDES Construction General Permit.

The Project includes construction of a septic system for disposal of domestic wastewater from the O&M building. The septic system would not capture stormwater runoff or wastewater other than domestic wastewater. However, the septic system would be constructed in accordance with County requirements which include measures such as minimum separations from highest groundwater depths that are protective of groundwater quality. As a result, the Project would not violate any groundwater quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality. Therefore, the Project would result in **less than significant** impacts.

As mentioned, the Proposed Project would be comparable to the Palo Verde Mesa Solar Project based on implementation of BMPs to protect water quality in groundwater.

***Threshold b: 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.* The Project's construction and operational water needs are anticipated to be supplied to the site by an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. Groundwater would also be a viable source of water supply that could be used in addition to or in lieu of imported water for construction and operation. If necessary, the Project would use existing wells or in the event that the wells are not in an adequate condition for use, new wells would be constructed. Also, groundwater from an onsite well may be used to fill the water tank to be located in proximity to the O&M building for fire safety. Potable water would be brought to the site in water bottles or as a potable water service delivery, and individual employees would not use the construction and operational water source for consumption.

As discussed in Section 3.11.1, SB 610 indicates that a WSA shall be completed for any project that qualifies as a "project" per California Water Code Section 10912(a). Because the Project is an industrial project that would occupy more than 40 acres of land, a WSA is required. SB 610 indicates WSAs shall include a discussion regarding whether water supplies, during a 20-year projection, will meet the projected water demand associated with a proposed project, in addition to the existing and planned future uses of the water source, including agricultural and manufacturing uses. As a result, a Project-specific WSA (Appendix F) was completed that assessed the sufficiency of water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years over a 20-year projection and over the life of the Project. The WSA concluded that there is sufficient water available for the Project, with PVID holding senior water rights to Colorado River water. Groundwater would be sourced, as necessary. However, the Project's demand represents a 99% reduction from the estimated historical agricultural water usage at the Project site (Appendix F). Based on the groundwater inflows and outflows for the PVGB, there is an existing balance indicating a potential stable and reliable source of Project water supply, if needed (Appendix F).

Construction water use is expected to be approximately 600 AF total for the anticipated 2.33-year construction period. Construction water would be used primarily for dust control and soil compaction, with minor amounts for sanitary and other purposes like fire protection. The average total annual water usage during operation is estimated to be up to 2 AFY for the assumed 40 years of operation, although that estimate is considered very conservative and it could be substantially lower at only 0.57 AFY based on the analysis in the WSA that considers published data of other existing solar facilities (Appendix F). Water use during operations would be primarily for panel washing, restrooms, and general maintenance activities, however panel washing may not even be necessary based on observations of other solar panel facilities.

Should groundwater be sourced to supply water for the Project, one potential concern would be whether Project-related groundwater use could affect flows in the Colorado River. However, any use of Colorado River water without an entitlement would be illegal and is otherwise subject to the Colorado River accounting surface requirements. As such, in the unlikely event that imported surface water is not available, use of groundwater would be subject to the requirements of the Colorado River accounting surface requirements which could include providing for replenishment of groundwater in equal amounts to that extracted.

With respect to groundwater recharge, the Project site is currently pervious, allowing groundwater recharge of all runoff at the site. The Project would introduce new impervious surfaces from the O&M building, the BESS units, the substation control building, and the inverters. However, the solar panels would only nominally impede infiltration of rainfall. The solar panels would be mounted on steel support posts and the intervening areas between posts would be unpaved and pervious. Solar field development would maintain sheet flow of stormwater runoff where possible, thus allowing stormwater infiltration into on-site soils the same as under existing conditions. Electrical inverters and the transformer would be placed on concrete foundation structures or steel skids. The transmission line structures would be constructed of either tubular steel monopoles or lattice structures. The BESS enclosures, O&M building, and other impervious surfaces would be dispersed on the site and represent a relatively small portion of the entire Project area such that it does interfere substantially with groundwater recharge.

Therefore, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. The potential impacts would be **less than significant**, consistent with the Palo Verde Mesa Solar Project.

***Threshold c: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?***

*LESS THAN SIGNIFICANT.* Drainage on the Project site includes ephemeral and intermittent channels that generally flow from northwest to southeast toward the Colorado River (Appendix I). Earthwork for Project construction would require the use of heavy machinery for vegetation removal, grading, installation of roads, solar panels, transmission facilities, the O&M building, the substation, the BESS, and other facilities. Construction and future decommissioning of these facilities would involve the use of tractors, bulldozers, graders, trucks, and various other types of heavy equipment, and would involve minor changes to on-site topography. These activities would loosen existing surface soils and sediments, increasing the potential for erosion during storm events, along with associated effects such as increased downstream sediment yields from on-site disturbed areas. Increased impervious areas could also lead to erosion by increasing the rate and frequency of runoff.

Grading that could result in alteration of drainages would be minimized by the Project's proposed grading design, which would minimize the required volume of earth movement, as described in Chapter 2, Description of the Project. The Project site is relatively flat to gently sloping and would require minimal grading to allow for installation of the solar panels. Grading would be required only for the inverter pads, substation, driveways, and other improvements, including the access roads, transmission lines, O&M building, substation, and BESS. The site would be contour-graded level and the overall topography and drainage patterns would remain unchanged, but within each solar array, high spots would be graded and the soil cut from these limited areas used to fill low spots within the same array area. Very limited cut and fill would be completed within specific solar arrays to limit slope steepness and produce a consistent grade in each solar array area.

Once developed, the area containing the solar panels or arrays (solar site) would maintain sheet flow where possible, with water exiting the site within existing natural contours and flows. However, much of the solar site would be impacted by some form of ground disturbance, either from compaction, drive and crush or grading. There would be some light grubbing for leveling and trenching. Access roads would also be grubbed, graded, and compacted. As described above, impervious groundcover would be limited to foundations for the transmission structures and solar panels, compacted roads and parking areas, O&M building, BESS, and portions of the substation and switchyard.

Sheet flow would be maintained across the majority of the Project site, alteration of the existing drainage pattern and any associated erosion or siltation would be minimal. As described in **MM-BIO-12** (Stream Protection and Compensation), existing hydrologic patterns would be maintained with respect to runoff, and washes, stream beds, and stream banks would be avoided to the extent possible during construction and decommissioning. However, in the absence of final grading plans and drainage plans, there remains a potential for alteration of drainage patterns and localized increased runoff in areas of proposed impervious surfaces, such as the BESS, such that erosion could occur, if not addressed appropriately.

Jurisdictional waters on the Project site presented in the Aquatic Resources Delineation Report (see Appendix I), would be avoided to the maximum extent practicable.

Additionally, a SWPPP would be incorporated in the Project to address potential erosion and siltation on or off-site during construction activities, **APM-WAT-1**. Erosion control measures would be included in the Site Restoration and Revegetation Plan that would be implemented during the decommissioning phase of the Project. In addition, a Project Drainage Plan would be prepared in accordance with County requirements indicating how the Project would control runoff and prevent long-term erosion during operations. The Drainage Plan would include pre-development and post-development peak flow estimates and hydraulic

calculations to determine flood conditions, floodplain limits, flood depths, and velocities. The plan would demonstrate the relationship of drainage and flood features to the components of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports. The plan would also demonstrate adequate design to protect the Project site from flooding, erosion, and scour without adversely affecting adjacent property, inducing erosion, or concentrating or diverting flows. The Drainage Plan would include detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates, including but not limited to retention basins and swales, thus minimizing the potential for off-site erosion and siltation of downstream washes. Finally, future decommissioning would involve site restoration, which would improve site conditions to approximate pre-Project conditions. With incorporation of the SWPPP and Project Drainage Plan, and future implementation of the Site Restoration and Revegetation Plan, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off site. Therefore, the Project would result in **less than significant** impacts.

The Palo Verde Mesa Solar Project determined that, in addition to BMPs, mitigation would be required to reduce impacts to a less-than-significant level. Mitigation included avoidance of existing drainages and crossings, and preparing a drainage plan. As mentioned, this would be required as part of the project-specific SWPPP, which would be implemented for the Proposed Project as APM-WAT-1. Thus, the Proposed Project would be comparable to the Palo Verde Mesa Solar Project despite the change in mitigation.

***Threshold d: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***

*LESS THAN SIGNIFICANT.* Although minimal alteration of drainage patterns is expected, development of the Project would change existing on-site drainage patterns and there remains a relatively 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. Such increases in impervious surfaces and ground surface alterations could result in localized flooding on or off site, if not designed appropriately.

Construction of the Project can be divided into two types: long, linear construction (e.g., improved access roads, internal emergency access roads, collector line routes, and transmission lines) and concentrated site development (e.g., solar panels, BESS, O&M Building, and substation). Concentrated site development would be relatively small compared to the entire area of the Project site and would be located to avoid or minimize impacts on existing drainage channels through location and grading. The internal access roads would be long, linear construction zones and therefore could run cross-gradient to drainage channels and be more difficult to avoid. The proposed Project would include construction of transmission lines and any associated maintenance/access roads to the line that could cross potentially jurisdictional waters. According to the hydrology and hydraulics analysis for the Project site, the majority of the Project is expected to have relatively low stormwater runoff velocities and flooding depths, and the introduction of the new impervious surfaces would not be a significant factor in the hydrology of the Project site and immediately surrounding area (Appendix N1).

As discussed under Threshold "c-i," impervious areas would be limited to the foundations for the proposed solar panels, foundations for the transmission structures, the O&M building and storage building, BESS, and portions of the substation. Together, these features are anticipated to be only a small

portion of the 3,705-acre site (see Figure 2-6 of Chapter 2, Project Description); however, localized increased surface runoff could occur in the vicinity of the McCoy Wash, northeast of the Project site, and to a lesser more minor degree, the southern portion of the site (Appendix N1).

As described above, a Project Drainage Plan would be prepared and would include guidance on controlling runoff volumes and rates and preventing on- and off-site flooding during operations in accordance with County drainage requirements. The Drainage Plan would include pre-development and post-development peak flow estimates and hydraulic calculations; would demonstrate the relationship of existing drainage features to the features of the Project, including buildings, fences, substations, access roads, culverts, linear features, and panel supports; and would demonstrate adequate design to protect from on- and off-site flooding. The plan would include a detailed design of flood retention features necessary to avoid any increase in downstream flood peak flow rates consistent with County drainage control requirements. Finally, future decommissioning would involve site revegetation, which would improve surface runoff conditions to approximate pre-Project conditions. In addition, a Site Restoration and Revegetation Plan would be implemented during the decommissioning phase of the Project. With incorporation of the Project Drainage Plan, and future implementation of the Site Restorage and Revegetation Plan, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in flooding on or off site. Therefore, the Project would result in a **less than significant** impact.

The Palo Verde Mesa Solar Project concluded that mitigation measures were necessary to reduce impacts to less than significant, however these measures are consistent with the existing regulatory requirements described above. Thus, with adherence to regulatory requirements, the Proposed Project would be comparable to the Palo Verde Mesa Solar Project.

***Threshold e: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?***

*LESS THAN SIGNIFICANT.* The Project site and adjoining areas are currently largely undeveloped without stormwater drainage infrastructure. The Project site was previously used for agriculture and past farming practices have modified the natural hydrology of the site; however, runoff still occurs as overland sheetflow. As discussed under 3.11.2, the hydrology of Project site includes washes and ephemeral and intermittent channels, which are mainly located on BLM land. As discussed under Threshold "c-i," localized increases in stormwater runoff would occur in the vicinity of proposed impervious surfaces. However, a Project Drainage Plan would be required by the County and incorporated into the Project design plans to control runoff volumes and rates and prevent on- and off-site flooding during operations. The Drainage Plan would include pre-development and post-development peak flow estimates and hydraulic calculations; would demonstrate the relationship of existing drainage features to Project features; and would demonstrate adequate design to protect from on- and off-site flooding. The plan would also include a detailed design of flood retention features necessary to avoid exceedance of the capacity of existing or planned stormwater drainage systems. In addition, although minor amounts of petroleum products and hazardous materials may be used for long-term maintenance of the Project's facilities, no large quantities of hazardous materials that might be subject to upset and spills during a high-intensity rain event would be stored on site. Finally, future decommissioning would involve site restoration, which would improve stormwater drainage conditions to approximate pre-Project conditions. No other potential sources of polluted runoff that have not already been addressed above in Threshold "a" would occur. With

incorporation of the required Project Drainage Plan, and future implementation of a Site Restoration and Revegetation Plan, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would 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. Therefore, the Project would result in a **less than significant** impact.

The Palo Verde Mesa Solar Project concluded that mitigation measures were necessary to reduce impacts to less than significant, however these measures consist of adherence to the required drainage control measures as previously discussed. Thus, with adherence to regulatory requirements, the Proposed Project would be comparable to the Palo Verde Mesa Solar Project.

***Threshold f: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?***

*LESS THAN SIGNIFICANT.* As noted in Section 3.11.2, Environmental Setting, the Project site is not within a FEMA flood zone but portions are within a DWR Flood Hazard Awareness Zone (DWR 2024b). Also as discussed under 3.11.2, the hydrology of Project site includes washes and ephemeral and intermittent channels, which are mainly located on BLM land. For the hydrology and hydraulics analysis of the Project site, flow depth and velocity modeling was conducted for existing conditions based on guidance from the California Department of Transportation Highway Design Manual which considered the 25-year and 100-year storm events. Based upon these analyses, two flow paths were noted in the vicinity of the Project site, namely the McCoy Wash which borders the site to the northeast and the second, more minor, drainage located farther west. While the southern portion of the Project site is modeled to experience flood depths over 3 feet and velocities at approximately 1.8 feet per second, the remainder of the Project site experiences relatively low velocities and shallow flooding depths (Appendix N1). The solar panels would be installed between 16 and 24 inches off the ground when at their lowest point, which would result in a maximum height of 8.5 to 15 feet from ground level, depending on the module resulting from the final engineering design. Thus, when tilted upright, the panels and associated electrical equipment would be well above any of the modeled flood depths. All proposed new impervious surface areas (e.g., the O&M Building, substation, and BESS), would be required to adhere to all County drainage control requirements. The proposed transmission lines would either be mounted overhead on existing steel poles, or on a new poles which would not substantively impede or redirect flood flows. Similarly, in terms of the access roads, drainage culverts would be installed at drainage crossings to prevent impeding or redirecting flood flows.

However, the Project would include perimeter fencing which, if clogged with debris normally carried by natural flood flows in the desert, could impede and redirect flood flows and substantially increase the flood potential on and off site. The County required no flow-obstructing fences (i.e., block wall, etc.) that would be constructed perpendicular to existing 100-year DWR floodplain limits and that fencing would be designed to allow runoff to traverse the Project site unencumbered. In addition, proposed structures shall be located outside of primary drainages, or if located within such drainages, designed such that they would be elevated and floodproofed as well as not impede or redirect flood flows, resulting in increased flooding of off-site properties. Finally, future decommissioning would involve site restoration, which would improve flood flow conditions to approximate pre-Project conditions. With incorporation of a Project Drainage Plan consistent with County requirements, and future implementation of the Site Restoration and Revegetation Plan, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the

addition of impervious surfaces, in a manner which would impede or redirect flood flows. Therefore, the Project would result in **less than significant** impacts.

The Palo Verde Mesa Solar Project included mitigation measures to ensure that the designs include flood proof measures and fencing restrictions similar to what is required by County requirements. Thus, with adherence to County requirements, the Proposed Project would be comparable to the Palo Verde Mesa Solar Project.

***Threshold i: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?***

*LESS THAN SIGNIFICANT.* As discussed in Threshold "a," existing state and federal water quality regulations, including the required SWPPP, are intended to ensure that water quality standards and waste discharge standards are not violated during construction, operations, and future decommissioning. The SWPPP would address and mitigate site-specific erosion-induced siltation impacts during construction, operation, and future decommissioning consistent with existing local and state water quality requirements. Adherence to these regulations is consistent with the goals and policies of the Basin Plan, and as a result, the Project would not conflict with or obstruct implementation of a Water Quality Control Plan. Groundwater production in the Palo Verde Mesa Groundwater Basin is not managed by an entity and no groundwater management plan or GSP is required or has been submitted to DWR.

As discussed under Threshold "b," the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. As a result, the Project would not conflict with or obstruct implementation of a sustainable groundwater management plan. Therefore, the Project would result in **less than significant** impacts. This was not analyzed in the Palo Verde Mesa Solar Project.

## Cumulative Impacts

**Geographic Scope.** The geographic scope for the cumulative analysis is the Southeast McCoy Mountains and Cinnabar Wash-Palo Verde Valley watersheds, the two watersheds that are intersected by the proposed Project. The following existing, proposed, and reasonably foreseeable projects from Tables 3.1-1 and 3.1-2 in in Chapter 3.1, Introduction to Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, are also located within these watersheds, which has relatively uniform drainage and water quality characteristics: Crimson Solar Energy, Victory Pass, Arica, Desert Quartzite, Oberon, Desert Sunlight, Blythe PV, McCoy/Arlington, Genesis, SCE Red Bluff Substation, Desert Harvest, Palen, Athos Renewable Energy, among some others.

**Surface Water and Water Quality**. Cumulative impacts to hydrology and water quality include the impacts of the Project with those likely to occur from other existing, proposed, and reasonably foreseeable projects, many of which are similar solar power projects. These cumulative projects in addition to the Project have the potential to contribute to cumulative hydrologic and water quality impacts in either of the two watersheds considered. These cumulative projects have the potential to introduce new or exacerbate existing pollutant generation associated with construction, operation, and future decommissioning. 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 Project.

All current and future cumulative projects would be subject to similar measures as the Project when obtaining the required permits to be consistent with state and federal clean water regulations and County floodplain development regulations. As all projects would go through an environmental review process, they would be subject to similar measures as the Project to address potential water quality impacts for the

Project. Many of the projects do or would likely avoid major drainages that traverse those sites. Because the cumulative projects are in a similar hydrologic setting and most are similar types of projects, individual project impacts are expected to be reduced to less than significant through compliance with regulations and mitigation that are designed to ensure that changes to drainage patterns are minimized. Accordingly, there is not an existing cumulative impact; therefore, the Project would not contribute to any cumulative effects to water quality caused by other past, present, and probable future projects.

This conclusion differs from Palo Verde Mesa Solar Project, which identified a less than significant cumulative impact with mitigation. However, as previously discussed, separate mitigation would not be required for the Proposed Project with adherence to existing regulatory requirements and implementation of the APMs.

**Groundwater.** As noted above, the Project would either source water supply needs from imported surface water or groundwater. The WSA (Appendix F), which considers the entire PVGB, determined that the basin is balanced with inflows and outflows and stable groundwater levels. As with the proposed Project, the other cumulative projects are also industrial projects that require preparation of a WSA to demonstrate available water supplies. The WSA prepared for the Project demonstrates that it is unlikely development within the PVGB would have a long-term overdraft condition with all cumulative projects combined, during normal, single dry, and multiple dry year scenarios over a 20-year projection (Appendix F). Therefore, there is no cumulative impact.

The WSA also demonstrates that the water demand of the Project represents a 99% reduction from the estimated historical agricultural irrigation demand that occurred at the Project site. Therefore, the Project would not contribute to an existing cumulative impact to groundwater, consistent with Palo Verde Mesa Solar Project.

## 3.11.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following Applicant Proposed Measures (APM) are considered as part of the project description and would be incorporated into the design of the Project.

**APM-WAT-1:** The Applicant will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will evaluate potential for erosion and sedimentation to occur on site and downstream because of construction, as well as potential for construction-related releases of fuels, oils, solvents, concrete wash-out, greases, paints, and other potential water quality pollutants to become entrained in storm water, or otherwise result in the degradation of surface water or groundwater quality. The evaluation shall implement specific measures to minimize potential effects on water quality. These measures may include, but would not be limited to, installation of temporary settling basins, stabilization of disturbed soils, replanting vegetation after disturbance, limitations on construction during wet periods, installation of temporary erosion control devices (fiber rolls, staked straw bales, detention basins, check dams, geofabric, dikes, and temporary revegetation), covering stockpiled loose material during rain events, equipment maintenance to prevent leaks, application of erosion protection to cut and fill slopes, and other Best Management Practices. Sediment shall be retained on site by sediment basins, traps, or other measures. No disturbed surfaces shall be left without erosion control measures in place during the rainy season. Spill kits to absorb the potential hazardous spills will be on hand during construction to minimize soil contamination and eventual groundwater contamination.

**APM-HAZ-1a** *See full text in Section 3.10, Hazards and Hazardous Materials.*

**APM-HAZ-1b** *See full text in Section 3.10, Hazards and Hazardous Materials.*

### Mitigation Measures

There are no mitigation measures required as all impacts were determined to be less than significant with adherence to existing regulatory requirements and implementation of the APMs.

## 3.11.5 References

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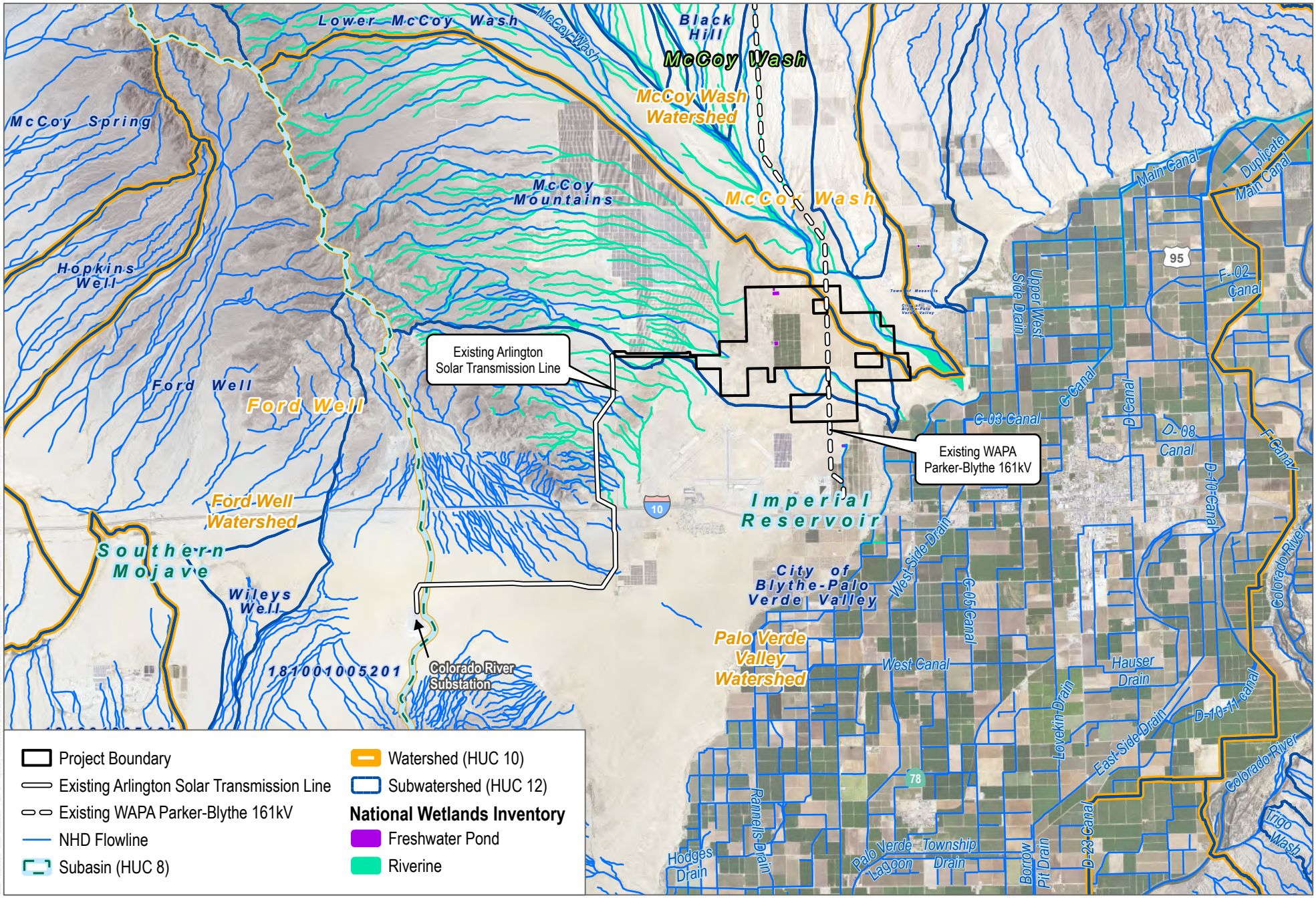
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SOURCE: NAIP 2020

DUDEK

0 6,000 12,000 Feet

**FIGURE 3.11-1**

Hydrological Setting

Grace Solar Energy Center Project

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# 3.12 Land Use and Planning

This section includes an analysis of the impacts on land use and planning that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning of the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions that influence land use and planning, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts to land use and planning, and includes mitigation measures that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

## 3.12.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Federal Land Policy and Management Act, 1976*

The United States Congress passed the Federal Land Policy and Management Act (FLPMA) in 1976. Title V, "Rights-of-Way," of the FLPMA establishes public land policy and guidelines for administration; provides for management, protection, development, and enhancement of public lands; and provides the Bureau of Land Management (BLM) authorization to grant rights-of-way (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 the following:

> [t]he Secretary, with respect to the public lands (including public lands, as defined in Section 103(e) of this Act, which are reserved from entry pursuant to Section 24 of the Federal Power Act (16 USC 818)) [P.L. 102-486, 1992] and, the Secretary of Agriculture, with respect to lands within the National Forest System (except in each case land designated as wilderness), are authorized to grant, issue, or renew ROW over, upon, under, or through such lands for roads, trails, highways, railroads, canals, tunnels, tramways, airways, livestock driveways, or other means of transportation except where such facilities are constructed and maintained in connection with commercial recreation facilities on lands in the National Forest System.

The primary directive guiding all of BLM's decisions under the FLPMA is to put public lands to their highest and best use.

On August 1, 2023, the BLM received a Standard Form 299 application for a BLM ROW grant and an amended Standard Form 299 application on September 9, 2025 to construct, operate, maintain, and decommission the Phase 2 transmission line, which would be located on BLM land under Grace Orchard Interconnection, LLC (Applicant). The solar facility, battery energy storage system, substation, and Phase 1 transmission line are on private lands under the jurisdiction of Riverside County (County).

#### *California Desert Conservation Area Plan*

Section 601 of the FLPMA required preparation of a long-range plan for the California Desert Conservation Area (CDCA). The CDCA Plan was adopted in 1980 to provide for the use of public lands and resources of the CDCA in a manner that enhances, wherever possible, and does not diminish, on balance, the environmental, cultural, and aesthetic values of the desert and its productivity. The CDCA Plan is a

comprehensive, long-range plan covering 25 million acres. Approximately 10.7 million acres of this total are public lands administered by BLM on behalf of the CDCA.

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.

A consistency analysis, including review of all applicable Conservation and Management Actions (CMAs), has been done to ensure the Project aligns with the goals and objectives of the CDCA Plan, as amended. This is included in the Plan of Development and reviewed by the BLM. The CDCA Plan identifies Areas of Critical Environmental Concern as special management areas where attention is required to protect important historic, cultural, scenic, biological, or other natural resources. The Project boundary overlaps an Area of Critical Environmental Concern, the McCoy Wash. There are no facilities proposed within the McCoy Wash and there would be no impacts to the Area of Critical Environmental Concern. The McCoy Wash is considered an exclusion area for development.

The following amendments to the CDCA Plan are incorporated into the plan through their Records of Decision:

- **Northern and Eastern Colorado Desert Coordinated Management Plan.** The Northern and Eastern Colorado Desert Coordinated Management (NECO) Plan provided for management of California desert recreation in El Centro, Blythe, and Needles, as well as cities in the Coachella Valley (BLM 2002). The NECO Plan is a landscape-scale, multi-agency planning effort that protects and conserves natural resources while balancing human uses. Included in the NECO Plan is a route inventory for OHVs and designated routes of travel.
- **Desert Renewable Energy Conservation Plan (DRECP).** In September 2016, the Record of Decision was signed for the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment. The Desert Renewable Energy Conservation Plan (DRECP) is a collaboration between the California Energy Commission, California Department of Fish and Wildlife, BLM, and the U.S. Fish and Wildlife Service. The DRECP is a landscape-level plan that streamlines transmission and renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. The Record of Decision for the DRECP Land Use Plan Amendment (LUPA) was signed in 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 Phase 2 transmission line on BLM managed land is located within an area designated as a Development Focus Area (DFA). DFAs are locations where transmission lines are an allowable use, incentivized, and could be streamlined for approval under the DRECP LUPA. No state or local agency, including the County, has adopted or approved the DRECP. The County recognizes the DRECP under federal law as a land use plan for BLM. It is also a relevant regional plan for purposes of the County's lead agency review of the Project under the California Environmental Quality Act (CEQA), including the DRECP's landscape-level focus on the conservation of, among other things, unique desert ecosystems in the plan area, which includes the Project site.

***Western Solar Plan***

The BLM issued the Final Programmatic Environmental Impact Statement for Solar Energy Development in Arizona, California, Colorado, Nevada, New Mexico, and Utah in July 2012, and signed the associated Record of Decision on October 12, 2012. The Western Solar Plan was adopted through the Approved

Resource Management Plan Amendments/Record of Decision for Solar Energy Development in Six Southwestern States in October 2012.

As part of the Western Solar Plan, BLM identified priority development areas called "solar energy zones" (SEZs) to preserve these sites for future transmission infrastructure and solar energy development. Included in this amendment was the Riverside East SEZ in the County. The transmission line is within this SEZ. SEZs are designated as "developable" areas for transmission infrastructure and solar power development.

## State Laws, Regulations, and Policies

## Local Laws, Regulations, and Policies

### *Riverside County General Plan*

The Riverside County General Plan was adopted on October 7, 2003. Through a series of resolutions, the Board of Supervisors adopted an update on December 8, 2015. The General Plan consists of a vision statement and the following elements: Land Use, Circulation, Multipurpose Open Space, Safety, Noise, Housing, Air Quality, and Administration. The General Plan sets forth County land use policies and guidance for implementation. The General Plan is augmented by more detailed Area Plans covering the County's territory. The Project site is located within the Palo Verde Valley Area Plan (PVVAP).

The private lands associated with the Project are designated as Open Space-Rural and Agriculture per the General Plan (Figure 2-4, Riverside County General Plan - Land Use). 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.

Land designated as Agriculture 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 as Agriculture 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.

The General Plan establishes policies for development and conservation within the entire unincorporated County. The General Plan's policies that are potentially relevant to land use for the Project are provided below (County of Riverside 2015, 2021a).

### *Land Use Element*

- **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 8.1.** Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity.
- **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 [National Environmental Policy Act], 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.** 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.
- **Policy LU 26.5.** Provide programs and incentives that allow Open Space-Rural areas to maintain and enhance their existing and desired character.

***Multipurpose Open Space Element***

- **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.

***Palo Verde Valley Area Plan***

The Project is located within the PVVAP. The PVVAP provides customized direction specifically for this portion of the County and guides the evolving character of the agricultural and desert area. The PVVAP envisions preservation of agricultural character to the east, community development within Mesa Verde, Ripley, and the City of Blythe, recreational resorts near the Colorado River, and identifies land for light industrial development. The PVVAP also envisions maintaining the sparsely populated, natural character of the west. Some commercial development is envisioned to the west, near the intersection of Wiley Well's Road and I-10, and near Blythe Airport. The Area Plan was adopted in 2010 before widespread development of utility-scale renewable projects and as a result is largely silent on such development (County of Riverside 2021b). The following policies would be applicable to the Project.

- **Policy PVVAP 3.1.** To provide for the orderly development of Blythe Airport and the surrounding areas, comply with the Airport Land Use Compatibility Plan for Blythe Airport as fully set forth in Appendix L-1 and as summarized in Table 4, as well as any applicable policies related to airports in the Land Use, Circulation, Safety and Noise Elements of the Riverside County General Plan.
- **Policy PVVAP 4.1.** Protect farmland and agricultural resources in Palo Verde Valley through adherence to the Agricultural sections of the General Plan Multipurpose Open Space and Land Use Elements.
- **Policy PVVAP 7.2.** Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.

- **Policy PVVAP 10.1.** Protect the scenic highways within the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.
- **Policy PVVAP 12.1.** Protect biological resources in the Palo Verde Valley planning area through adherence to the Environmentally Sensitive Lands, Wetlands and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element.

***Riverside County Ordinances***

**Ordinance No. 509, Establishing Agricultural Preserves**. Agricultural preserves are lands identified for, and devoted to, agricultural and compatible uses and are established through resolutions adopted by the County Board of Supervisors. The purpose of this ordinance is to ensure that incompatible uses are not allowed within established agricultural preserves. It sets forth the powers of the County in establishing and administering agricultural preserves pursuant to the California Land Conservation Act of 1965 (Government Code Section 51200, et seq.). The ordinance also establishes "Uniform Rules" for the agricultural and compatible uses allowed in an agricultural preserve. Land uses not covered in the ordinance are prohibited within agricultural preserves. As mentioned, there are no parcels under Williamson Act Contract in the Project boundary and therefore no agricultural preserves.

**Riverside County Ordinance No. 625, the "Right to Farm" Ordinance.** The purpose of the Ordinance No. 625 is to reduce the loss of agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. It was enacted to conserve, protect, and encourage the development, improvement, and continued viability of agricultural land. As mentioned, the Project is located on undeveloped land, an inactive lemon orchard, or fallow agricultural land, where the Project would not impact active agricultural operations.

**Riverside County Ordinance No. 348.4705.** 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 (CUP) in the following zone classifications: General Commercial (C-1/C-P), Commercial Tourist (C-T), Scenic Highway Commercial (C-P-S), Rural Commercial (C-R), Industrial Park (I-P), Manufacturing Servicing Commercial (M-SC), Medium Manufacturing (M-M), Heavy Manufacturing (M-H), Mineral Resources (M-R), Mineral Resource and Related Manufacturing (M-R-A), Light Agriculture (A-1), Light Agriculture with Poultry (AP), Heavy Agriculture (A-2), Agriculture-Dairy (A-D), Controlled Development (W-2), Regulated Development Areas (R-D), Natural Assets (N-A), Waterways and Watercourses (W-1), and Wind Energy Resource Zone (W-E). The private lands associated with the Project are located primarily within lands zoned as W-2-10 Controlled Development Areas (Figure 2-5, Riverside County Zoning). There is also one parcel zoned as A-1-10 Light Agriculture and a few parcels zoned as N-A Natural Assets. Thus, the proposed Project does not require a zone change. The Project would require the following discretionary actions by the County to implement the Project:

- **Conditional Use Permit (CUP 03684)** is proposed to be amended for the construction, operation, and decommissioning of the proposed solar facility.
- **Development Agreement (DA 00086)** is proposed to be amended for the construction, operation, and decommissioning of the proposed solar facility.
- **Public Use Permit (PUP 00916)** is proposed to be amended for the portions of the transmission line that would cross County roads.

**Resolution No. 84-526, Riverside County Rules and Regulations Governing Agricultural Preserves.** These rules and regulations were adopted pursuant to California Government Code Section 51231 to govern agricultural preserve procedures within the County and to aid in implementation of the Williamson Act.

The rules and regulations address procedures for the initiation, establishment, enlargement, disestablishment, and diminishment of agricultural preserves. To protect existing agricultural lands and agricultural preserves within the County, Division VI of these rules requires a "Comprehensive Agricultural Preserve Technical Advisory Committee" (CAPTAC) to review and report on land use proposals and applications related to agricultural preserves and advise the County Board of Supervisors on the administration of agricultural preserves, as well as Williamson Act contract-related matters. In particular, the CAPTAC is charged with reviewing any proposals for the diminishment or disestablishment of an agricultural preserve and providing its recommendations to the Board of Supervisors. Regarding diminishments and disestablishments, the CAPTAC reviews the following findings:

- Whether a notice of nonrenewal has been served pursuant to the Williamson Act, Section 401 of these rules
- Whether the cancellation is likely to result in the removal of adjacent lands from agricultural use
- Whether the proposed alternative use of land is consistent with the provisions of the Riverside County General Plan
- Whether the cancellation will result in discontinuous patterns of urban development
- Whether there is proximate non-contracted land that is both available and suitable for the use for which the contracted land is being proposed
- Whether the development of the contracted land would provide more contiguous patterns of urban development than that of proximate non-contracted land

As mentioned, there are no parcels under Williamson Act Contract in the Project boundary and therefore no agricultural preserves.

## 3.12.2 Environmental Setting

The Project site is located in eastern Riverside County, approximately 2.8 miles north of Interstate (I) 10, adjacent, on the west side, to the city limits of Blythe, in the unincorporated county, California (refer to Figure 2-1, Project Location). The Project site is undeveloped and includes an inactive lemon orchard and former agricultural land that is now fallow in addition to vacant, undeveloped land. Undeveloped lands in this area generally include native creosote scrub. The topography of the Project site generally slopes downward toward the southeast toward McCoy Wash. Ground surface elevations at the Project site range from approximately 310 feet above mean sea level (amsl) in the southeastern end of the site to 430 feet amsl near the northwestern portion of the site. There are no buildings or structures present on the site with the exception of an underground water conveyance system in the southeast corner of the Project site which connects to an offsite canal. Tree species, such as *Olneya tesota* (Ironwood), were also identified onsite, primarily near the washes and along the transmission line (Appendix C). A privately-owned active lemon orchard is surrounded by the Project, but outside the Project boundary (Figure 2-6). McCoy Wash is an Area of Critical Environmental Concern within the Project site but does not include any facilities. McCoy Wash is considered an exclusion area for development. Dracker Drive runs along the west side of the Project boundary and Buck Boulevard is to the southeast.

Development in the surrounding area consists of inactive and fallow agricultural fields and overhead electrical transmission lines in addition to the following solar projects: Blythe Solar Energy Project, which is adjacent, north of the Project; McCoy Solar Energy Center, which is approximately 3 miles northwest of the Project; Arlington Solar Energy Project, which is approximately 3 miles northwest of the Project; Blythe Mesa Solar, which is adjacent, south of the Project; Blythe 21 Solar, which is approximately 1 mile south

of the Project; Crimson Solar, which is approximately 6 miles southwest of the Project; and Blythe Airport Solar 1, which is approximately 0.7 mile south of the Project (Figures 2-1 and 2-3). Desert Quartzite is a nearby solar project that is permitted/under construction approximately 4 miles south of the Project. These solar projects have existing or proposed transmission lines connecting to the Southern California Edison Colorado River Substation.

Other adjacent land uses include the community of Mesa Verde approximately 1.2 miles east and the City of Blythe approximately 4.5 miles southeast of the Project boundary. A single residence is located just north of the Project boundary and the Rancho Ventana RV Resort is approximately 2 miles northeast of the Project boundary. Other nearby community resources include a gas station north of the community of Mesa Verde, Palo Verde College approximately one mile east of the Project boundary, Blythe Airport approximately one mile south of the Project boundary, and Blythe Municipal Golf Course adjacent to the Rancho Ventana RV Resort.

A portion of the Project site includes land administered by the U.S. Department of Interior, BLM. The undeveloped land on the BLM-administered parcels is generally native creosote scrub and include numerous drainages, with some recreational disturbance by undesignated off-highway-vehicle (OHV) routes and open routes as designated by the BLM.

**Riverside County General Plan Land Use Designations**

The Project is located within the PVVAP Boundary of the Riverside County General Plan. The private lands associated with the Project are designated as Open Space-Rural and Agriculture (Figure 2-4, Riverside County General Plan - Land Use). All parcels within the Project site are designated as Agriculture and most of the land along the transmission line is designated as Open Space-Rural with a few areas designated as Agriculture.

**Existing Zoning**

Private lands within the Project site are zoned W-2-10 Controlled Development Areas, A-1-10 Light Agriculture, and N-A Natural Assets (Figure 2-5, Riverside County Zoning). The transmission line parcels are zoned N-A Natural Assets and W-2-10 Controlled Development Areas.

## 3.12.3 Impact Analysis

### Methodology

The land use consistency evaluation reviews the proposed Project for consistency with applicable goals and policies contained in the County's General Plan, as well as the PVVAP, and the Riverside County Zoning Ordinance. Physical environmental impacts resulting from development of the Project site are discussed in the applicable technical sections in Chapter 3 of this ~~Draft~~ Final SEIR. Land use can be assessed by analyzing current land activities, land ownership, zoning, and consistency with existing land use plans, ordinances, regulations, and policies. Compliance with applicable policies is provided in Table 3.12-1, below. An 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 sites and surrounding area. The focus of the land use analysis is on land use conflicts that could 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. Significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

The proposed solar site is located on private lands, and the transmission line is located on BLM-administered public lands.

## Criteria for Determining Significance

Section XI of Appendix G to the State CEQA Guidelines addresses typical adverse effects on land use and planning and includes the following questions to evaluate a project's impacts on land use and planning. Would the project:

a) Physically divide an established community?

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section XI of Appendix G to the State CEQA Guidelines (listed above), and state that the project would have a significant impact on land use and planning if the project or any project-related component would:

a) Physically divide an established community?

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Division of an Established Community*

The Project site is located on an inactive lemon orchard, fallow agricultural land, and undeveloped private land, and BLM-administered land. There are no residences or residential communities within the Project boundary. There is one residence adjacent to the Project site, the closest established communities are over 1 mile from the Project site. The proposed solar facility is located in the same remote location as Palo Verde Mesa Solar Project. The Palo Verde Mesa Solar Project EIR identified additional residences (six residences are within 1,000 feet and over 200 residences within one mile) near the project site due to a different transmission line route, but still determined that there would be no division of an established community. Therefore, the Project, which is nearby less residences compared to Palo Verde Mesa Solar Project, would not physically divide an established community and no impact would occur, and this issue is not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts to land use and planning per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Previous Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the project would be subject to the Riverside County General Plan, PVVAP, City of Blythe General Plan 2025, CDCA, and NECO Management Plan. The EIR determined that implementation of the project would not conflict with the applicable local land use plans, policies, or regulations and impacts would be less than significant, and no mitigation measures are required.

***Threshold b: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?***

*LESS THAN SIGNIFICANT*. This impact considers both the use of the land and the existing rights and potential conflicts with the Project. The Project is located on approximately 3,705 acres, of which approximately 3,310 acres is located on private lands and approximately 395 acres is located on land administered by the BLM. This is compared to the Approved Palo Verde Mesa Solar Project, which included approximately 3,345 acres on private land for the solar site and transmission line and 48 acres on BLM-administered land for the transmission line.

## Phase 2 Transmission Line (BLM Lands)

The entirety of the 395-acre area associated with the Phase 2 transmission line is on BLM-administered lands that are located within a DFA for transmission, solar, wind, and geothermal projects, as designated by the DRECP. The Project is also located within the Riverside East SEZ, which is a DFA under the DRECP. The DFA designation identifies land well-suited for development of transmission lines, renewable energy facilities, and associated infrastructure, without requiring a LUPA if a project complies with relevant DRECP CMAs. Although only BLM and no state or local agency (including the County) ultimately adopted the DRECP such that it applies to federal lands only, the DRECP included non-federal lands as well. As noted in Section 3.12.1, Regulatory Framework, BLM describes the DRECP as a landscape-level plan that streamlines transmission and renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. Although it never adopted the DRECP, the County has determined that the DRECP is a "land use plan" relevant to its lead agency review as a tool for identifying the most appropriate lands for transmission and solar development within the County. By being located within a DFA, the Project site is appropriate for transmission development, and is consistent with the DRECP.

Unlike the proposed Project, the Palo Verde Mesa Solar Project EIR did not evaluate consistency with the DRECP as the Project was completely within a utility corridor when located on BLM-administered land and consistent with the CDCA and NECO Plan. The Palo Verde Mesa Solar Project EIR evaluated a different transmission line route to the existing SCE Colorado River Substation, located primarily on private land and partially on BLM-administered land. The transmission line on BLM-administered land was located within the BLM Utility Corridor K and therefore, would not have required a plan amendment to the CDCA.

The transmission line would be consistent with the CDCA Plan, as amended by the DRECP LUPA, and its applicable CMAs. Because this land is specifically designated for transmission developments such as the Project, there would be no conflicts with BLM land use, and the Project would not conflict with federal policies, regulations, and goals.

The transmission line includes various OHV routes designated as open by the NECO Plan Amendment on the BLM lands. Designated OHV routes along the transmission line would likely be closed during construction but would reopen during operation and maintenance of the Project. Closure or rerouting of BLM open routes would be considered by BLM in its NEPA document and would be considered an implementation process, consistent with BLM regulations.

If the transmission line is developed on this site, the land could not be used for other use opportunities that would otherwise be available on public lands during the life of the Project. At the end of the BLM ROW Grant term (for the transmission line), if there is no contract extension available, the transmission line would be decommissioned. Decommissioning would include removal of all Project-related structures and infrastructure and restoration of all disturbed areas to their pre-construction conditions (refer to

Chapter 2, Section 2.6, Decommissioning, for additional details). The land would then be available for other uses, as allowed by applicable federal land use planning documents and regulations at the time of decommissioning.

While Phase 2 of the proposed Project is subject to the DRECP, unlike the Palo Verde Mesa Solar Project, it would be consistent with the DRECP CMAs and thus would be consistent with applicable land use plans like the Palo Verde Mesa Solar Project.

### Solar Site and Phase 1 Transmission Line (Private Lands)

While OHV routes cannot be officially designated on private land, there are some non-designated OHV routes throughout the Project site used by recreationalists via unauthorized travel on private land. The heaviest uses are in the southern portion of the site and near the McCoy Wash in the northeast corner of the site. The Project would close access during construction, operation, maintenance, and decommissioning of the proposed Project. The boundary of the solar site would be secured by a permanent security fence with posts set in concrete. The fence would be a 6-foot-tall chain link fence with 1-foot-tall strands of barbed wire along the top which would help prevent the illegal use of OHV routes across private lands. Recreational users would likely increase OHV usage in other areas in the county outside the Project site where OHV use areas are designated. There would be no increase in use of nearby authorized recreational facilities, such as parks or wilderness areas where OHV use is prohibited, and no impact to authorized recreational land use.

The solar facilities and Phase 1 transmission line are located on private lands and therefore required to be consistent with local land use policies. Table 3.12-1, Consistency with Regional and Local Land Use Plans, Policies, and Regulations, below includes a review of the applicable local land use policies. The private land components would be expected to be consistent or substantially consistent with all local and regional policies adopted for the purpose of avoiding or mitigating an environmental effect. Additionally, the solar facilities would be consistent with the County's policies to promote alternative energy supply sources and provide solar opportunities. As part of the permitting process, the Applicant is coordinating as appropriate with specific County departments, such as the Riverside County Fire Department, that may be impacted by the Project (both the transmission line and solar facilities) to ensure any impacts are addressed and that the Project does not impact public facilities (refer to Section 3.17, Public Services, regarding impacts to public services and facilities).

On private land, the Project would be subject to the Riverside County General Plan, PVVAP, and County Ordinances. Unlike Palo Verde Mesa Solar Project, the Proposed Project is not subject to the City of Blythe General Plan 2025, as the proposed transmission lines are no longer located within the City of Blythe. Similar to the Palo Verde Mesa Solar Project, the Proposed Project is consistent with the applicable land use plans, policies, and regulations. Table 3.12-1 describes how the Project would be generally consistent with applicable local land use plans, policies, or regulations.

**Table 3.12-1. Consistency with Regional and Local Land Use Plans, Policies, and Regulations**

| Policy/Regulations/ Goals | Description | Consistency Analysis |
|---|---|---|
| **Riverside County General Plan: Land Use Element** | | |
| LU 7.1 | Require land uses to develop in accordance with the General Plan and area plans to ensure compatibility and minimize impacts. | **Consistent.** The Project would be consistent with the Riverside County General Plan and PVVAP and would be generally compatible with surrounding uses. |

**Table 3.12-1. Consistency with Regional and Local Land Use Plans, Policies, and Regulations**

| Policy/Regulations/ Goals | Description | Consistency Analysis |
|---|---|---|
| LU 8.1 | Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity. | **Consistent.** The Project would help maintain the County's fiscal viability by increasing the revenue of the County. |
| LU 9.1 | Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values. | **Consistent.** As mentioned, the Project boundary overlaps the McCoy Wash, an Area of Critical Environmental Concern (ACEC), but does not include facilities in the McCoy Wash. The McCoy Wash is considered an exclusion area, and no development would occur within the ACEC. Additionally, the Project design has avoided known cultural resources, as well as water features, where feasible. Regarding unknown cultural resources, the Project would include archaeological and tribal monitoring as described in **MM-CUL-1** and **MM-CUL-2**. |
| 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 [California Environmental Quality Act], NEPA [National Environmental Policy Act], the Clean Air Act, and the Clean Water Act. | **Consistent.** The Project would comply with CEQA, NEPA, and other federal and local resource conservation laws and regulations. Additionally, by complying with the Conservation and Management Actions from the BLM Desert Renewable Energy Conservation Plan Land Use Plan Amendment as required for the Phase 2 transmission line on BLM-administered land, the Project would help protect environmental resources by developing in an area designated by these plans for transmission lines. |
| LU 10.1 | Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities. | **Consistent.** The Project is not anticipated to cause additional impacts to public facilities and would coordinate with the County for payment of any required fair share fees for infrastructure projects. |
| LU 14.1 | Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public. | **Consistent.** The Project would be located on an inactive lemon orchard, disturbed former agricultural land, and undeveloped land near existing solar projects and electrical facilities. As evaluated in Section 3.2, Aesthetics, the County does not designate the Project site as containing any scenic vistas or visual features for preservation. The Project would not affect views of scenic vistas or visual features for travelers along I-10 (Refer to Section 3.2, Aesthetics for more information.). |

**Table 3.12-1. Consistency with Regional and Local Land Use Plans, Policies, and Regulations**

| Policy/Regulations/ Goals | 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. | **Consistent.** The Project site is not visible from any designated state or County scenic highways. Views to Project components (primarily solar panels and the transmission line) would be available from County-eligible scenic highway I-10; however, due to distance from the highway views would be limited. Additionally, the Project would be located within an area with existing electrical facilities. Refer to Section 3.2, Aesthetics for more information. |
| LU 17.2 | Permit and encourage, in an environmentally and fiscally responsible manner, the development of renewable energy resources and related infrastructure, including but not limited to, solar power plants in the County of Riverside. | **Consistent.** The Project is a renewable energy project and potential impacts of the Project are evaluated under CEQA and NEPA and include measures to reduce the environmental impacts of the Project. |
| LU 26.3 | Ensure that development does not adversely impact the open space and rural character of the surrounding area. | **Consistent.** The Project includes solar development located on an inactive lemon orchard, disturbed former agricultural, and undeveloped land near existing solar projects and electrical facilities. Due to the nature of the Project, it would generally not adversely impact the nearby open space and rural character. |
| LU 26.5 | Provide programs and incentives that allow Open Space-Rural areas to maintain and enhance their existing and desired character. | **Consistent.** The Project's solar facilities are located primarily on private lands consisting of an inactive lemon orchard, disturbed former agricultural, and undeveloped land near existing solar projects and electrical facilities. The County allows for renewable energy in this zoning designation and would be consistent with nearby areas designated Open Space-Rural. |
| | **Riverside County General Plan: Multipurpose Open Space Element** | |
| OS 11.2 | Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments. | **Consistent.** The Project would be a renewable energy solar project. |
| OS 11.3 | Permit and encourage the use of passive solar devices and other state-of-the-art energy resources. | **Consistent.** The Project would be a renewable energy solar project that would use the most current and technically feasible solar equipment. |
| OS 11.4 | Encourage site-planning and building design that maximizes solar energy use/potential in future development applications. | **Consistent.** The Project facilities would be consistent with this policy. |

**Table 3.12-1. Consistency with Regional and Local Land Use Plans, Policies, and Regulations**

| Policy/Regulations/ Goals | Description | Consistency Analysis |
|---|---|---|
| **Riverside County: Palo Verde Valley Area Plan** | | |
| Palo Verde Valley Area Plan (PVVAP) 3.1 | To provide for the orderly development of Blythe Airport and the surrounding areas, comply with the Airport Land Use Compatibility Plan for Blythe Airport as fully set forth in Appendix L-1 and as summarized in Table 4, as well as any applicable policies related to airports in the Land Use, Circulation, Safety and Noise Elements of the Riverside County General Plan. | **Consistent.** The Project's solar facilities are located in Blythe Airport Compatibility Zones D and E. The Project boundary also crosses Compatibility Zone C and B1 but there are no facilities in these zones, which are considered exclusion areas. The Project would not exceed the Compatibility Zone maximum densities, would exceed minimum open space requirement, and would comply with land use restrictions. Additionally, the Project would not cause hazards to flight. The existing Arlington transmission line already crosses Compatibility Zones C, D, and E and was previously approved by Riverside County Airport Land Use Commission. Refer to Section 3.10, Hazards and Hazardous Materials and Section 3.14, Noise for additional discussion regarding Airport Land Use. |
| PVVAP 4.1 | Protect farmland and agricultural resources in Palo Verde Valley through adherence to the Agricultural sections of the General Plan Multipurpose Open Space and Land Use Elements. | **Consistent.** While the Project's solar facilities would be located on land available for agricultural use, the Project site does not currently support active agricultural operations. Private lands within the Project site include an inactive lemon orchard, fallow agricultural land, and undeveloped land. The Project site includes primarily Farmland of local Importance, Other Land, and Other Land. There is an area of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland where the inactive lemon orchard is located (i.e., Farmland Mapping and Monitoring Program-designated Farmland). While the Project would convert agricultural lands, because this land is fallow and inactive, there would not be a conversion of important active agricultural land. The Project site is also designated for development of renewable energy projects and is consistent with the General Plan Multipurpose Open Space Element policies OS 11.2, 11.3,11.4 (discussed above). At the end of the Project lifetime, the land could be returned to agricultural use. See Section 3.3, Agriculture and Forest Resources for more information. As mentioned above, the Project's solar facilities are on inactive and fallow agricultural land and not used for irrigated agriculture. The Project would be consistent with this goal. |

**Table 3.12-1. Consistency with Regional and Local Land Use Plans, Policies, and Regulations**

| Policy/Regulations/ Goals | Description | Consistency Analysis |
|---|---|---|
| PVVAP 7.2 | Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element. | **Consistent.** The Project would require up to six fulltime employees which would not have an adverse effect on the County's LOS standards. The Project is consistent with this policy. |
| PVVAP 10.1 | Protect the scenic highways within the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements. | **Consistent**. I-10 is not a state Scenic Highways (I-10 is a County Eligible Scenic (County of Riverside 2020)). The nearest eligible state Scenic Highway (Scenic Highway 62) is located approximately 29 miles to the north of the Project site. No views of the Project site are available from a state Scenic Highway. The Project is consistent with this policy. Refer to Section 3.2, Aesthetics SEIR for more information. |
| PVVAP 12.1 | Protect biological resources in the Palo Verde Valley planning area through adherence to the Environmentally Sensitive Lands, Wetlands and Floodplain and Riparian Area Management sections of the General Plan Multipurpose Open Space Element. | **Consistent.** The Project boundary overlaps the McCoy Wash Area of Critical Environmental Concern and other stream channels. No Project facilities are proposed in the McCoy Wash and the Project would mitigate any impacts to jurisdictional waters of the state with the incorporation of mitigation measures. Refer to Section 3.5, Biological Resources for more information. |
| **Riverside County Zoning Ordinance** | | |
| Section 15.1.d. (32) Uses Permitted in W-2 Zone (Controlled Development Areas) | This zone permits a solar power plant on a lot 10 acres or larger upon issuance of a Conditional Use Permit (CUP). | **Consistent.** With approval of the CUP, the Project would be an allowable use under this zone. |
| Section 13.1.c (12) Uses permitted in A-1 Zone (Light Agriculture) | This zone permits a solar power plant on a lot 10 acres or larger upon issuance of a CUP. | **Consistent.** With approval of the CUP, the Project would be an allowable use under this zone. |
| Section 15.200.c (15) Uses Permitted in N-A Zone (Nature Assets) | This zone permits a solar power plant on a lot 10 acres or larger upon issuance of a CUP. | **Consistent.** With approval of the CUP, the Project would be an allowable use under this zone. |

### *Riverside County General Plan*

The Applicant is seeking a amended CUP and Development Agreement for the construction, operation, and decommissioning of the proposed solar facility and transmission line, as well as an amended Public Use Permit for portions of the transmission line that would cross County roads. The Project would be a conditionally permitted use within the A-1-10 Light Agriculture, N-A Natural Assets, and W-2-10 Controlled Development Areas (Figure 2-5) with approval of the CUP and completion of the CEQA process. The Project site would be located on 3,073 acres of land zoned as W-2-10, 64 acres of land zoned as N-A, and 155 acres of land zoned as A-1-10 (excluding existing road rights-of-way). The Phase 2 transmission line would be located on approximately 302 acres of land zoned as N-A and 31 acres of land zoned as W-2-10. Table 3.12-1 describes how the Project would be consistent with General Plan policies included in the Land Use and Multipurpose Open Space Elements.

The existing and planned land uses surrounding the Project site are similar in nature to those identified for the Project. The parcels closest to the solar facility are zoned N-A, W-2-10, A-1-10, M-H, A-2-10 (Heavy Agriculture), and R-R (Rural Residential). The existing solar facilities adjacent to the Project are zoned N-A and W-2-10. All of the listed nearby zones, other than R-R, which is the closest to the city limits of Blythe, allow solar power development with a CUP on a lot 10 acres or larger. Similar to the Palo Verde Mesa Solar Project, the Proposed Project would be conditionally permitted with approval of a CUP and completion of environmental review.

***Palo Verde Valley Area Plan and Riverside County Zoning Ordinance***

The Project would be a conditionally permitted use under the W-2-10, A-1-10, and N-A zones. A solar power plant is permitted in all these zones on a lot 10 acres or larger upon issuance of a CUP. The Project is located on approximately 3,705 acres, of which approximately 3,310 acres is located on private lands and approximately 395 acres is located on land administered by the BLM. With the approval of the CUP, the Project would be allowable under the current zoning.

The PVVAP includes policies regarding development near Blythe Airport, protection of farmland, roadway levels of service, protection of scenic highways, and biological resources. The Project would be consistent with the applicable policies within the Multipurpose Open Space Element, Circulation Element, Safety Element, Noise Element, and Land Use Element of the County General Plan.

Similar the Palo Verde Mesa Solar Project, the Proposed Project would not conflict with the PVVAP and Riverside County Zoning Ordinance. For additional details, see Table 3.12-1.

***Federal Policies, Regulations, and Goals***

The solar facility would be located on private land with the Phase 2 transmission line proposed on BLM-administered public land. The solar facility and Phase 1 transmission line, located on private land, would not be subject to federal policies, regulations, and goals. Similar to the solar facility of Palo Verde Mesa Solar Project, the components on private land are not located in the federal DRECP planning area. Nevertheless, the solar facility is located adjacent to BLM-administered land designated as DFA in the DRECP, areas where transmission lines and renewable energy generation is an allowable use, incentivized, and could be streamlined under the DRECP LUPA. The Phase 2 transmission line is entirely within BLM land designated as a DFA in the DRECP LUPA to the CDCA Plan. The DFA designation allows for the development of transmission lines without requiring a LUPA. The transmission line on BLM-land would be consistent with the DRECP LUPA and CDCA Plan, and would not conflict with federal policies, regulations, and goals.

The Project site includes various OHV routes designated as open by the NECO Plan Amendment on the BLM lands; however, they are not included in County planning documentation. Designated OHV routes along the transmission line would likely be closed during construction but would reopen during operation and maintenance of the Project. Closure or rerouting of BLM open routes would be considered by BLM in its NEPA document and would be considered an implementation process, consistent with BLM regulations.

**Existing Rights and Potential Conflicts**

Grants, including the Project's requested ROW grant to BLM to construct, operate, maintain, and decommission the Phase 2 transmission line on BLM land, are subject to the valid existing rights of others, including rights retained by the United States. Other valid existing rights pertain to collocated transmission lines, which do not conflict with the Project, as the shared transmission line ROWs (Arlington transmission

line) would be managed to meet all applicable regulations. If there are other applications in the Project area, 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.

BLM retains the right to issue other compatible ROWs within the proposed transmission line corridor. If subsequent ROWs are granted within the site for the proposed ROW, BLM would be required to notify those with valid existing rights, per the Code of Federal Regulations Section 2807.14. Grant holders would have an opportunity to respond in writing as to how the actions would impact their existing operations/rights. BLM would consider the potential effects prior to granting subsequent ROWs. There are multiple active, approved, and proposed solar projects near the Project site, as shown in Tables 3.1-1 and 3.1-2, on Figure 2-3, Energy Projects Along I-10, and as described in the cumulative impact analyses section within each resource section in Chapter 3, Environmental Analysis. These include existing and proposed solar projects.

Prior to ROW grant approval by BLM, 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 Phase 2 transmission line with construction of other approved projects. The Project Phase 2 transmission line would use the open circuit of the existing double circuit Arlington transmission line, which is also owned and operated by NextEra. Internal coordination would occur, in consultation with the BLM, to ensure that the Project is in compliance with existing agreements between the BLM and NextEra.

The Project would not conflict with applicable land use plans, policies, and regulations, and would not result in an alteration of the present or planned land use of the area. The Project is not inconsistent or incompatible with the site's existing, proposed, or surrounding land uses. Therefore, the Project would not indirectly cause a significant environmental impact due to conflicts with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. As a result, the Project would result in **less-than-significant** impacts related to the use of the land and other conflicts, consistent with the findings in the Paleo Verde Mesa Solar Project EIR.

## Cumulative Impacts

**Geographic Scope.** The cumulative scope for land use would include eastern Riverside County. This is because the uses and users of the land from Blythe to Desert Center are similar and this region is often considered as a whole for land use planning. Past, present, and reasonably foreseeable future actions making up the cumulative scenario are identified in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario.

Implementation of the 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 Palo Verde Valley Are Plan. Potential effects could include access conflicts, or conflicts with various transmission line routes connecting to the existing Colorado River Substation or the Western Area Power Administration transmission line.

**Cumulative Impacts.** As discussed above, the Project site does not divide an established community and, therefore, not contribute to cumulative impacts associated with this issue.

As discussed under Threshold "b," the Project site is zoned as W-2-10 Controlled Development Areas, A-1-10 Agricultural Zone, and N-A Natural Assets. However, in accordance with County Ordinance No. 348, solar power plants on lots 10 acres or larger are permitted through a CUP within the W-2-10 Controlled

Development Areas, A-1-10 Light Agricultural, and N-A Natural Asset zoning designations (County of Riverside 2021a). Many solar and renewable energy projects have been proposed, approved, or constructed in the Project area, both on private and public land (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Section 3.1.2).

The 395-acre area associated with the Phase 2 transmission line on BLM-administered lands is located within a DFA for transmission, solar, wind, and geothermal projects as designated by the DRECP and within an existing transmission line ROW. The Project is also located within the Riverside East SEZ. The DFA designation allows for development of transmission lines without requiring a LUPA if a project complies with relevant DRECP CMAs.

The consistency of the Project with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect is site specific and would not combine with other cumulative projects. However, the following analysis is provided to further describe how the Project would not result in a cumulative contribution. Some cumulative projects may preclude other types of uses (e.g., agriculture, mining, grazing). However, with appropriate permitting, the Project would minimize or avoid impacts to land use. Similarly, cumulative projects would have to obtain the appropriate permits for development. During the permitting of the cumulative projects, the authority having jurisdiction would consider other types of uses of the project areas to ensure there would be no direct conflicts of land use and that appropriate access to nearby recreational areas would be continued. As part of its planning process, the BLM has set aside millions of acres for uses other than transmission and renewable development (e.g., recreation, mining, conservation) and has directed transmission and renewable development to DFAs. While the County's PVVAP did not anticipate the potential for multiple solar projects in the area, the County has approved nearby solar projects (Arlington, Blythe, and McCoy) and has shown that these projects do not conflict with the County plans (refer to Table 3.12-1). Because each individual project must undergo this type of review and because the agencies have identified Blythe as an area where renewable energy is acceptable, the Project, in conjunction with other past, present, and probable future projects, would not result in a cumulatively considerable or significant land use impact. Therefore, the Project would not result in cumulatively considerable impact relative to land use and planning, which is consistent with Palo Verde Mesa Solar Project.

## 3.12.4 Mitigation Measures

No mitigation would be required.

## 3.12.5 References

County of Riverside. 2015. "Multipurpose Open Space Element." Chapter 5 in *Riverside County General Plan*. Revised December 8, 2015. Accessed July 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf.

County of Riverside. 2021a. "Land Use Element." Chapter 3 in *Riverside County General Plan*. September 28, 2021. Accessed July 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-Ch03-Land-20Use-FINAL-209-28-21.pdf.

County of Riverside. 2021b. *Palo Verde Valley Area Plan*. Revised September 28, 2021. Accessed July 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-GPA-2022-Compiled-PVVAP-4-2022-rev-6-2022.pdf.

Boulevard Associates, LLC.2024. *Grace Solar Energy Center CACA-106313356, Draft Plan of Development*. June 2024.

# 3.13 Noise

This section includes an analysis of noise and vibration impacts that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing noise conditions in and surrounding the Project site, provides background and terminology used in the assessment of noise and vibration, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts related to noise and vibration and includes mitigation measures that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The analysis in this section relies on the following reports:

**Appendix H** Transportation Analysis Grace Solar Energy Project, Riverside County, prepared by Dudek.

**Appendix O** Grace Solar Project Riverside County Noise Technical Report, prepared by Dudek.

## 3.13.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Noise Control Act*

The Noise Control Act of 1972 and its subsequent amendments in the Quiet Communities Act of 1978 (42 USC 4901 et seq.) delegate authority to the states to regulate environmental noise and direct government agencies to ensure compliance with local community noise statutes and regulations.

#### *Federal Transit Administration*

In its Transit Noise and Vibration Impact Assessment guidance manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA $L_{eq}$ over an 8-hour period when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project (FTA 2018). FTA also recommends using a construction noise threshold of 75 dBA $L_{dn}$ averaged over 30 days for residences exposed to construction noise lasting 30 days or longer. Although this FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the state and local jurisdictional levels.

### State Laws, Regulations, and Policies

#### *California Code of Regulations, Title 24*

Title 24 of the California Code of Regulations sets standards that new developments in California must meet. According to Title 24, interior noise levels are not to exceed 45 dBA CNEL in any habitable room (ICC 2019).

#### *California Noise Control Act of 1973*

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas.

The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

### *California Department of Transportation Vibration Standards*

The California Department of Transportation (Caltrans) conducted extensive research on human annoyance and damage to structures caused by vibration from short-term construction activities and from long-term highway operations and has published criteria for vibration management (Caltrans 2020). These criteria established by Caltrans are commonly used to assess vibration impacts from all types of projects and activities. For commercial buildings constructed of concrete and steel, Caltrans identifies a damage threshold of 0.5 in/sec PPV. For residential structures employing concrete foundation and wood frame construction, Caltrans identifies a conservative damage threshold vibration level standard of 0.3 in/sec PPV (Caltrans 2020).

## Local Laws, Regulations, and Policies

### *Riverside County General Plan Noise Element*

The County of Riverside (County) General Plan Noise Element has identified noise-sensitive uses for which noise compatibility should be assessed. The General Plan Noise Element sets exterior noise limits to control community noise impacts from non-transportation noise sources (such as mechanical equipment, including trash compactors, air-conditioning units, etc.) on these noise-sensitive uses and also established acceptable levels for vibration. The following policies are relevant to the Project (County of Riverside 2018):

- **Policy N 1.3.** Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:

    a) Schools

    b) Hospitals;

    c) Rest Homes;

    d) Long Term Care Facilities;

    e) Mental Care Facilities;

    f) Residential Uses;

    g) Libraries;

    h) Passive Recreation Uses; and

    i) Places of Worship

    According to the State of California Office of Planning and Research General Plan Guidelines, an acoustical study may be required in cases where these noise-sensitive land uses are located in an area of 60 CNEL or greater. Any land use that is exposed to levels higher than 65 CNEL will require noise attenuation measures.

- **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. (AI 105, 106, 108)

- **Policy N 4.1.** Prohibit facility-related noise received by any sensitive use from exceeding the following worst-case noise levels: (AI 105)

    a) 45 dBA-10-minute $L_{eq}$ between 10:00 p.m. and 7:00 a.m.

    b) 65 dBA-10-minute $L_{eq}$ between 7:00 a.m. and 10:00 p.m.

Table N-1 establishes normally acceptable sound levels of up to 60 dBA CNEL for single family residential uses, 70 dBA CNEL for schools, and 75 dBA CNEL for agricultural.

Regarding vibration, Table N-3 in the County's General Plan Noise Element identifies vibration levels with a PPV of 0.08 inches per second (in/sec) as readily perceptible and PPV above 0.2 in/sec as annoying to people in buildings. For the purposes of the noise analysis, the vibration annoyance threshold of 0.2 in/sec is used to assess the potential impacts due to Project construction at nearby sensitive receptor locations.

***Palo Verde Valley Area Plan***

The Project is located within the Palo Verde Valley Area Plan (County of Riverside 2021) which does not include any goals or policies related to noise or vibration.

***Riverside County Municipal Code***

**Stationary Noise Source Standards**

The County's Noise Ordinance allows for different levels of acceptable noise depending upon land use, noting that "this ordinance is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act and no such thresholds are hereby established." Given that the ordinance is not intended to establish thresholds of significance under CEQA, it is used in this document for informational purposes only and Policy N 4.1 of the County's Noise Element is applied to establish significance thresholds.

For informational purposes, 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 (and 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 $L_{eq}$ during the daytime hours (7:00 a.m. to 10:00 p.m.) or 45 dBA $L_{eq}$ during the nighttime hours (10:00 p.m. to 7:00 a.m.). Schools are not specifically included in the code; however, the maximum decibel level for public facilities is 65 dBA $L_{eq}$ during the daytime hours (7:00 a.m. to 10:00 p.m.) or 45 dBA $L_{eq}$ during the nighttime hours (10:00 p.m. to 7:00 a.m.). These nighttime thresholds coincide with the nighttime thresholds given in Policy N 4.1 of the County's Noise Element. Ordinance No. 847 also provides standards for non-noise sensitive land uses, such as agriculture, which can occasionally include noise-sensitive (i.e., residential) uses. In cases where there are no noise-sensitive land uses, as defined in Policy 1.3 in the Noise Element, on a property which is designated as a Land Use identified in Ordinance No. 847, the standards identified in Ordinance No. 847 would not apply.

**Construction Noise Standards**

Section 9.52.020(I) of the County's Noise Regulation Ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. Neither the County's General Plan nor County Code establish numeric maximum acceptable construction source noise levels at

potentially affected receptors, which would allow for a quantified determination of what constitutes a substantial temporary or periodic noise increase for purposes of CEQA analysis.

While the County has not adopted construction noise level limits for construction activities conducted during daytime hours, the FTA has adopted a guideline for daytime construction noise exposure at residential land uses. The FTA guideline is a maximum of 80 dBA $L_{eq}$ which is averaged over a typical 8-hour construction day. While the County has not adopted this standard, it is a useful guideline when evaluating potential impacts from daytime construction noise.

## 3.13.2 Environmental Setting

### Fundamentals of Noise and Vibration

#### *Sound, Noise and Acoustics*

Sound consists of three components: the sound source, sound path, and sound receptor. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are multiple sound sources, paths, and receptors. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

#### *Sound Pressure Levels and Decibels*

The amplitude of a sound wave determines its loudness. Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micronewtons per square meter, also called micropascals. One micropascal is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascals would be very cumbersome and the sensitivity of human hearing to changes in micropascals is rather coarse (e.g., a doubling of micropascals is just audible to most people), sound pressure level in logarithmic units is used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called Bels. To provide a finer resolution, a Bel is subdivided into 10 decibels (dB).

#### *A-Weighted Sound Level*

In addition to the sound pressure level, the frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special situations (e.g., B-scale, C-scale,

and D-scale), but these scales are rarely used in conjunction with most environmental noise evaluations. Noise levels are typically reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA). Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 3.13-1.

**Table 3.13-1. Typical Noise Levels Associated with Common Activities**

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| | 110 | Rock Band |
| Jet Flyover at 1,000 feet | 105 | |
| | 100 | |
| Gas Lawn Mower at 3 feet | 95 | |
| | 90 | |
| Diesel Truck at 50 feet, 50 miles per hour | 85 | Food Blender at 3 feet |
| | 80 | Garbage Disposal at 3 feet |
| Noisy Urban Area, Daytime | 75 | |
| | 70 | Vacuum Cleaner at 10 feet |
| Commercial Area | 65 | Normal Speech at 3 feet |
| Heavy Traffic at 300 feet | 60 | |
| | 55 | Large Business Office |
| Quiet Urban Daytime | 50 | Dishwasher (in next room) |
| | 45 | |
| Quiet Urban Nighttime | 40 | Theater, Conference Room (background) |
| Quiet Suburban Nighttime | 35 | |
| | 30 | Library |
| Quiet Rural Nighttime | 25 | Bedroom at Night, Concert Hall (background) |
| | 20 | |
| | 15 | Broadcast/Recording Studio |
| | 10 | |
| | 5 | |
| Lowest Threshold of Human Hearing (Healthy) | 0 | Lowest Threshold of Human Hearing (Healthy) |

Source: Caltrans 2020.
Notes: dBA = A-weighted decibel.

### *Human Responses to Changes in Noise Levels*

Under controlled conditions in an acoustics laboratory, the trained, healthy human ear is able to discern changes in sound pressure levels of 1 dB when exposed to steady, single-frequency signals in the mid-frequency range. Outside such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise. It is widely accepted that the average healthy ear, however, can barely perceive noise level changes of 3 dB. A change of 5 dB is readily perceptible, and a change of 10 dB is perceived as twice (if a gain) or half (if a loss) as loud. A doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

### *Noise Descriptors*

Additional units of measure have been developed to evaluate the long-term characteristics of sound. The energy-equivalent sound level ($L_{eq}$) is also referred to as the time-average sound level. It is the equivalent steady-state or constant sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound level during the same time period. For instance, the 1-hour A-weighted

equivalent sound level, $L_{eq(h)}$, is the energy average of the A-weighted sound levels occurring during a 1-hour period and is the basis for most of the City Noise Ordinance standards. The statistical sound level ($L_{xx}$) is a statistical value corresponding with the decibel level exceeded for a cumulative percent over a defined time period. By way of example, the "L-ninety" value ($L_{90}$) is a decibel level exceeded 90% during a given measurement period (such as 54 minutes out for an hour).

People are generally more sensitive to and thus potentially more annoyed by noise occurring during the evening and nighttime hours. Hence, another noise descriptor used in community noise assessments—the community noise equivalent level (CNEL)—represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. However, unlike an unmodified 24-hour $L_{eq}$ value, the CNEL descriptor accounts for increased noise sensitivity during the evening (7 p.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during these defined hours within a 24-hour period.

***Sound Propagation***

Sound propagation (i.e., the traverse of sound from a noise emission source position to a receptor location) is influenced by multiple factors that include geometric spreading, ground absorption, atmospheric effects, and occlusion by natural terrain and/or features of the built environment.

Sound levels attenuate (or diminish) geometrically at a rate of approximately 6 dB per doubling of distance from an outdoor stationary point-type source due to the spherical spreading of sound energy with increasing distance travelled and 3 dB per doubling of distance from an outdoor stationary line source (like vehicles traveling along a roadway). The effects of atmospheric conditions such as humidity, temperature, and wind gradients are typically distance-dependent and can also temporarily either increase or decrease sound levels measured or perceived at a receptor location. In general, the greater the distance the receptor is from the source of sound emission, the greater the potential for variation in sound levels at the receptor due to these atmospheric effects. Additional attenuation can result from sound path occlusion and diffraction due to intervention of natural (ridgelines, dense forests, etc.) and built features (such as solid walls, buildings, and other structures).

***Ground-borne Vibration Fundamentals***

Ground-borne vibration is fluctuating or oscillatory motion transmitted through the ground mass (i.e., soils, clays, and rock strata). The strength of ground-borne vibration attenuates rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. Several basic measurement units are commonly used to describe the intensity of ground vibration. The descriptors used by the Federal Transit Administration (FTA) are peak particle velocity (PPV), in units of inches per second (ips), and velocity decibel (VdB) that is based on a root-mean square (RMS) of the vibration signal magnitude. Per the California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (Caltrans 2020b), the calculation to determine PPV at a given vibration source to receptor distance is as follows:

$$PPV_{distance} = PPV_{ref} * (25/D)^{1.1}$$

Where:

$PPV_{distance}$ = the peak particle velocity in inches per second of the equipment adjusted for distance

$PPV_{ref}$ = the reference vibration velocity in inches per second at 25 feet

D = the distance from the equipment to the receptor

## Existing Conditions

### *Sound Monitoring Survey*

Sound pressure level (SPL) measurements were conducted near the Project site on July 9 through 11, 2024, to quantify and characterize the existing outdoor ambient sound levels. Table 3.13-2 provides the location, date, and time period at which these baseline sound level measurements were performed.[1]

Three (3) short-term (ST) sound level measurement locations (ST1-ST3) that represent existing noise-sensitive receivers were selected on and near the Project site. These locations are depicted as receivers ST1-ST3 on Figure 3.13-1, Project Location and Sound Monitoring Locations, and were selected to characterize the baseline outdoor ambient sound levels for residential noise-sensitive receptors in the County. The measured sound levels and primary sound sources at locations ST1-ST3 are provided in Table 3.13-2.

**Table 3.13-2. Measured Baseline Outdoor Ambient Sound Levels**

| Receptor | Location/Address (sound sources) | Date/Time | $L_{eq}$ (dBA) | $L_{90}$ (dBA) | $L_{10}$ (dBA) |
|---|---|---|---|---|---|
| ST1 | East of Project boundary, along 8th Avenue and near Blythe Bowmen Club (biogenic and natural sounds) | 2024-07-09, 10:05 AM to 10:20 AM | 44 | 38 | 46 |
| ST2 | South of Project boundary, along Hobsonway (I-10 and local traffic) | 2024-07-09, 10:39 AM to 10:54 AM | 51 | 50 | 53 |
| ST3 | Southeast of Project boundary, along South Neighbors Boulevard (I-10 and local traffic) | 2024-07-09, 11:02 AM to 11:17 AM | 60 | 58 | 61 |

**Source:** Appendix O.
**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); $L_{90}$ = sound level exceeded 90% of the time; $L_{10}$ = sound level exceeded 10% of the time; dBA = A-weighted decibels; ST = short-term noise measurement locations.

Additionally, four long-term (LT) sound measurement locations (LT1-LT4) that represent existing noise-sensitive receptors were selected on and near the Project site (see Figure 3.13-1). The sound measurements at locations LT1-LT4 spanned a full 48-hour cycle, totaling 2,880 consecutive minutes in duration, and $L_{eq}$, $L_{10}$, $L_{50}$, and $L_{90}$ metrics were measured. While $L_{eq}$ provides insight into the overall sound exposure level detected by a sound level meter, the $L_{90}$ value is a good indicator of the background sound environment, offering a perspective clear of short-lived disturbances. And, where the $L_{10}$ value offers a perspective of the higher percentage of fluctuating sound levels, the $L_{50}$ level represents the median sound levels of the measurement period. Beyond the summarized information presented in Table 3.13-2, detailed sound measurement data, such as plots displaying $L_{eq}$, $L_{10}$, $L_{50}$, and $L_{90}$ levels derived from the LT1-LT4 measurement data, field survey photos, and weather data is included in Appendix O.

[1] Sound level measurements were performed using a Rion-branded Model NL-62 sound level meter (SLM) equipped with a 0.5-inch, pre-polarized condenser microphone with pre-amplifier which meets the current American National Standards Institute standard for a Type 1 (Precision Grade) sound level meter. Sound level measurements were also conducted using a SoftdB "Piccolo" model SLM equipped with a windscreen-protected, 0.5-inch diameter pre-polarized condenser microphone with pre-amplifier which meets the current American National Standards Institute (ANSI) standard for a Type 2 (General Use) SLM. The accuracy of both sound level meters was verified using a field calibrator before and after the measurements, and the measurements were conducted with the microphone positioned approximately five feet above the ground.

### *Sensitive Receptors*

Noise- and vibration-sensitive land uses are typically locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation or open space areas would be considered noise- and vibration-sensitive and may warrant unique measures for protection from intruding noise. Existing sensitive receptors in the vicinity of the Project site consist of a single residence located approximately 175 feet to the north of the Project site, rural residences located about 4,400 feet to the east along 10th Avenue and about 5,500 feet to the east along Arrowhead Boulevard, and Palo Verde College, located about a mile to the east.

### *Airports*

The closest airport to the Project site is the Blythe Municipal Airport, located about 3,000 feet to the south of the Project site. The Blythe Airport is a public airport owned by Riverside County, leased to the City of Blythe. The closest private airstrip to the Project site is the Cyr Aviation Airport located approximately 4.7 miles southeast.

## 3.13.3 Impact Analysis

### Methodology

### *Construction/Decommissioning*

Construction and decommissioning activities include temporary noise and vibration sources with emission levels varying from hour to hour and day to day, depending on the equipment in use, the operations performed, and the distance between the source and receptor. Construction and decommissioning noise modeling was performed using a Microsoft Excel–based noise prediction. Input variables include the equipment type (backhoe, crane, truck, etc.), the number of equipment pieces, the duty cycle for each piece of equipment (i.e., percentage of each hour the equipment typically works), and the distance from the sensitive receptor. Sound source information was obtained from the Noise Source Database developed under National Cooperative Highway Research Program 25-49 (NCHRP 25-49), Development of a Highway Construction Noise Prediction Model (NASEM 2022). For the pile driving equipment, noise data for a representative solar array post driver was used.

Table 3.13-3 provides a list of the maximum sound levels generated by various powered equipment that could be associated with construction and decommissioning of the Project, measured at a distance of 50 feet using a "slow" response time constant (1 second). Usually, construction equipment operates in alternating cycles of full power and low power, producing average noise levels over time that are less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time.

**Table 3.13-3. Sound Levels of Typical Construction Equipment**

| Equipment | Maximum Sound Level (dBA $L_{max}$) – 50 feet from Source |
|---|---|
| Air Compressor | 67 |
| Aerial Lift (Man Lift) | 73 |
| Backhoe | 84 |
| Compactor (Plate) | 75 |
| Compactor (Roller) | 83 |
| Concrete Mixer | 82 |
| Concrete Saw | 88 |

**Table 3.13-3. Sound Levels of Typical Construction Equipment**

| Equipment | Maximum Sound Level (dBA $L_{max}$) – 50 feet from Source |
|---|---|
| Crane, Mobile | 76 |
| Dozer | 86 |
| Forklift | 88 |
| Generator | 68 |
| Grader | 79 |
| Horizontal Bore Drill | 88 |
| Loader | 81 |
| Paving - Asphalt | 83 |
| Paving - Concrete | 88 |
| Pump | 74 |
| Scraper | 92 |
| Flatbed Truck | 74 |
| Welding Machine | 72 |
| Small Pile Driver | 84 |

**Source**: NASEM 2022, Vermeer PD10 manufacturer specifications
**Notes:** dBA = A-weighted decibel; $L_{max}$ = maximum instantaneous noise level.

A noise prediction model was used to estimate construction and decommissioning noise levels at the nearest noise-sensitive land use (i.e., residence), based upon the distance between the closest Project construction activities and this residence. Aggregate noise emission from Project construction and decommissioning activities, broken down by sequential phase of construction activity, was predicted for the worst-case construction activity occurring along the closest construction boundary to the off-site closest residence. Predicted construction and decommissioning noise levels were compared to the recommended FTA construction noise exposure standard and to measured ambient noise levels.

### *Traffic Noise*

Traffic noise modeling used the Federal Highway Administration's Traffic Noise Model with traffic volumes provided by the Project's Transportation Analysis (Appendix H). Project-related traffic noise levels were examined along Hobsonway using the results of the traffic analysis. Acoustical calculations were performed for the following scenarios: Existing, Project Construction Traffic, and Background Plus Project Construction Traffic.

### *Operational Noise Level Quantification*

Long-term operational Project noise was assessed based upon the site layout plans indicating locations for each of the major noise-generating components, identified sound level for each piece of equipment, and the location of the closest noise-sensitive receptors (i.e., residences) to the Project site. The primary sound-producing equipment associated with the proposed Project include (1) power conversion systems (PCS) consisting of inverters and low-voltage transformers, (2) BESS consisting of batteries, controllers, and inverters, and (3) a substation with step-up transformers. The sound level contribution from other Project equipment, such as trackers and heating, ventilation and air conditioning (HVAC) equipment for the BESS and for the operations and maintenance (O&M) building are negligible with respect to the primary sound sources and are therefore not discussed further in this analysis. Details of sound modeling of Project operations are provided in Appendix O.

Sound sources modeled for the Project were major producers of continuous-type noise generation, which include battery containers, PCSs, and main power transformers at the Project collector substation. While there may be other electrical transmission system components on site, such as breakers and buses, their

noise emissions are—if any—sporadic and thus have no meaningful contribution to overall aggregate noise emission from the BESS facility during charging or discharging conditions. The following sound sources are included in the sound propagation model:

- *Power conversion systems*: each PCS includes an inverter and a medium voltage transformer. Manufacturer data indicated that each PCS generates a sound power level of 98 dBA under full load conditions. Although the PCSs would not be running under full load at all times, this analysis assumes full load sound generation to represent a conservative analysis. A total of 144 PCSs, modeled as point sources, are included in the model.
- *Battery energy storage containers*: The primary sound source within the containers is operation of the thermal management system (i.e., the chiller and/or cooling fan[s]). Sound test results for the battery energy storage enclosures by octave band were provided from the manufacturer. Using the loudest operating condition, each BESS was modeled at a sound power level of 102 dBA. Since the battery storage cooling systems would not be running under full load at all times, the usage of this apparent loudest sound generation condition represents a very conservative analysis. The Project proposes installation of 55 BESS containers on site.
- *Substation transformer*: The Project utilizes one 230 mega volt-amp high voltage transformer. Based on the methodology outlined in the Electric Power Plant Environmental Noise Guide (Teplitzky et al. 1979), these would generate a sound power level of 103 dBA under full power with cooling fans operating (i.e., oil natural air force or ONAF conditions).

Noise-sensitive uses in the general vicinity of the Project site include a rural residence located about 175 feet to the north of the site along 5th Avenue (designated as R1), Palo Verde College located about 1 mile to the east (R2) and rural residences located about 4,400 feet to the east along 10th Avenue (R4) and about 5,500 feet to the east along Arrowhead Boulevard (R3). There are no other noise-sensitive uses in the vicinity of the Project site, as defined in the County's Noise Element Policy N 1.3. Sound modeling included four discrete off-site receivers. In addition, a grid of in-model receivers spaced 20 meters by 20 meters was set at a height of 1.5 meters (5 feet) aboveground, spanning the Project area and its immediate surroundings. Detailed model inputs are provided in Appendix O.

### *Vibration Assessment*

Caltrans has been assembling data for vibration levels generated by heavy construction equipment operation during the building of transportation projects for many years. The vibration levels from use of such equipment are representative for other types of construction efforts, not just transportation projects, and are therefore widely employed to assess vibration levels from heavy equipment use for any effort. According to Caltrans (2020), the most important equipment relative to generation of vibration, and the vibration levels produced by such equipment, is illustrated in Table 3.13-4.

**Table 3.13-4. Vibration Velocities and Ground-borne Noise Levels for Typical Construction Equipment**

| Equipment | PPV at 25 Feet (Inches per Second) |
|---|---|
| Impact Pile Driver (Typical) | 0.644 |
| Vibratory Roller | 0.210 |
| Large Bulldozer | 0.089 |
| Loaded Trucks | 0.076 |
| Small Bulldozer | 0.003 |

**Source:** Caltrans 2020
**Notes:** PPV = peak particle velocity

Ground-borne vibration attenuates rapidly, even over short distances. The attenuation of ground-borne vibration as it propagates from source to receptor through intervening soils and rock strata can be estimated with expressions found in Caltrans guidance (Caltrans 2020b). The following equation is used to calculate PPV at any distance of interest from the operating construction equipment.

$$PPV_{rcvr} = PPV_{ref} * (25/D)^{1.1}$$

In the above equation, $PPV_{rcvr}$ is the predicted vibration velocity at the receiver position, $PPV_{ref}$ is the reference value at 25 feet from the vibration source (as listed in Table 9), and D is the actual horizontal distance to the receiver.

Significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

## Criteria for Determining Significance

Each California Environmental Quality Act (CEQA) lead agency has discretion to establish thresholds for when a noise level increase would be considered substantial. Section XIII of Appendix G of the State CEQA Guidelines addresses typical adverse effects due to noise and includes the following questions to evaluate a project's impacts due to noise. Would the project:

a) 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?

b) Result in generation of excessive groundborne vibration or groundborne noise levels?

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

The following significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section XIII of Appendix G of the State CEQA Guidelines (listed above), and are used to evaluate the significance of impacts due to noise and vibration in this analysis:

a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (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?

b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

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

d) Would the project result in the generation of excessive ground-borne vibration or ground-borne noise levels?

In light of these above significance criteria, the analysis uses the following standards to evaluate potential noise and vibration impacts.

- Construction noise – Riverside County's Municipal Code exempts the noise generated by construction activity occurring between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and between 7:00 a.m. and 6:00 p.m., during the months of October

through May. For informational purposes, this analysis compares Project construction-generated sound levels to the Federal Transit Administration construction noise level threshold of 80 dBA Leq over an 8-hour period.

- Transportation noise – For purposes of this analysis, a noise impact due to transportation noise would be considered significant if Project-generated traffic causes the existing levels to increase by more than 3 dB (a barely perceptible change in audibility).
- Stationary operations noise – The Riverside County General Plan Noise Element prohibits facility-related noise received by any sensitive use from exceeding 65 dBA Leq during daytime hours (7:00 a.m. to 10:00 p.m.) and 45 dBA Leq during nighttime hours (10:00 p.m. to 7:00 a.m.). Sensitive uses are defined as school, hospitals, rest homes, long term care facilities, mental care facilities, residential uses, libraries, passive recreation uses, and places of worship. Agricultural land uses are considered normally acceptable in noise exposures of 75 dBA CNEL or less.
- Construction vibration – Riverside County General Plan considers a vibration velocity of 0.2 ips PPV received at a structure to be annoying. Additionally, Caltrans Guidance recommends that a vibration level of 0.3 ips PPV be used as the threshold for building damage risk to residential structures and 0.5 ips PPV be used as the damage threshold for non-residential structures. These thresholds are used in this analysis to determine vibration impacts.

## Significance Threshold Criteria Not Applicable to the Proposed Project

***Private Airstrip***

The closest private airstrip to the Project site is the Cyr Aviation Airport located approximately 4.7 miles southeast. Similar to the Palo Verde Mesa Solar Project, the Project is not located within the vicinity of a private airstrip, there would be no impact, and this issue is not further discussed in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts due to noise and vibration per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that construction of the project would create a temporary noise increase and expose people to noise levels exceeding local standards. Additionally, the project site is located within the Blythe Municipal Airport Land Use Plan, which would expose construction, operation, and maintenance personal to elevated noise levels from aircraft. However, implementation of MM-NOI-1 through MM-NOI-3, which include construction requirements for work during daytime hours, notices to residents, and implementation of a Hearing Conservation Program, and applicable BMPs would reduce impacts to less than significant.

***Threshold a: For a project located within an airport land use plan or, where such a plan has not been adopted, within two (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.*

The closest airport to the proposed Project site is the Blythe Municipal Airport, located about 3,000 feet to the south of the Project site. The Blythe Airport is a public airport owned by Riverside County, leased to the City of Blythe. The Blythe Airport currently has two runways (8/26 and 17/35) and aircraft

operations average 37 flights per day (AirNav 2024). The airport is also used for flight instruction, aircraft rental, air cargo, and air ambulance (RCALUC 2004).

Based on the Blythe Airport Master Plan Blythe 2001 (RCALUC 2004), portions of the Project site would reach about 58 dBA CNEL under the "ultimate" buildout of the airport. Based on the Blythe Airport Master Plan "future" (Year 2020) conditions, the site would be exposed to levels below 55 dBA CNEL. These levels would be considered compatible with residential and nonresidential land uses. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels and the impact is less than significant**.**

Additionally, the Project would have no effect upon the volume of aircraft activity at Blythe Municipal Airport, and the Project would also not include development of new residential structures. With the "future" conditions being compatible with residential and nonresidential land uses, it is not anticipated that Project construction workers would be exposed to elevated noise levels associated with airport operations. Therefore, impacts would be less than significant.

This is different from Palo Verde Mesa Solar Project, which determined that impacts would be less than significant with mitigation due to the impacts of the proximity of the airport on the Project workers. However, the purpose of this SEIR is to evaluate the impacts of the Project on the environment, not vice versa. Nonetheless, it is typical for personal protective equipment to be used during construction. Impacts would be **less than significant** as described above.

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

*LESS THAN SIGNIFICANT WITH MITIGATION.*

***Project Construction and Decommissioning***

**Short-Term On-Site Construction Noise.** Construction and decommissioning noise levels at the closest sensitive receptors in the Project vicinity were modeled based upon construction equipment operation and activities along the closest Project boundary to a given receptor. Noise emissions from Project construction were calculated at the nearest noise-sensitive land use, a single residence located about 175 feet to the north of the Project site and Palo Verde College, located about a mile to the east. The anticipated construction equipment is shown in Appendix O for each phase of Project construction. Aggregate sound emissions from Project construction activities, broken down by sequential phase of construction, were predicted for the worst-case construction activity occurring along the closest construction boundary to the residence and also from the site center to the residence. Given the expanse of the site, only the loudest five pieces of equipment per phase were included in the construction calculations for the Project boundary adjacent to the nearest residence, with the understanding that equipment located farther from the boundary would have limited contribution to the overall noise levels at this location. For the site center calculations and the calculations for Palo Verde College, all equipment planned to be used for each phase of construction was included. In practice, construction activities would be distributed across the entire Project site, involving greater separation distances and lower noise levels at receptors in the Project vicinity. Table 3.13-5 provides a summary of the construction noise modeling; detailed information is provided in Appendix O.

**Table 3.13-5. Construction and Decommissioning Noise Levels, Worst-Case**

| Task/Activity | Closest Residence from Project Boundary (175 feet) | Closest Residence from Center of Construction (1 mile) | Palo Verde Community from Project Boundary (1 mile) |
|---|---|---|---|
| | $L_{eq\ 8\text{-}hr}$ (dBA) | $L_{eq\ 8\text{-}hr}$ (dBA) | $L_{eq\ 8\text{-}hr}$ (dBA) |
| Site Preparation | 70 | 37 | 37 |
| Civil Improvements – Grading/ Roads/ Earthwork | 79 | 48 | 48 |
| PV Panel BESS Construction | 75 | 50 | 50 |
| Decommissioning | 74 | 48 | 48 |

**Source**: Appendix O.
**Notes:** dBA = A-weighted decibel; $L_{eq\ 8\ hr}$ = average noise level equivalent over an 8-hour period.

Applicant Proposed Measure (APM)-NOI-1 would require adherence with County noise ordinance limitations, which would reduce noise impacts by limiting most activities to the typical work hours for construction activities. Most construction activity would be limited to daytime hours consistent with the County's Noise Ordinance, Ordinance No. 847. It is anticipated that construction and decommissioning would typically occur within the County's allowable hours of 6:00 a.m. to 6:00 p.m., June through September, and 7:00 a.m. to 6:00 p.m., October through May. However, minimal nighttime work may be required, specifically helicopter use for stringing the Phase 2 transmission line across I-10. Nighttime work is not anticipated during other construction activities for the transmission line or solar facility; however, limited nighttime work may be necessary should daytime temperatures preclude construction crews from completing construction activities during daytime hours.

Per the County's Noise Ordinance, private construction outside one-quarter mile from an inhabited dwelling is exempt from the County noise limits. Construction activities associated with the transmission line, including helicopter use, would be more than one-quarter mile from an inhabited dwelling; therefore, these limited activities would be exempt from the County's Noise Ordinance limits. The County's Noise Ordinance also clarifies that private construction located within one-quarter of a mile from an inhabited dwelling occurring during the County's allowable daytime hours are exempt from the County's noise limits. Thus, during typical daytime construction hours, construction of the Project would be exempt from the County's noise limits. However, if limited nighttime work is required, activities could exceed County noise ordinance standards.

While the County has not adopted quantified construction noise level limits for construction activities conducted during daytime hours, Federal Transit Administration (FTA) has adopted a guideline for daytime construction noise exposure at residential land uses. For informational purposes, this analysis compares Project construction-generated sound levels to the FTA construction noise level threshold of 80 dBA Leq over an 8-hour period (FTA 2018).

As indicated in Table 3.13-5, worst-case construction sound levels would range from 70 to 79 dBA Leq 8hr at the nearest residence when construction is located at the Project boundary adjoining this residence. Worst-case construction sound levels would range from 37 to 50 dBA Leq 8hr at the nearest residence when construction is spread throughout the site and also at Palo Verde College when construction is located at the boundary closest to the school. Worst-case decommissioning sound levels would be 74 dBA Leq 8hr at the nearest residence when activities are at the nearest boundary and 48 dBA Leq 8hr at the nearest residence when decommissioning is spread throughout the site and also at Palo Verde College.

Construction and decommissioning activities would typically occur during the County's allowable hours and would comply with the FTA-recommended construction noise limit of 80 dBA Leq 8hr with best management construction practices only. Sound levels inside the residence would be anticipated to be about 15 dB lower with windows open and 25 dB lower with windows closed. In the case that nighttime construction is required within one-quarter mile of an inhabited dwelling, **MM-NOI-1** would be implemented, which requires that only light-duty equipment and vehicles be used during nighttime construction activities. Following implementation of **MM-NOI-1**, construction noise impacts of the Project would be less than significant. Consistent with Palo Verde Mesa Solar Project, impacts during construction would be less than significant with mitigation, specifically with the inclusion of construction requirements associated with daytime hours. Similar to the Palo Verde Mesa Solar Project MMs, **MM-NOI-1** includes construction restrictions during daytime hours with updated language to meet current best practices. Rather than include a separate MM and requirement for a Hearing Conservation Program, **MM-NOI-1** includes restrictions on construction hours, equipment muffling, staging locations, and behavioral protocols to minimize noise impacts as necessary. However, Palo Verde Mesa Solar Project also included MMs for notices to nearby residents and implementation of a Hearing Conservation Program and Personal Protective Equipment Program and OSHA standards. Compliance with OSHA standards is standard and does not require a separate MM. Also notices to nearby residents were not determined to be required for the updated Project.

Decommissioning activities at the end of Project life would be anticipated to result in temporary noise levels no greater than those quantified for construction, and therefore Project decommissioning activities would result in less-than-significant temporary noise impacts with mitigation. This is different from Palo Verde Mesa Solar Project, which included a less than significant impact during decommissioning due to the duration of decommissioning being less than a year. While decommissioning of Grace Energy Solar Project is also anticipated to be less than a year, mitigation would still be required if nighttime activities are anticipated. Thus, construction and decommissioning impacts would be **less than significant with mitigation** incorporated.

**Off-site Construction Traffic Noise.** While construction traffic noise was not specifically analyzed in Palo Verde Mesa Solar Project, he Project would result in local, short-term increases in roadway noise as a result of construction traffic. Based on information developed as part of the Project's transportation analysis (Appendix H), Project-related traffic would include workers commuting to and from the Project site as well as vendor and haul trucks bringing or removing materials. Table 3.13-6 shows the construction trips by day for each construction phase. As shown in Table 3.13-6, the highest number of average daily construction-related trips to and from the Project site for all of construction phases would be 1,200 worker trips, 140 vendor trips, 46 water truck trips, and 6 haul truck trips occurring during the PV Panel and BESS construction phase.

**Table 3.13-6. Peak Period of Construction Trip Generation Estimates**

| Vehicle Type | Daily Quantity | | Daily Trips | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total |
| **Trip Generation** | | | | | | | | | |
| Construction Workers[1] | 600 | Light vehicles | 1,200 | 600 | 0 | 600 | 0 | 600 | 600 |
| Vendor Trucks[2] | 70 | Medium trucks | 140 | 6 | 6 | 12 | 6 | 6 | 12 |
| Water trucks[2] | 23 | Heavy-Duty trucks | 46 | 4 | 2 | 4 | 2 | 2 | 4 |

**Table 3.13-6. Peak Period of Construction Trip Generation Estimates**

| Vehicle Type | Daily Quantity | | Daily Trips | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total |
| **Trip Generation** | | | | | | | | | |
| Haul Trucks[2] | 3 | Heavy Duty trucks | 6 | 1 | 0 | 1 | 1 | 0 | 1 |
| **Peak Trip Total (Non-PCE)** | | | **1,392** | **609** | **10** | **617** | **9** | **608** | **617** |

**Source**: Appendix O.
**Notes:**
1 Conservatively assumes all construction workers arrive in the AM peak hour and depart the site in the PM peak hour.
2 Vendor and Haul trucks are assumed to arrive and depart the site evenly throughout the workday.

The majority of Project construction traffic would travel along Buck Boulevard, traveling east and west along West Hobsonway to access I-10. The only noise-sensitive uses along this route are residences located along Hobsonway, east of Buck Boulevard. The Project's Transportation Analysis (Appendix H) determined that 270 light vehicles and 15 trucks would travel along this segment of roadway during the AM and PM peak hours as a result of Project construction.

Based on sound monitoring at location ST3 (Figure 3.13-1) and considering the increased distance between I-10 and the residences, traffic along I-10 generates an existing sound level of 58 dBA $L_{eq}$ at these residences. Using the FTA's Traffic Noise Model with traffic volumes provided by the Project's Transportation Analysis (Appendix H), traffic along Hobsonway is modeled to generate a peak-hour sound level of 59 dBA $L_{eq}$ under existing conditions and would potentially generate a peak-hour sound level of 63 dBA $L_{eq}$ under existing plus Project construction traffic conditions, taking into account that heavy-duty trucks generate sound levels that are about 10 dB higher than light vehicles. The overall traffic noise level at these homes along Hobsonway, east of Buck Boulevard would be 62 dBA $L_{eq}$ under existing conditions and 64 dBA $L_{eq}$ under existing plus Project construction traffic conditions. Project generated and background traffic noise levels are provided in Table 3.13-7.

**Table 3.13-7. Project Construction Generated Traffic Noise Levels Compared to Background Sound Levels**

| Location | Peak Hour Traffic Noise Level, Dba $L_{eq}$ | | | Project Generated Increase, dB |
|---|---|---|---|---|
| | Existing | Project Construction | Background + Project | |
| Residence along Hobsonway | 62 | 61 | 64 | 2.6 |

**Source**: Appendix O.
**Notes:** dBA = A-weighted decibel; $L_{eq}$ = average noise level equivalent.

The overall increase in traffic noise levels resulting from Project construction traffic is less than 3 dB at all noise-sensitive locations. Therefore, impacts from Project-related construction traffic noise would be **less than significant.**

### *Short-Term Helicopter Noise*

While a helicopter was not specifically identified for the construction of the Palo Verde Mesa Solar Project, construction of the project may include use of a helicopter for a period of up to 4 days, for a maximum of up to 4 hours per day, to string the Phase 2 transmission line across Interstate 10 and other areas of the transmission line if necessary. The helicopter may operate during nighttime hours, depending on requirements from the Caltrans crossing agreement. Construction activities associated with the transmission line, including helicopter use, would be more than one-quarter mile from an inhabited dwelling; therefore, would be exempt from the County's noise limits.

Separate from the exemption from the County's noise limits, the significance of the helicopter noise impact is also analyzed. For informational purposes, helicopter overflights could generate noise levels of up to 100 dBA at a distance of 100 feet. Helicopter overflights and activity would be intermittent during the up to 4 days that helicopters would be used. The nearest sensitive receptors are suburban residences located south of I-10 and about 5,000 feet east of the helicopter path. At a distance of 5,000 feet, the helicopter would generate a noise level as high as 66 dBA. As the helicopter would not be located near sensitive locations for any extended period, and noise levels would not exceed the recommended FTA construction noise level threshold of 80 dBA $L_{eq}$ over an 8-hour period. Therefore, impacts from Project-related helicopter noise would be **less than significant**.

### *Operational Noise*

As described under Methodology, the Project's operational noise was quantified using a predictive noise model, with receptors at noise-sensitive uses in the general vicinity of the Project site. These include a rural residence located about 175 feet to the north of the site along 5th Avenue (designated as R1), Palo Verde College located about 1 mile to the east (R2) and rural residences located about 4,400 feet to the east along 10th Avenue (R4) and about 5,500 feet to the east along Arrowhead Boulevard (R3). There are no other noise-sensitive uses in the vicinity of the Project site, as defined in the County's Noise Element Policy N 1.3. Detailed information for the operational noise modeling is provided in Appendix O. The model results are presented graphically in Figure 3.13-2, Sound Modeling Results for Project Operations, providing noise contours extending outward from the Project to illustrate the noise level from operation of the Project. Model results are provided numerically, compared to code limits, in Table 3.13-8. Table 3.13-9 compares Project operational sound levels to background sound levels at these locations.

**Table 3.13-8. Modeled Project Operation Sound Levels Compared to Code Limits**

| Model Receiver | Land Use | Project Operational Sound Level, dBA $l_{eq}$ | Nighttime Municipal Code Limit, dBA $L_{eq}$ |
|---|---|---|---|
| R1 | Residence | 39 | 45 |
| R2 | School[1] | 27 | 45 |
| R3 | Residential | 19 | 45 |
| R4 | Residential | 21 | 45 |

**Source:** Appendix O.
**Notes:** dBA = A-weighted decibel; $L_{eq}$ = average noise level equivalent.
[1] Palo Verde College.

**Table 3.13-9. Modeled Day-Night ($L_{dn}$) Operational Sound Levels Compared to Background Sound Levels**

| Model Receiver | Project Operational Sound Level, Dba $L_{dn}$ | Background Sound Level, dBA $L_{dn}$ | Background + Project dBA $L_{dn}$ | Project Generated Increase, dB |
|---|---|---|---|---|
| R1 | 46 | 46 | 49 | 2.7 |
| R2 | 34 | 50 | 50 | 0 |
| R3 | 26 | 46 | 46 | 0 |
| R4 | 28 | 46 | 46 | 0 |

**Source:** Appendix O.
**Notes**: dBA = A-weighted decibel; $L_{dn}$ = day-night average noise level; dBA = A-weighted decibel.
For a sound level occurring continuously over a 24-hour period, the calculated $L_{dn}$ would be 6 dB higher than the 24-hour $L_{eq}$ level.

Operational sound levels would be below background sound levels and the normally acceptable sound levels established in the County's General Plan and would result in sound level increases of less than 3 dB at all sound-sensitive locations. Sound levels would likely be inaudible at Palo Verde College and at the residences represented by R3 and R4. At R1, sound levels would be below daytime sound levels and similar in level to nighttime levels.

Non-noise sensitive land uses surrounding the site include the Blythe airport, adjacent and nearby solar facilities and fallow agricultural lands. These land uses would be considered normally acceptable in noise environments of up to 75 dBA Ldn, as identified in Table N-1 of the County's General Plan Noise Element. As shown in Figure 3.13-2, these land uses are primarily exposed to sound levels of 45 dBA Leq or less. However, the Project boundary to the northwest of the site adjacent to the substation would be exposed to Project operational sound levels as high as 70 dBA Leq. For a sound level occurring continuously over a 24-hour period, the calculated Ldn would be 6 dB higher than the 24-hour Leq level. Project generated sound levels would be 75 dBA Ldn or less at a distance of 100 feet or more from the Project boundary at this non-noise sensitive location, considering a conservative analysis that assumes continuous 24-hr operation of all equipment at its highest operating sound level. Project operational levels would be lower at all other Project boundary locations. Therefore, these sound levels would be considered compatible with existing land uses as identified in the County's General Plan Noise Element.

As a result, Project operational noise levels would be **less than significant** consistent with the Palo Verde Mesa Solar Project.

***Threshold d: Would the project result in the generation of excessive ground-borne vibration or ground-borne noise levels?***

*LESS THAN SIGNIFICANT.*

***Construction and Decommissioning Vibration and Groundborne Noise***

The closest residential structure to the Project site is a residence located about 175 feet to the north and the closest non-residential structure is Palo Verde College, located about a mile to the east. Using the vibration source level of construction equipment provided in Table 3.13-4, the distance to the closest structures, and the equation supplied in the Caltrans (2020) construction ground-borne noise assessment methodology, the Project construction-related vibration levels were calculated and are shown in Table 3.13-10.

**Table 3.13-10. Construction and Decommissioning Vibration Levels at Nearest Structures, inches per second**

| Equipment | PPV at Nearest Residential Structure (175 feet) | PPV at Palo Verde College (1 mile) |
|---|---|---|
| Impact Pile Driver (Typical) | 0.076 | 0.003 |
| Vibratory Roller | 0.025 | 0.001 |
| Large Bulldozer | 0.010 | 0.000 |
| Loaded Trucks | 0.009 | 0.000 |
| Small Bulldozer | 0.000 | 0.000 |

**Source:** Caltrans 2020.
**Notes:** PPV = peak particle velocity

The applicable damage threshold for Project-attributed construction vibration would be 0.3 in/sec PPV at the closest residence and 0.5 in/sec PPV at the school building. As shown in Table 3.13-10, Project construction and decommissioning would result in vibration levels well below these thresholds and also below the County's annoyance level of 0.2 in/sec PPV. Therefore, Project construction- and decommissioning-related vibration levels and groundborne noise levels would be **less than significant** consistent with Palo Verde Mesa Solar Project.

***Operation Phase Vibration and Groundborne Noise***

The ongoing operation of the proposed solar and BESS facility would not involve rotational equipment, or impact equipment. Consequently, long-term operation of the Project would not be anticipated to generate perceptible vibration levels nor result in perceptible groundborne noise levels at offsite locations; operational vibration and groundborne noise levels are therefore considered **less than significant** consistent with Palo Verde Mesa Solar Project.

## Cumulative Impacts

**Geographic Scope.** The geographic scope for cumulative analysis of noise and vibration is generally localized because noise and vibration attenuate with distance. Noise sources attributable to cumulative projects may cause adverse effects within approximately 1 mile of a project site, including truck routes, but the region of greatest influence is typically within 0.5 miles from the boundary of a project. Similarly, vibration sources that typically occur from construction activity or vehicle traffic have a region of influence that is limited to approximately 200 feet.

**Cumulative Impacts.** Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, list existing and reasonably foreseeable projects in the region that could contribute to noise and/or vibration levels via construction, operation, or decommissioning with a potential to result in a cumulative noise or vibration impact at existing noise-sensitive receptors in the region. Of the projects in Tables 3.1-1 and 3.1-2 only four are located within approximately 1 mile of the Grace Solar Energy Center: Blythe Solar Energy Center, Blythe Mesa Solar, Desert Quartzite Solar, and Crimson Solar. Operational noise levels from the Project at vicinity receptors would be below background sound levels and the normally acceptable sound levels established in the County's General Plan and would result in sound level increases of less than 3 dB at sound-sensitive locations. As such, the Project's contribution to noise levels at vicinity receivers resulting from combined noise generation by Blythe Solar Energy Center, Blythe Mesa Solar, Desert Quartzite Solar, and Crimson Solar would not be measurable in the environment. With respect to construction noise, on-site construction activities would be anticipated to typically occur during the County's allowable hours and would comply with the FTA-recommended construction noise limit of 80 dBA $L_{eq\ 8hr}$ with best management construction practices only. In the case that

nighttime work would be necessary within one-quarter mile of an inhabited dwelling, **MM-NOI-1** would be implemented to reduce impacts to less than significant with mitigation. Assuming the Project and the Desert Quartzite Solar and/or Crimson Solar (Blythe Solar Energy Center and Blythe Mesa Solar are currently in operation) would be under construction simultaneously, and the intensity of construction would be similar such that each would typically occur during the County's allowable hours, or implement mitigation for potential nighttime work, and would comply with the FTA-recommended construction noise limit of 80 dBA $L_{eq\ 8hr}$ with best management construction practices only, then cumulative noise impacts would be less than significant with mitigation; therefore, the Project would not contribute to an existing cumulative noise impact. Also, construction noise is localized, so receptors are only impacted by the construction noise adjacent to them. However, if construction noise increases at the receptors from Desert Quartzite and/or Crimson this could result in a significant cumulative impact. The Project's relative contribution to the combined total increase would still comply with the FTA-recommended construction noise limit of 80 dBA $L_{eq\ 8hr}$ and would not represent a substantial contribution to cumulative construction noise impacts. This is similar to Palo Verde Mesa Solar Project, which determined that the Project's incremental contribution to cumulative noise levels would not have an adverse impact. Therefore, the Project would not have a substantial contribution to cumulative impacts on noise and vibration levels associated with other projects in the sub-region.

## 3.13.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following APM is considered as part of the project description and would be incorporated into the design of the Project.

**APM-NOI-1:** The Applicant will limit most construction activity to daytime hours consistent with Riverside County noise ordinance limitations.

### Mitigation Measures

The following mitigation measure was developed to reduce impacts to noise in the unlikely event nighttime work is required within one-quarter mile of an inhabited dwelling during construction and decommissioning of the Project.

**MM-NOI-1** **Construction Restrictions.** Heavy equipment operation, noisy construction work relating to any Project features onsite, and truck trips associated with materials and equipment deliveries shall be restricted to the times delineated below, unless a special permit has been issued by the County of Riverside: during June through September, between 6:00 a.m. to 6:00 p.m.; and during October through May, between 7:00 a.m. to 6:00 p.m. Thus, construction activities outside of the County's allowable daytime hours would be limited to light-duty equipment and vehicles.

During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. 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.

## 3.13.5 References

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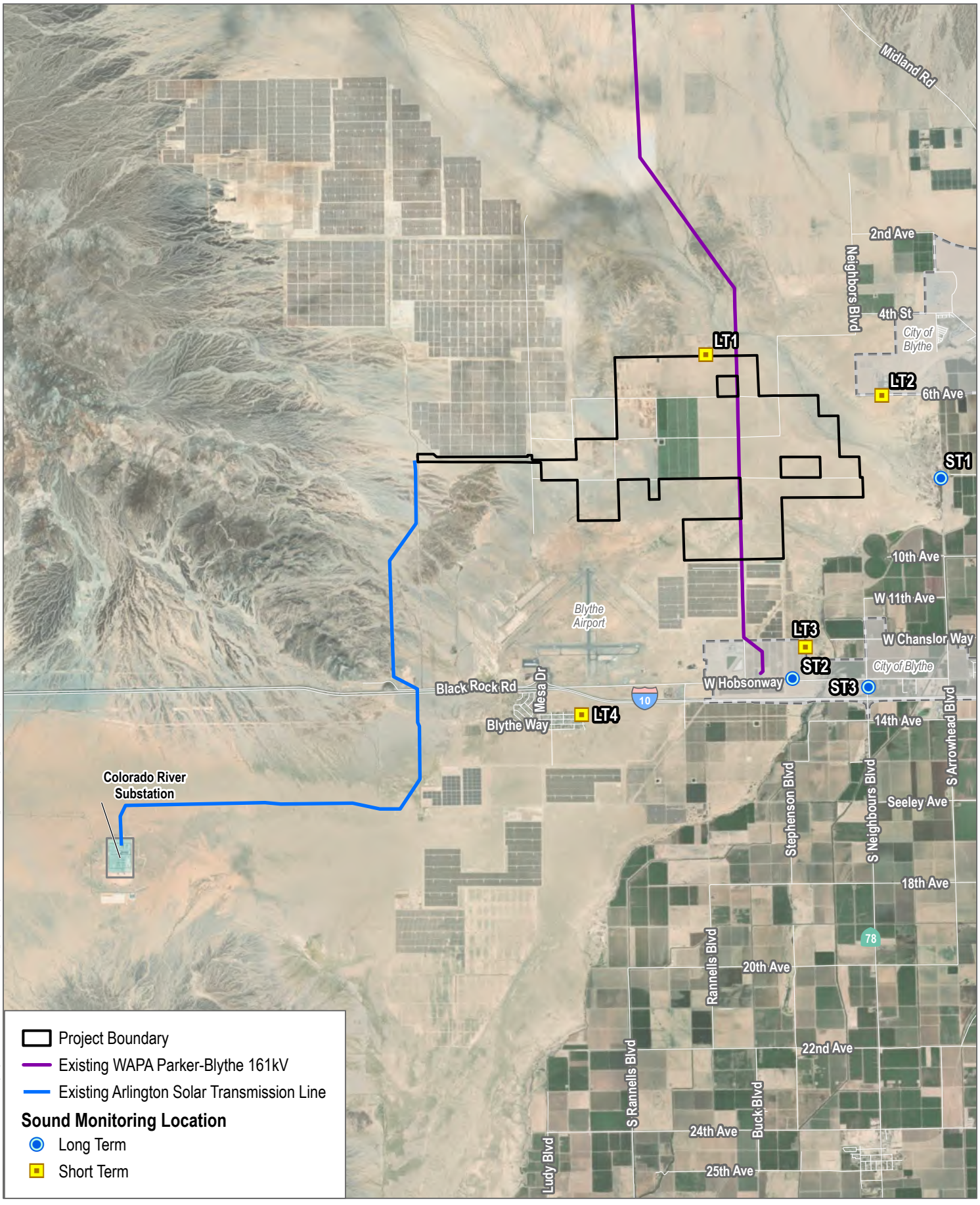
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SOURCE: Esri World Imagery (accessed 2025)

DUDEK

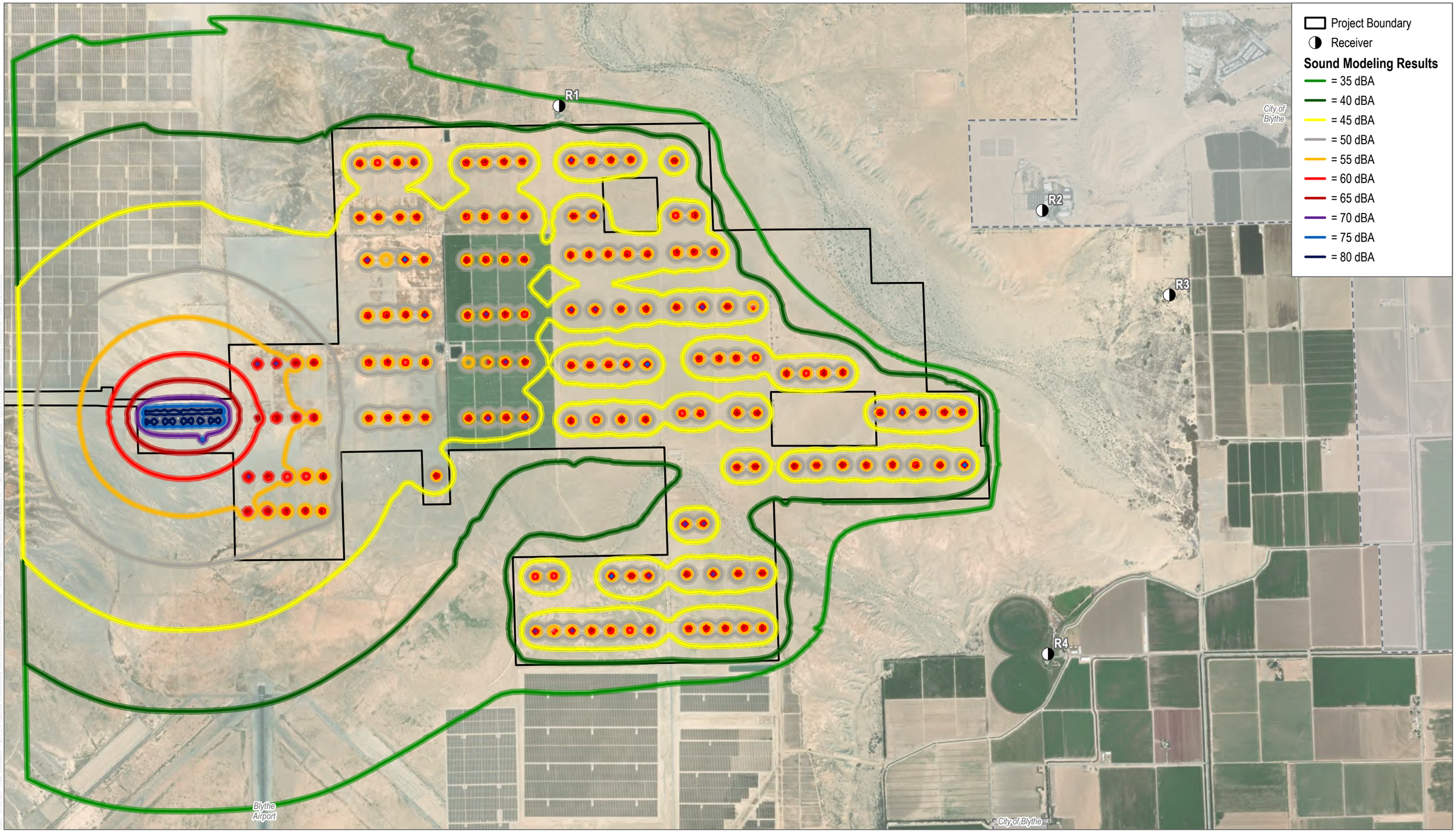
0 4,100 8,200 Feet

**FIGURE 3.13-1**

Project Location and Sound Monitoring Locations

Grace Solar Energy Center

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SOURCE: Esri World Imagery (accessed 2024); Riverside County 2015

DUDEK

0 1,250 2,500 Feet

**FIGURE 3.13-2**

Sound Modeling Results for Project Operations

Grace Solar Energy Center

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# 3.14 Paleontological Resources

This section includes an analysis of the impacts to paleontological resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing paleontological resources in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to paleontological resources, and lists mitigation measures (MMs) that would be incorporated into the Project to avoid and or substantially lessen to the extent feasible potentially significant impacts.

The information in this section is based on multiple online sources and published documents, records search results from the Natural History Museum of Los Angeles County (NHMLA) and Western Science Center (WSC), as well as the following:

**Appendix P** Grace Solar Energy Center Paleontological Resources Survey Report, prepared by Dudek.

## 3.14.1 Regulatory Framework

Paleontological resources are protected on public lands under the Paleontological Resources Protection Act (PRPA).

### Federal Laws, Regulations, and Policies

#### Paleontological Resources Preservation Act of 2009.

The Paleontological Resources Protection Act (PRPA) of 2009 directs the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise." The PRPA incorporates many of the recommendations of the Secretary of the Interior's report titled Assessment of Fossil Management on Federal and Indian Lands (DOI 2000) in order to formulate a consistent paleontological resources management framework. In passing the PRPA, congress officially recognized the scientific importance of paleontological resources on some federal lands by declaring that fossils from these lands are federal property that must be preserved and protected. The PRPA codifies existing policies of the BLM, National Park Service, U.S. Forest Service, Bureau of Reclamation, and the U.S. Fish and Wildlife Service, and provides the following: criminal and civil penalties for illegal sale and transport and theft and vandalism of fossils from federal lands minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants) definitions for "paleontological resources" and "casual collecting" requirements for curation of federal fossils in approved repositories. The PRPA requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land. The PRPA furthers the protection of fossils on federal lands by criminalizing the unauthorized removal of fossils.

**Antiquities Act of 1906**. The Antiquities Act obligates 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 Omnibus Public Lands Management Act (OPLMA)-PRPA OPLMA-PRPA.

**Federal Land Policy Management Act of 1976.** The Federal Land Policy Management Act requires that public lands be managed such that the quality of their scientific values is protected. The Act recognizes

significant paleontological resources as scientific resources and requires federal agencies to manage public lands in a manner that protects scientific resource quality.

## State Laws, Regulations, and Policies

**California Environmental Quality Act**. The CEQA Guidelines require that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to paleontological resources. Paleontological resources, which are limited, nonrenewable resources of scientific, cultural, and educational value, are recognized as part of the environment under these state guidelines. This study satisfies project requirements in accordance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the "Environmental Checklist Form," which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or unique geologic feature[s]." This provision covers scientifically significant fossils, which include, but are not limited to, newly discovered species or genera, fossils exhibiting morphological features not previously recognized for a given animal group, fossils that increase the temporal range of the species, fossils discovered from geological units within which they were previously unknown, fossils that expand the biogeographic range of a species, and/or localities that yield fossils significant in their abundance, diversity, and preservation.

**California Public Resources Code, Section 5097.5**.

PRC Section 5097.5 regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites. California PRC Section 5097.5 provides protection for paleontological resources on public lands, where Section 5097.5(a) states, in part, that:

> A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

## Local Laws, Regulations, and Policies

**Riverside County General Plan.** The following policies outlined in the Multipurpose Open Space Element of the Riverside County General Plan (County of Riverside 2015a) provide direction for paleontological resources. General plan policies applicable to the Project are as follows:

- **Policy OS 19.6**. Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
- **Policy OS 19.7**. Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall

document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

- **Policy OS 19.8**. Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.
- **Policy OS 19.9**. Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

***Palo Verde Valley Area Plan***

The Palo Verde Valley Area Plan is an Area Plan within the General Plan that includes the Project site (County of Riverside 2021). The Palo Verde Valley Area Plan does not include any goals and policies related to paleontological resources.

## 3.14.2 Environmental Setting

The Project site is located within the Mojave Desert Geomorphic Province, near its eastern boundary, approximately 80 miles east of the boundary between the Colorado Desert and Transverse Ranges Geomorphic Provinces. This province is characterized by broad mountain ranges separated by expanses of desert with interior drainages and numerous playas. The Mojave province is sharply wedged between the Garlock fault and the San Andreas fault (CGS 2002). The Project site is located west of the McCoy Wash near the eastern foothills of the McCoy Mountains, north of the Mule Mountains, and the western portion of Palo Verde Mesa.

The Project site is located northwest of the junction of Interstate 10 and U.S. Highway 78, approximately 3 miles north of the town of Mesa Verde, and approximately 7.25 miles west of the California–Arizona state line in eastern Riverside County, California (Figure 2-1). The Project site is situated on relatively undeveloped, mainly private land in eastern Riverside County, California with some public land administered by the BLM Palm Springs/Southern Coast Field Office along the Phase 2 transmission line.

### Geology of the Project Site

According to published mapping, the Project site is underlain by Holocene (less than 11,700 years ago) modern wash alluvium (map unit Qw), Holocene alluvial fan and alluvial valley deposits (less than 11,700 years old) (map unit $Qa_6$), Holocene to late Pleistocene (11,700 years ago to 129,000 years ago) alluvial fan and alluvial valley deposits (map unit $Qa_3$), Pleistocene (11,700 years ago to 2.58 million years ago) alluvial deposits of the Palo Verde Mesa (Chemehuevi Formation) (map unit Qpv), and Pleistocene to Pliocene (11,700 years to 5.53 million years ago) alluvial deposits of the McCoy Wash Area (map unit QTmw) (Appendix P).

Holocene age deposits generally have low potential to yield paleontological resources due to their recent age, but the sensitivity can increase with depth as sediments become older. These Holocene age deposits cover a relatively small portion of the Project site. The majority of the site contains Pleistocene and/or Pliocene age deposits which generally have high potential to yield paleontological resources as they are of an age that would allow for the preservation of fossils (SVP 2010; County of Riverside 2015b).

## Paleontological Resources

### *Paleontological Resource Classifications*

**BLM Fossil Yield Classification System.** The BLM released the Potential Fossil Yield Classification (PFYC) as a tool to rapidly assess the initial paleontological resource sensitivity of a given area. The BLM version of the PFYC was first released in 2007 (IM-2008-09) and was last updated in 2016 (IM-2016-124) (BLM 2007, 2016). Frequently, the BLM's PFYC system is used for the paleontological assessment of non-federal areas that do not have a classification system of their own. The following categories are used to assess paleontological significance:

- **Class 1—Very Low.** Class 1 geologic units are those not likely to contain recognizable paleontological resources. Geologic units are igneous or metamorphic, excluding air-fall and reworked volcanic ash units. Geologic units are Precambrian in age. Management concerns for paleontological resources in Class 1 units are usually negligible or not applicable. Paleontological mitigation is unlikely to be necessary except in very rare or isolated circumstances that result in the unanticipated presence of paleontological resources, such as unmapped geology contained within a mapped geologic unit. An assignment of Class 1 normally does not trigger further analysis unless paleontological resources are known or found to exist. However, standard stipulations should be put in place prior to authorizing any land use action to accommodate an unanticipated discovery.
- **Class 2—Low.** Class 2 geologic units are those not likely to contain paleontological resources. Characteristics of Class 2 units include: field surveys have verified that significant paleontological resources are not present or are very rare; units are generally younger than 10,000 years before present; recent aeolian deposits; and/or sediments exhibit significant physical and chemical changes that make fossil preservation unlikely. Except where paleontological resources are known or found to exist, management concerns for paleontological resources are generally low and further assessment is usually unnecessary except in occasional or isolated circumstances. Paleontological mitigation is only necessary where paleontological resources are known or found to exist.
- **Class 3—Moderate**. Class 3 units are sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence. This classification includes units of moderate or infrequent occurrence of paleontological resources. Management considerations cover a broad range of options that may include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require assessment by a qualified paleontologist to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources.
- **Class 4—High.** Class 4 geologic units are those that are known to contain a high occurrence of paleontological resources. Significant paleontological resources have been documented in Class 4 units, but may vary in occurrence and predictability. Surface-disturbing activities may adversely affect paleontological resources. Rare or uncommon fossils, including nonvertebrate (such as soft body preservation) or unusual plant fossils, may be present. The probability for impacting significant paleontological resources is moderate to high and is dependent on the proposed action. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment by a qualified paleontologist is normally required and on-site monitoring or spot-checking may be necessary during land-disturbing activities. In some cases, avoidance of known paleontological resources may be necessary.

- **Class 5—Very High**. Class 5 units are highly fossiliferous geologic units that consistently and predictably produce significant paleontological resources. Significant paleontological resources have been documented and occur consistently in Class 5 units. Paleontological resources are highly susceptible to adverse impacts from surface-disturbing activities. A field survey by a qualified paleontologist is almost always needed. Paleontological mitigation may be necessary before or during surface-disturbing activities. The probability for impacting significant paleontological resources is high. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed, and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.

The BLM National PFYC 2022 online viewer shows the majority of the Project site within areas designated Class 5, with a very high potential of encountering paleontological resources. A small portion of the site is in the undetermined potential class (PFYC Class Unknown) and also Class 2 where there is a low potential of encountering paleontological resources. Three BLM parcels lie within the PFYC Class 5, and the westernmost BLM parcel within the Project boundary lies within PFYC Class 2 (Appendix P).

**County of Riverside Paleontological Sensitivity**. The following sensitivity categories were developed for the County in the 2015 County of Riverside Environmental Impact Report No. 521 (County of Riverside 2015b, pp. 4.9-10 and 4.9-11). The County classification system is as follows:

- **Low Potential.** This classification is for lands which previous field surveys and documentation demonstrate have a low potential for containing significant paleontological resources subject to adverse impacts. It must be noted that surface geology, such as soils, are not always indicative of subsurface geology or the potential for paleontological resources. Actual sensitivity must be ultimately determined by both a records search and a field inspection by a paleontologist. This classification would correlate to BLM's PFYC Classes 1 and 2.
- **High Potential.** This classification is for sedimentary rock units with a high potential for containing significant nonrenewable paleontological resources. This includes rock units in which vertebrate or significant invertebrate fossils have been found or determined likely to be present. These units include, but are not limited to, sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically[1] suitable for the preservation of fossils. High sensitivity includes not only the potential for yielding abundant vertebrate fossils, but also for production of a few significant fossils that may provide new and significant data. High sensitivity areas are mapped as either "High A" or "High B," according to the following criteria:
  - **High Sensitivity A (Ha).** This classification is based on geologic formations or mapped rock units that are known to contain or have the correct age and depositional conditions to contain significant paleontological resources.
  - **High Sensitivity B (Hb).** This classification is equivalent to High A but is based on the occurrence of fossils at a specified depth below the surface. This category indicates fossils that are likely to be encountered at or below 4 feet of depth and may be impacted during construction activities. This classification would correlate to BLM's PFYC Classes 3, 4, and 5.

[1] The description and scientific study of rocks including physical characteristics such as color, composition, and texture.

- **Undetermined Potential.** This classification is for areas underlain by sedimentary rocks, for which literature or unpublished studies are not available, that have undetermined potential for containing significant paleontological resources.

The Riverside County Information Technology (RCIT) online paleontological sensitivity mapper indicates the Project site is underlain by geological units assigned to low (L) and unknown (U) potential (RCIT 2024).

### *Previous Research*

A review of previous research was conducted through a records search for the Project area. The purpose of the museum records search is to determine whether there are any known fossil localities in or near the Project site, identify geological units present within the Project site, and assist in determining whether a paleontological mitigation program is necessary.

Literature and Records Search

A paleontological records search was requested from NHMLA on October 30, 2024, and results were received on November 10, 2024. The museum reported no previous localities within the Project site but did identify localities nearby from the same or similar sediments that underlie the Project site.

A paleontological records search was requested from WSC on January 10, 2025, and results were received on February 5, 2025. The museum reported no previous localities within the Project site but did note localities are present 7 miles from the site, within the Desert Quartzite Solar Project which contains the same or similar sediments that underlie the Project site.

Paleontological resources have been documented by other consultants in the surrounding area, such as numerous fossil localities from the Chemehuevi Formation located south-southwest of the Project site (Appendix P).

### *Field Survey*

In November 2024, an intensive-level pedestrian field survey of the Project site was conducted after a desktop review of the geology and scientific literature was concluded. The survey was conducted by three paleontological surveyors and included the entire Project site, with a greater focus on outcrops and lands determined to have greater paleontological potential. These areas included undisturbed lands with moderate to well-developed desert pavements, visible paleosols (ancient soils), and eroded outcroppings on the flanks of washes. Ground surface visibility was excellent (more than 85%). While the BLM lands did not show signs of significant disturbance, the private lands showed indications of former agricultural practices as evidenced by linear ground disturbance, wells, and pumping stations. During the survey, no significant paleontological resources were identified (Appendix P).

### *Paleontological Sensitivity*

No significant paleontological resources were identified within the Project site as a result of the desktop geological and paleontological review or paleontological survey. The Holocene wash deposits (map unit Qw), alluvial fan, and alluvial valley deposits (map units Qa6 and Qa3) are not conducive to fossil preservation due to their young age. These units have low paleontological sensitivity on the surface, but that sensitivity increases to high at depth. The Pleistocene alluvial deposits of the Palo Verde Mesa (map unit Qpv) and the Plio-Pleistocene alluvial deposits of the McCoy Wash Area (map unit QTmw) have high paleontological sensitivity due to the age of the sediments and the number of previously recorded fossil localities in the nearby area.

## 3.14.3 Impact Analysis

The Project's potential impacts to paleontological resources are evaluated in this section.

### Methodology

Due to the variability within 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, regardless of the presence of fossils at the surface, it is necessary to evaluate the geologic units, or units with similar sedimentology, that lie within or outside the Project site based on their known potential to produce scientifically significant fossil resources. The paleontological resources assessment for the Project is based on the paleontological sensitivity of the underlying geologic units as determined by the records search results from the WSC and the NHMLA, a review of relevant scientific literature, and a pedestrian field survey of the Project site as detailed in the paleontology survey report (Appendix P). Areas with high paleontological sensitivity are evaluated by the type of disturbance activities that would result in impacts to the paleontological resources. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section VII of Appendix G to the State CEQA Guidelines addresses typical adverse effects to paleontological resources and includes the following threshold questions to evaluate a project's impacts to paleontological resources. Would the project:

a) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Significance thresholds are set forth in the County's Environmental Assessment Checklist, are derived from Section VII of Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact on paleontological resources if construction and/or operation of the Project would:

a) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

### Environmental Impacts

This section includes an examination of the Project's impacts to paleontological resources per the County's Environmental Assessment Checklist and Appendix G to the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined sensitive sedimentary units were present in the project area and that the project has the potential to impact the paleontological resources during ground disturbing construction activities. During operation and maintenance, no major ground-disturbing activities are expected, so impacts to paleontological resources are unlikely. There is potential for decommissioning activities to impact to any remaining resources. Implementation of MM-PALEO-1 through MM-PALEO-3, and applicable BMPs during construction and decommissioning activities would reduce impacts to less than significant.

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

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* A review of record search data, geological mapping, and geological and paleontological literature did not identify any existing paleontological resources within the Project site. As noted above under 3.14.2, Environmental Setting, the Project site under BLM jurisdiction is within areas designated with a low potential of encountering paleontological resources (PFYC Class 2). No significant fossil localities were identified during the field survey of the Project site. However, given the required excavation activities for the Project, there is a potential for significant paleontological resources to be unearthed during Project-related ground disturbance, including decommissioning activities. Therefore, the Project would have the potential to directly or indirectly impact a unique paleontological resource or site or unique geologic feature.

**MM-PALEO-1** includes the preparation and implementation of a Paleontological Resources Impact Mitigation Program (PRIMP) outlining the details of how construction monitoring and mitigation would be conducted and implemented. The PRIMP includes monitoring for paleontological resources by a qualified paleontologist during all on-site rough grading, excavation and other significant ground-disturbing activities and shall require that any significant paleontological resources uncovered during Project excavations be properly analyzed and salvaged by the on-site paleontological monitor.

Incorporation of **MM-PALEO-1** described below would reduce impacts to paleontological resources to less than significant. This is consistent with Palo Verde Mesa Solar Project which determined a less than significant impact with mitigation incorporated. Mitigation for both the Proposed Project and Palo Verde Mesa Solar Project include a version of the Paleontological Resources Impact Mitigation Program (PRIMP). MM-PALEO-1 for the Proposed Project consolidates the applicable information from the Palo Verde Mesa Solar Project mitigation measures into one and reflects current best practices.

## Cumulative Impacts

**Geographic Scope.** Paleontological cumulative impacts include the Project's impacts as well as those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario). Cumulative impacts to paleontological resources consider whether the impacts of the Project together with other related projects substantially diminish the number of paleontological resources within the same or similar context or property type.

**Cumulative Impacts.** As discussed under Threshold "a," the Project could have the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature during ground-disturbing activities. Potential cumulative impacts to paleontological resources would result from projects that combine to create an environment where fossils, exposed on the surface, are vulnerable to destruction by earthmoving equipment, looting by the public, and natural causes such as weathering and erosion. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis. Cumulative projects would be required to assess impacts to paleontological resources through the environmental review (CEQA) process. Additionally, as needed, projects would incorporate individual mitigation for site-specific geological units present on each individual project site. However, it is possible that construction of the project in combination with other cumulative projects in undeveloped areas underlain by the Pleistocene alluvial deposits of the Palo Verde Mesa and the Plio-Pleistocene alluvial deposits of the McCoy Wash Area could disturb multiple unknown unique paleontological resources within these areas. This could result in a potentially significant cumulative impact to which the project would make a cumulatively significant incremental contribution.

The Project includes implementation of **MM-PALEO-1** that would ensure any significant paleontological resources uncovered during Project excavations would be properly analyzed and salvaged by the on-site paleontological monitor. Therefore, the Project, in combination with the past, present, and reasonably foreseeable future projects adjacent to the Project, would result in less than cumulatively considerable contribution to the loss of paleontological resources consistent with the Palo Verde Mesa Solar Project. As mentioned, MM-PALEO-1 for the Proposed Project consolidates the applicable information from the Palo Verde Mesa Solar Project mitigation measures into one and reflects current best practices.

## 3.14.4 Mitigation Measures

The following Mitigation Measure was developed to substantially lessen the potentially significant effects to paleontological resources that could result from construction and decommissioning of the Project.

**MM-PALEO-1** **Paleontological Resources Impact Mitigation Program.** Prior to commencement of any site disturbing activity including grading or excavation, the Applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (2010) guidelines. The paleontologist shall prepare a Paleontological Resource Impact Mitigation Program (PRIMP) for the Project. PRIMP shall be consistent with the Society of Vertebrate Paleontology (2010) guidelines and shall outline requirements for pre-construction meeting attendance and worker environmental awareness training; where monitoring is required within the Project site based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; paleontological methods (including sediment sampling for microvertebrate fossils); and reporting, and collections management. The PRIMP shall be provided to the construction contractor, the Applicant and the lead agency. The qualified paleontologist shall attend the pre-construction meeting and a qualified paleontological monitor shall be on site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed, fine-grained Quaternary alluvial deposits of Pleistocene age. In the event that paleontological resources (e.g., fossils) are unearthed during construction activities, the qualified paleontological monitor shall temporarily halt and/or divert ground disturbing activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the qualified paleontological monitor shall remove the rope and allow grading to recommence in the area of the find.

Paleontological specimens recovered from the Project site, if any, shall be processed in the laboratory. Processing shall include removal of any matrix so that the fossil can be identified to the lowest possible taxonomic level. The specimens shall then be identified and cataloged into a paleontological database. Specimens shall be prepared for curation prior to repository accessioning.

The qualified paleontologist shall produce a Paleontological Monitoring Report describing the paleontological discoveries in their stratigraphic and geographic context and detailing the procedures for preparing, curating, and accessioning the paleontological collection into a suitable repository. The report of monitoring results shall be submitted to the lead agency. If no significant paleontological resources are recovered during Project ground-disturbing activities, a final Monitoring Memorandum shall be produced and submitted to the lead agency.

***Significance after Implementation***

Implementation of **MM-PALEO-1**, which would mitigate impacts to paleontological resources, and would reduce impacts to less than significant.

## 3.14.5 References

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SVP (Society of Vertebrate Paleontology). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Accessed July 2023. https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf.

# 3.15 Public Services

This section includes an analysis of the impacts on public services (fire and law enforcement) that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning of the proposed project (Project). The analysis in this section describes the applicable regulations, presents an overview of existing conditions that influence public services, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts to public services, and lists mitigation measures that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The Project does not include a new population (i.e., residences) that require additional services including health, parks, schools and libraries. Therefore, the Project would not impact these services, please see Section 3.15.3 for additional information.

## 3.15.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

There are no federal regulations, plans, or standards for public services that apply to the Project.

### State Laws, Regulations, and Policies

There are no state laws for public services that apply to the Project. Provided below is a list of applicable state regulations and policies that apply to public services.

#### *California Fire Code*

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes the minimum requirements consistent with nationally recognized best practices 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 operation. Chapter 6 (Building Services and Systems) of the Code focuses on building systems and services as they relate to potential safety hazards and when and how they should be installed. Building services and systems are addressed include emergency and standby power systems, electrical equipment, wiring and hazards, and stationary storage battery systems. Chapter 33 (Fire Safety During Construction and Demolition) of the Code outlines general fire safety precautions to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. Features regulated include fire protection systems, fire fighter access to the site and building, means of egress, hazardous materials storage and use and temporary heating equipment and other ignition sources.

#### *2019 Strategic Fire Plan for California*

The 2019 Strategic Fire Plan for California (CAL FIRE 2019) was developed in coordination with the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection (CAL FIRE) to reduce and prevent the impacts of fire in California. The plan reflects the values of CAL FIRE, including integrating fire protection, natural resource management, and fire prevention under a single mission on behalf of the state and local communities. The plan includes goals to improve CAL FIRE's core capabilities, enhance internal operations, ensure health and safety, and build a workforce by the year 2023. Objectives to reach these goals include but are not limited to the following: establishing a 30-year

investment plan to maintain right-sized department staffing and resource deployment for mission delivery, implementing fuels reduction projects on at least 50,000 acres annually, increasing funding to keep pace with wildfire risks, and improving timeliness and frequency of communications. The objectives and goals outlined are applicable to the Riverside County Fire Department.

## Local Laws, Regulations, and Policies

### *Riverside County Fire Department (RCFD) Technical Policy 15-002*

RCFD Technical Policy 15-002, Solar Energy Generating System 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 solar energy generating system (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 solar energy generating system 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 13.5 feet. The grade of the access road shall not exceed 15%. 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 (Riverside County Fire Department Office of the Fire Marshal 2020).

### *Riverside County Fire Department Fire Protection and EMS Strategic Master Plan*

The County has developed a strategic fire plan that details the department's goals and strategies for proactively coordinating fire facility, service and equipment needs for 2009-2029. It incorporates CAL FIRE's management plan for several sub-zones within the county. The plan is aimed at ensuring that existing and future development maintains adequate service levels throughout the county.

### *2023 Unit Strategic Fire Plan for Riverside County*

The 2023 Unit Strategic Fire Plan for the County was drafted by the CAL FIRE and the RCFD to reduce costs and prevent the impacts of fire in Riverside Unit (CAL FIRE/RCFD 2023). The plan includes all wildland, not only the State Responsibility Areas, to provide protection for residents and firefighters. In addition, the plan includes all wildland fire service providers including federal, state, local government, and private.

### *Riverside County Ordinances*

**Ordinance No. 659 - Establishing a Development Impact Fee Program**: This ordinance requires that new development pay Development Impact Fees to ensure that certain facility obligations are met in order to reasonably serve the subject development. Such obligations include the construction of new fire facilities. The ordinance ensures that there is a reasonable relationship between the use of the fees and the type of development projects on which the fees are imposed.

**Ordinance No. 787 - Fire Code Standards:** This ordinance adopts a variety of state codes, such as the Uniform Fire Code (UFC), established by the International Fire Code Institute, for implementation and enforcement at the county level. This ordinance also addresses implementation of the California Uniform Building Code, based on the International Conference of Building Officials. Both major Codes prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection.

### *Riverside County General Plan*

The Safety Element of the General Plan includes a Fire Hazards section which addresses earthquake-induced fire as a threat and provides an integrated approach to minimizing the threat of wildland fires. To minimize the potential for disastrous loss of structures and life (human and wildlife), a coordinated program to manage development in the hazardous areas is included in the Safety Element (County of Riverside 2021c). The following policy is applicable to the Project.

- **Policy S 4.18.** When updating the Safety Element, the Multi-Jurisdictional Local Hazard Mitigation Plan, or at other times as appropriate, review inter-jurisdictional fire response agreements and improve firefighting resources as recommended in the Riverside County Fire Department Fire Protection Plan and Emergency Medical Services (EMS) Strategic Master Plan. Ensure that fire response agreements and firefighting resources are able to meet current and future needs, including increased demand from new development and changing fire regimes. Ensure that:

  a) Fire reporting and response times do not exceed the goals listed in the Riverside County Fire Department Fire Protection Plan and EMS Strategic Master Plan identified for each of the development densities described in these plans.

The Land Use Element of the General Plan includes policies that address the provision of infrastructure, public facilities, and services with the projected increase in population (County of Riverside 2021b). The Project does not include an increase in population or demand for some public services. Applicable policies are as follows:

- **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 10.1.** Require that new development contribute their fair share to fund infrastructure and public facilities such as police and fire facilities.

### *Palo Verde Valley Area Plan*

The Project is located within the Palo Verde Valley Area Plan. The Palo Verde Valley Area Plan contains policies that guide the physical development and land uses within the Palo Verde Valley Area which include Chuckwalla Valley, Big Maria, Mccoy, Mule Mountains, and the Colorado River. The plan includes a Hazards element as portions of the Palo Verde Valley Area may be subject to flooding, dam inundation, seismic occurrences and wildland fire. The following policy addresses hazard issues specific to Palo Verde Valley applicable to the Project.

- **Policy PVVAP 11.1.** Protect the Colorado River watershed and habitat and provide recreational opportunities and flood protection through adherence to the Open Space, Habitat, and Natural Resource Preservation section of the General Plan Land Use Element and the Wetlands and Floodplain and Riparian Area Management sections of the Multipurpose Open Space Element, as well as through use of Best Management Practices.

## 3.15.2 Environmental Setting

### Fire Protection Services

The RCFD is one of the largest regional fire service organizations in California (RCFD 2009). The County contracts with the State of California (the California Department of Forestry and Fire Protection, also now known as CAL FIRE for fire protection. There are 101 fire stations located throughout the County that serve unincorporated communities, partner cities, and the state under the California Master Mutual Aid Agreement (County of Riverside 2021a). Within its service area, RCFD provides fire suppression, emergency medical, rescue and fire prevention services and is equipped to fight both urban and wildland emergency conditions. CAL FIRE also has primary responsible responsibility for managing fires on lands designated "State Responsibility Areas" (SRAs). A variety of local fire agencies, for example city fire departments, have jurisdiction over "Local Responsibility Areas" (LRAs). And on federal lands, Federal Responsibility Areas (FRAs), federal agencies (Bureau of Land Management [BLM] or U.S. Forest Service) are responsible (County of Riverside 2015).

The closest RCFD/CAL FIRE station to the Project's location in the Palo Verde Valley Area is Fire Station No. 45–Blythe Air Base (Station No. 45), located at 17280 West. Hobson Way, Blythe, CA 92225, approximately 2 miles south of the Project site (RCFD 2021). Station No. 45 is part of Battalion 8. Station No. 45 is a one engine facility that operates 24 hours, 7 days a week. At any given time, the staff includes 3 personnel of any rank and 1 paramedic to the one engine. Station No. 45 has a service area from Desert Center to the Arizona border. Station No. 45 also provides backup for Station No. 43, all the way up Highway 43 on the California line. The station receives on average 1-2 calls per day, typically regarding medical support, vehicle fires, car accidents, and flood water rescue in the Colorado River and agricultural canals. The Station rarely receives calls from solar sites. Due to the station's vast service area, the average response time is 20-30 minutes (Engineer Perez 2024).

The BLM Fire Program includes fire suppression, preparedness, predictive services, fuels management, fire planning, community assistance and protection, prevention and education, and public safety (BLM 2024a). Its field offices, such as the BLM Palm Springs–South Coast Field Office, may provide on-the-ground fire management and aviation services. BLM California 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 2020, 2024b).

### Law Enforcement Services

The Riverside County Sheriff's Department provides service to the unincorporated county, which includes the Palo Verde Valley Area (Riverside County Sheriff-Coroner 2024). The Colorado River Station is located at 260 North Spring Street, Blythe, California (Riverside County Sheriff-Coroner 2024), approximately 4.7 miles southeast of the Project site. The Colorado River Station receives an average of four to five calls per day with an average response time of 18 to 33 minutes. The main reasons for calls include assaults, burglaries, and theft. The station has three to four vehicles on patrol at any on time and two to three deputies and a sergeant on shift at any given time. The Blythe Police Department and California Highway Patrol (CHP) provide as needed backup and support (Lieutenant M. Moulton, pers. comm., 2023).

The California Highway Patrol (CHP) is the primary law enforcement agency for state highways and unincorporated county roadways. The Border Division CHP covers highways within East Riverside County. The California Highway Patrol (660) Blythe Area is located at 430 South Broadway, Blythe, California 92225, approximately 4.5 miles southeast of the Project site. This office patrols I-10, State Route 78, and U.S. Route 95, and 500 miles of unincorporated county roadways (CHP 2024).

Under the Federal Land Policy and Management Act of 1976, 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. BLM has a law enforcement program that protects public land from illegal activities such as unauthorized use of off-highway vehicles and vandalism of archaeological resources (U.S. Department of the Interior 2024). BLM Rangers from BLM Law Enforcement and Security Region 1 are responsible for enforcing federal laws on federal land in the State of California (BLM 2024c). The BLM has approximately 200 law enforcement rangers (uniformed officers) on staff who promote safety, security, and environmental protection of public lands, public land users, and employees (BLM 2024d). The BLM's law enforcement program draws its authority from federal law under federal jurisdiction. BLM law enforcement officers enforce federal laws and do not have authority to enforce state laws without written authorization from a sheriff, other authorized state official, or state law.

## 3.15.3 Impact Analysis

### Methodology

This section considers the potential impact to public services, specifically police and fire in the unincorporated County during construction and operation of the Project. The methodology used to evaluate potential public services impacts includes the following: (1) evaluation of existing fire and law enforcement services and personnel for the fire and law enforcement stations serving the Project site; (2) determination of whether the existing fire and law enforcement services and personnel are capable of servicing the Project, in addition to the existing population and building stock; and (3) determining whether the Project's contribution to the future service population would cause fire or sheriff station(s) to operate beyond service capacity. The RCFD and County Sheriff's Department do not have adopted response times or number of required personnel per population due to the rural nature of the county. The determination of the significance of the Project on fire protection and law enforcement protection services considers the level of services required by the Project and the ability of RCFD/CAL FIRE and the County Sheriff's Department to provide and maintain this level of service throughout the county, including whether the Project would require the construction of new or expansion of existing facilities to ensure adequate service can be provided. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section XV of Appendix G to the State CEQA Guidelines addresses typical adverse effects to public services and includes the following threshold questions to evaluate a project's impacts on public services. Would the project:

a) 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:

    a) Fire Protection;

    b) Police Protection;

    c) Schools;

    d) Parks; and

e) Other Public Facilities?

Significance thresholds are set forth in Riverside County's Environmental Assessment Checklist, are derived from Section XV of Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact on public services if construction and/or operation of the project would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

f) Fire services;

g) Sheriff services;

h) Schools;

i) Libraries; and

j) Health services?

**Significance Threshold Criteria Not Applicable to the Proposed Project**

***Schools, Parks, Libraries and Health Services***

The Project does not include a new population (i.e., residences) that require additional services including schools, parks, libraries, and health services. Construction and future decommissioning of the Project would temporarily increase the number of people in the Palo Verde Valley Area, but it would not substantially increase the population. Further, the addition of up to six O&M personnel would not substantially increase the population. The temporary addition of construction and future decommissioning workers and addition of six operations personnel to the local population is not anticipated to impact school enrollment, use of recreational facilities, use of libraries, or demand for health services. Therefore, the Project would not impact these services, and these issues are not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts to public services per Riverside County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that there would be a temporary increase in workers on the Project site, but the majority of the personnel would come from the local population within Riverside County, and would not result in the permanent demand for additional government facilities or public services including schools, police and sheriff, protection services, fire protection, parks and recreation, and other public services such as health centers and libraries. Additionally, the project would be required to pay development impact fees pursuant to Riverside County Ordinance 659, which would mitigate any potential impacts resulting from the project on public services. Therefore, the project would result in less than significant impacts to public services with compliance with Riverside County Ordinance 659 and applicable BMPs.

***Threshold a. Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?***

*LESS THAN SIGNIFICANT.* Construction of the Project is anticipated to occur over an approximately 28-month period and would require an average construction-related on-site workforce of 50-100 individuals, with the peak workforce reaching approximately 600 workers. It is anticipated that the construction workforce would be drawn from communities within Riverside and San Bernardino counties including the nearby community of Mesa Verde and the City of Blythe, and, as such, would not induce substantial permanent growth to the regional population levels.

After the construction phase, up to six permanent staff could be on site at any time for ongoing facility maintenance and repairs. These six employees would also come from or move to local communities and would not contribute to a significant population increase.

Decommissioning is anticipated to require a workforce similar to or slightly less than that required for construction. It is assumed the workforce would also be drawn from communities within Riverside County and San Bernardino counties and would not require a substantial increase in new residents.

***Fire Protection Services***

The Project site is not located within a designated area of very high or high fire hazard severity, according to the Fire Hazard Severity Zones Map (CAL FIRE 2024). Vegetation in the Project area is sparse, thus fire risk from vegetation is minimal. In addition, no residential or commercial structures exist within the Project boundary, nor would any be constructed as part of the Project. There is one residence located adjacent to the northern Project boundary. Refer to Section 3.22, Wildfire, for additional details regarding fire protection and services.

During construction and future decommissioning, workforce would be at its peak, which would create human presence-related hazards (i.e., fire) not currently present within the Project site, including a variety of equipment used that could create sparks or other potential fire hazards. Electrical sparks; combustion of fuel oil, hydraulic fluid, mineral oil, or insulating fluid at substations; or flammable liquids, explosions, and over-heated equipment pose fire risks. As noted in Section 2.5.7 Fire Safety, in Chapter 2, Description of the Project, the Project would coordinate with BLM, RCFD, and other applicable jurisdictions as appropriate to define measures to control the risk of fire.

Increases in long-term demand for fire protection services typically are associated with substantial permanent increases in population due to residential development. Typically, service demands for commercial development per employee are less than service demands per resident. The RCFD does not have adopted service standards for number of personnel per population. Nevertheless, the addition of construction personnel on the Project site could result in an increase in demand for fire protection services. While this would be an increase in people on the site above existing levels, the presence of construction workers would be temporary, as the construction period for the Project would last approximately 28 months. It is anticipated that the construction workforce would be drawn from communities within Riverside and San Bernardino counties, and therefore would not result in the addition of permanent residents 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 itself, would increase.

During the operation phase, up to six permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. This addition of six permanent employees would not contribute to a significant population increase and would not result in measurable increase in demand for fire protection services or require new or altered facilities.

Additionally, the Project includes Applicant Proposed Measures (APMs), which would ensure that impacts related to fire are reduced to the extent feasible, and require the Project to be designed, constructed, and operated in accordance with applicable state and County fire protection standards and other requirements. The Project includes preparation of a Project specific Fire Prevention Plan for both construction and operation of the Project, in compliance with Riverside County requirements (**APM-HAZ-2**). The Fire Prevention Plan would comply with applicable BLM and County regulations and would be coordinated with the RCFD. The Fire Prevention Plan would contain notification procedures and emergency fire precautions consistent with the California Fire Code (CFC) and County Fire Code. The Fire Prevention Plan would also include emergency fire precautions for vehicles and equipment, as well as fire prevention measures including training at "tailgate safety meetings" so construction workers are educated on fire prevention and how to handle any potential fire threats.

During construction, water would be supplied to the site by an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. The Applicant has also purchased a 320-acre property with a water source and has secured use of this water supply. During operations, water would be obtained from the same source as construction or via an onsite well. If required by RCFD for fire protection, the Project may include one or more aboveground water storage tank(s) adjacent to the O&M building. The tank(s) would be sized to meet County fire requirements to supply sufficient fire suppression water during operations. Additional fire protection measures within the O&M building may include sprinkler and fire suppression systems in compliance with current building codes. The systems would be compatible with the building's electrical system. Furthermore, there would be portable carbon dioxide fire extinguishers mounted at the power conversion system units.

Water use during decommissioning is expected to be similar to that for Project construction. Water for decommissioning would be obtained from the same source as construction and operation.

The Project would facilitate emergency access by installing a Knox-Box containing keys for fire and other emergency personnel on all access gates. The Project would need to coordinate directly with RCFD regarding fire access and secondary access, as required by Technical Policy 15-002 (RCFD Office of the Fire Marshal 2020). All Project facilities 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.

As previously noted in Section 3.15.2, the closest RCFD/CAL FIRE station to the Project site is Station No. 45, approximately 2 miles south of the Project site (RCFD 2021). Station No. 45 is a one engine facility that operates 24 hours, 7 days a week. The station receives on average 1-2 calls per day, typically regarding medical support, vehicle fires, car accidents, and flood water rescues and rarely receives calls from solar sites. Due to the stations vast service area, the average response time is 20-30 minutes (Engineer Perez 2024). Given the Project site's proximity to Station No. 45 it is likely that the response times to the Project site would be minimal.

**Battery *Energy Storage System (BESS)***

The Project would have a BESS with a capacity up to 500 MW housed within containers in a centralized location near the proposed on-site substation. The BESS would likely consist of containers housing batteries connected in strings and mounted on racks. Alternating current-coupled BESS design standards typically include lighting, monitoring equipment, cooling units, active exhaust venting, multiple fire detection units including gas/heat/smoke detectors, and fire protection systems, which adequately address fire risk associated with the unit (California Fire Code 2022). 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 imminent fire danger. The BESS would be equipped with integrated operational management, fire, and safety systems, such as heating, ventilation, and air conditioning, gas, heat and smoke detection and alarms, and fire extinguishing and protection systems. In addition, a Failure Mode and Effects Analysis must be performed for each system and requires a test to ensure safe compatibility of the system's parts.

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 protection tanks. The BESS would be NFPA 855 Code compliant and UL certified and would include built-in fail-safe and cooling systems designed to prevent thermal runaway and the spread of fire (Appendix M, Fire Prevention Plan). The proposed batteries and containers will include multiple safety components, including integrated heat and fire detection and protection systems, integrated air conditioning, and integrated battery management system. The heat and fire detection system would be linked to an automatic inert gas protection system within each container. A water truck or other portable water storage tank would be kept on site to provide the water supply needed for fire protection and operations, if necessary based on consultation with Riverside County Fire Department.

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

- Modular battery racks designed for ease of maintenance
- Integrated heat and fire detection and protection system
- Integrated air conditioning system
- Integrated battery management system

Under normal operations, BESS facilities do not contain, store, or generate hazardous materials in quantities that would represent a risk to off-site receptors. Potential hazards associated with a BESS are primarily associated with the possibility of thermal runaway (similar to overheating) occurring from a malfunctioning or damaged battery. Newer battery technologies have minimized the occurrence of thermal runaway through a system of protections including internal cell monitoring and partitioning; use of nonflammable chemicals; container design and features; ventilation, and air-conditioning systems; and inert gas fire protection systems. As discussed above, the Project includes preparation of a Fire Prevention Plan that would include a discussion of BESS risk reduction and fire prevention measures to reduce the risk of fires. Fire prevention measures would include requiring the use and storage of flammable materials away from areas containing ignition sources and the proper storage of chemicals that are incompatible (i.e., chemically reactive) to ensure substances are separated appropriately.

The Project would use a BESS that is National Fire Protection Association 855 Code compliant, Underwriters Laboratories certified, and include built-in failsafe and cooling systems designed to prevent thermal runaway and the spread of fire. Additionally, all stationary BESS facilities in California are required

to comply with Chapter 12 (Energy Systems) and particularly Section 1206 (Electrical Energy Storage Systems) of the CFC, which has adopted internationally and federally accepted National Fire Protection Association 855 standards for the design, construction, installation, commissioning, of BESS facilities.

Pursuant to the California Fire Code, all battery manufacturers are required to prove that a failed battery cell inside an enclosure will not cause a fire outside the system. The CFC also contains safety standards for the BESS construction (e.g., frame and enclosure, including mounting, supporting materials, barriers and more); the insulation, wiring, switches, transformers, spacing and grounding; safety standards for performance, such as tests for temperature, volatility, impact, overload of switches, and an impact drop test; and standards for manufacturing, ratings, markings, and instruction manuals. The Project would meet the CFC industry standards and also includes an alarm signal if potentially hazardous temperatures or other conditions such as short circuits, over voltage or under voltage, are detected. This system would be capable of controlling and isolating individual cells from the rest of the system both remotely and manually. In addition to compliance with the National Fire Protection Association 855 Code and the CFC, the Project would also comply with all other local, state, and federal safety standards and regulations, including those of the RCFD.

In summary, fire risk during construction, operation, and decommissioning of the Project would be minimal and further reduced preparation of a Project specific Fire Prevention Plan for both construction and operation of the Project, in compliance with Riverside County requirements (**APM-HAZ-2**). Additionally, the Project would include emergency access and other safety features and plans for fire protection. As such, given the temporary nature of the Project's construction and decommissioning phases, the minimal number of permanent staff needed during operation, proximity to Station 45, and the Fire Prevention Plan, the Project would not significantly impact acceptable service ratios, response times or other performance objectives of RCFD or require new or physically altered governmental facilities. Therefore, impacts on the provision of fire protection services would be **less than significant**. While the Palo Verde Mesa Solar Project did not include a BESS, there was still a less than significant impact on fire protection services.

***Law Enforcement Services***

The temporary addition of construction and future decommissioning workers to the Project site could increase demands on police services. Although an addition of up to 600 construction personnel on site at any one time could alter the current protection service ratio; however, because construction would not permanently increase the local population, no new or expanded law enforcement facilities or increase in the number of sheriff's deputies would be required.

The Project would implement several security measures which would minimize the potential need for assistance from the Sheriff's Department or CHP. Before construction commences, a permanent security fence topped with barbed wire would be erected surrounding the Project site, which would remain in place throughout construction, operation, and decommissioning of the Project. Locked entrance gate(s) located near the O&M building would control ingress and egress of personnel and vehicles, and security may be enhanced with motion detectors, lighting, and cameras in key locations.

Project operations require six fulltime employees to oversee operations and maintenance of the facility. The addition of these employees would result in a negligible increase in depend for law enforcement services. Furthermore, the Project site is located in a relatively remote location surrounded by undeveloped land, other solar energy developments, and sparse rural residential development and it is unlikely to attract attention that would make Project facilities susceptible to crime.

Overall, construction, operation, and future decommissioning of the Project would not result in the need for new or physically altered law enforcement protection facilities to maintain acceptable service ratios, response times, or other performance objectives. Impacts on the provision of law enforcement services would be **less than significant** consistent with Palo Verde Mesa solar Project.

## Cumulative Impacts

**Geographic Scope.** The geographic scope of the cumulative impacts analysis includes the service areas of each of the providers serving the Project. This geographic scope would include all projects listed in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario. The Project and other projects in the cumulative scenario, together, could increase demand for public services in eastern Riverside County due to increases in workers within the area during construction and future decommissioning, which could result in a significant cumulative impact to public services. The Project is not located within a designated area of very high or high fire hazard, according to the Fire Hazard Severity Zones Map (CAL FIRE 2023).

### *Schools, Parks, Libraries and Health Services*

**Cumulative Impact.** As discussed above, the Project would not impact schools, parks, libraries, and health services. Therefore, the Project would not contribute to cumulative impacts associated with these issues.

### *Fire Protection Services*

As discussed in Threshold "a" above, the greatest potential for fires and fire hazards would exist at the Project site during construction and decommissioning because the on-site workforce would be at its peak, which would create human presence-related hazards not currently present within the Project site, including a variety of equipment used that could create sparks or other potential fire hazards. Increases in long-term demand for fire protection services typically are associated with substantial permanent increases in population. The increase in construction personnel on the Project site would be temporary and would therefore not result in a permanent increase in the demand for fire protection services. During the operation phase, up to six permanent staff could be on the site at any one time for ongoing facility maintenance and repairs. These six operation personnel would not contribute to a significant population increase and would not increase the demand for fire protection services or require new or altered facilities. Additionally, **APM-HAZ-2** would be implemented, which would ensure that impacts related to fire are reduced to the extent feasible.

Construction of reasonably foreseeable future projects, listed in Table 3.1-2, may overlap with construction of the Project. However, similar to the Project, future projects would have to comply with applicable federal, state, and local laws, policies, and regulations. This includes compliance with all CFC requirements for emergency access, fire detection, protection systems, and minimum fire flow. Code compliance would serve to reduce the susceptibility of new development to fires and, in turn, minimize demand for fire protection. Furthermore, the County also requires development applicants to pay established fire protection mitigation fees that are to be used by the RCFD to construct new fire protection facilities or provide facilities in lieu of the fee as approved by the RCFD. The County also requires all new structures constructed in unincorporated areas comply with the construction requirements of Riverside County Ordinance No. 787 and shall be provided with fire-retardant roofing material as described in the Uniform Building Code (County of Riverside 2015). Other cumulative projects in the RCFD service area would be reviewed for impacts on fire protection. Therefore, the Project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to fire protection. This is consistent with the Palo Verde Mesa Solar Project.

***Law Enforcement Services***

As discussed in Threshold "a" above, the Project would implement several security measures which would minimize the potential need for assistance from the Riverside County Sheriff's Department or CHP. Furthermore, the Project and foreseeable future projects would be located in a relatively remote location surrounded by undeveloped land, other solar energy developments, open space, and sparse rural residential development and are unlikely to attract attention that would make the facilities susceptible to crime that would be cumulatively considerable. This is consistent with the Palo Verde Mesa Solar Project.

## 3.15.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

The following APM is considered as part of the project description and would be incorporated into the design of the Project.

**APM-HAZ-2** *See full text in Section 3.10, Hazards and Hazardous Materials.*

### Mitigation Measures

No mitigation is required.

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# 3.16 Transportation

This section includes an analysis of the impacts on transportation that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions that influence transportation in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts to transportation, and lists mitigation measures (MMs) that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The information in this section is based on multiple online sources and published documents, as well as the following:

**Appendix H** Grace Solar Energy Center Transportation Analysis, prepared by Dudek.

## 3.16.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Code of Federal Regulations, 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 Laws, Regulations, and Policies

#### *Senate Bill (SB) 743*

SB 743, signed by the governor in 2013, changed the way transportation impacts are identified in California Environmental Quality Act (CEQA) documents. Specifically, the legislation directed the Governor's Office of Planning and Research (OPR), now the Office of Land Use and Climate Innovation (LCI), to look at different metrics for identifying transportation as a CEQA impact. The updated CEQA Guidelines (OPR 2018a) and the final OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018b) identify vehicle miles traveled (VMT) as the appropriate metric for transportation impact analysis, as opposed to the use of roadway capacity/delay metrics, such as automobile delay and level of service (LOS). Also, the OPR Technical Advisory indicates that any construction effects on transportation will be temporary and evaluation of VMT during the construction phase of a project can be a qualitative, high-level assessment.

#### *California Department of Transportation (Caltrans) Local Development-Intergovernmental Review*

The Caltrans Local Development-Intergovernmental Review program uses the Transportation Impact Study Guide (TISG) during environmental review of land use projects and plans (Caltrans 2020a). The Caltrans Local Development-Intergovernmental Review 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; increase accessibility to destinations via cycling, walking, carpooling, and transit; and reduce greenhouse gas emissions. Those goals, along with standard CEQA practice, create the foundation of Caltrans review of proposed new land use projects.

The 2020 TISG replaced Caltrans' previous 2002 TISG, which was based on vehicle delay and congestion. Based on the 2020 TISG, for land use projects and plans, automobile delay is no longer considered a significant impact on the environment under CEQA per SB 743. Caltrans review of land use projects and plans is now based on VMT, consistent with changes to the CEQA Guidelines (14 CCR 15064.3[b][1]). This 2020 VMT-focused TISG provides a foundation for lead agencies' application of the VMT metric to CEQA project analyses.

Caltrans Traffic Safety Bulletin 20-02-R1: Interim Local Development and Intergovernmental Review Safety Review Practitioners Guidance (Caltrans 2020b) provides additional guidance on evaluating the potential safety impacts of a project on Caltrans facilities. The analysis provided in Section 3.16.3, Impact Analysis, is consistent with Caltrans' guidelines.

## Local Laws, Regulations, and Policies

### *Southern California Association of Governments (SCAG) Connect SoCal – Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)*

The SCAG develops the RTP, which presents the transportation vision for Los Angeles, Orange, San Bernardino, Imperial, Riverside, and Ventura counties. SB 375 was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. Under the law, SCAG is tasked with developing an SCS, an element of the RTP that provides a plan for meeting emissions reduction targets set forth by the California Air Resources Board. The SCS outlines the plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands.

The 2020–2045 RTP/SCS, also known as Connect SoCal, is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies, and between the people whose collaboration can improve the quality of life for Southern Californians (SCAG 2020). The SCAG Regional Council adopted Connect SoCal (2020–2045 RTP/SCS) on September 3, 2020.

Additionally, SCAG's 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 RTP/SCS. The criteria for projects of regional significance are outlined in CEQA Guidelines Sections 15125 and 15206. The Project's consistency with SCAG's goals included in the current RTP/SCS is included in Section 3.16.3.

### *Riverside County Long Range Transportation Study*

In December 2019, the Riverside County Transportation Commission developed the first countywide Long Range Transportation Study (LRTS) (RCTC 2019). It provides a vision for what an integrated transportation system will look like in Riverside County (County) in the next 20 years. The LRTS dovetails with and bridges local plans and SCAG's RTP/SCS. The Study is multimodal in nature and encompasses all forms of transportation: highways, local roads, transit, rail, pedestrian and bicycle facilities. The LRTS incorporates the County's Congestion Management Plan (CMP) which includes multimodal system performance standards for the County in accordance with CMP legislation and federal CMS requirements. The CMP

roadway network includes all state highway facilities in the County, including Interstate (I) 10 and State Route (SR) 78. However, LOS is no longer used to identify potential transportation impacts under CEQA.

***Riverside County General Plan***

The Riverside County General Plan Circulation Element contains the following policies applicable to the Project (County of Riverside 2020a):

- **Policy C 2.2.** 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 C 2.3**. Traffic studies prepared for development entitlements (tracts, public use permits, conditional use permits, etc.) shall identify project related traffic impacts and determine the "significance" of such impacts in compliance with CEQA and the Riverside County Congestion Management Program Requirements.
- **Policy C 3.6.** 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 C 3.8.** 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 C 3.10.** Require private and public land developments to provide all onsite auxiliary facility improvements necessary to mitigate any development-generated circulation impacts. A review of each proposed land development project shall be undertaken to identify project impacts to the circulation system and its auxiliary facilities. The Transportation Department may require developers and/or subdividers to provide traffic impact studies prepared by qualified professionals to identify the impacts of a development.
- **Policy C 6.2.** Require all-weather access to all new development.

***Riverside County Municipal Ordinances***

**Title 10, Chapter 10.08, Sections 10.08.010–10.08.180.** These regulations establish requirements and permits for oversized and overweight vehicles.

**Ordinance No. 460.** This ordinance specifies that all new access roads shall conform to the requirements of the County Transportation Department Subdivision Regulations.

**Ordinance No. 461.** This ordinance specifies that all new access roads shall conform to the requirements of the County Transportation Department Road Improvement Standards and Specifications.

***Palo Verde Valley Area Plan***

The Palo Verde Valley Area Plan is an Area Plan within the General Plan (County of Riverside 2021). The Palo Verde Valley Area Plan contains policies that guide the physical development and land uses within the Palo Verde Valley Area and includes a Circulation Element, which aims to create an interconnected and efficient circulation system for the entire County. The following policy is applicable to the Project.

- **Policy PVVAP 7.2**. Maintain Riverside County's roadway Level of Service standards as described in the Level of Service section of the General Plan Circulation Element.

## 3.16.2 Environmental Setting

The Project is located in in the unincorporated County, approximately 2.8 miles north of I-10, adjacent on the south side, to the city limits of Blythe (City). The Project is located on federal lands administered by the Bureau of Land Management (BLM) and adjacent private lands in the County, as well as adjacent to existing solar facilities on private and public lands.

Figure 3.16-1, Existing Transit Facilities, illustrates the roadway network surrounding the Project site. Because the Project is in a remote area, all materials and personnel would travel from surrounding communities within the County.

All Project-related traffic would use I-10 to either the Blythe Airport/Mesa Drive interchange or the State SR-78/Neighbours Boulevard interchange to Hobsonway, Buck Boulevard, and the Project access roads would provide primary site access. Secondary access for emergency services would be from Hobsonway and Stephenson Boulevard under Phase 1, and the Blythe Airport/Mesa Drive interchange to Black Rock Road and Dracker Road under Phase 2.

The "study area" for the traffic and transportation analysis includes the segments of I-10, segments of Black Rock Road/Hobsonway, and segments of SR-78/Neighbours Boulevard, which would have the greatest potential to experience an increase in traffic volume during Project construction and operation, as well as local roadways connecting to the Project site. Eight intersections are included in the study area for the traffic and transportation analysis. It is anticipated that most construction workers would be drawn from the greater Riverside County or San Bernardino County regions with some workforce coming from Blythe, Palo Verde or Desert Center. Construction workers and delivery trucks would access the Project site from Buck Boulevard and Dracker Road.

### Regional and Local Roadways

Regional roadway facilities in the area and those used to access the Project site include the following (see Figure 3.16-1):

- **I-10** is an east–west-oriented, generally four-lane freeway located south of the Project. It would provide regional access to the Project site via its interchange with Mesa Drive and Neighbours Boulevard. The posted speed limit is 70 miles per hour (MPH). Based on the most recent available data from the 2022 Caltrans Traffic Census, I-10 at the Mesa Drive and SR-78 junctions carries approximately 31,800 average daily traffic (Caltrans 2022).
- **SR 78 (locally known as Neighbours Boulevard)** is an east-west, generally two-lane major highway located southeast of the Project. The road terminates at 11th Avenue, northeast of the Project. The posted speed limit is 55 MPH. Based on the most recent available data from the 2022 Caltrans Traffic Census, SR-78 carries approximately 2,900 average daily traffic near the I-10 junction and 2,800 average daily traffic near Hobsonway (Caltrans 2022).
- **Black Rock Road** is an east-west two-lane, undivided roadway located between Mesa Drive and Dracker Road. The road dead ends immediately west of Dracker Road. The General Plan Circulation Element classifies a small section of Black Rock Road as a Collector Street where it intersects with Mesa Drive. There are pedestrian facilities on the north side of the roadway (approximately 160 feet long) along the frontage of the Valero gas station. No bicycle facilities are present on either side of the roadway. The posted speed limit is 45 MPH**.**

- **Mesa Drive** is a north-south, two-lane, undivided roadway located southwest of the Project. The road provides interchanges with I-10 and dead ends immediately north of the I-10 ramps. The General Plan Circulation Element classifies Mesa Drive as a Collector Street from I-10 to the south for a small portion of the roadway. There are pedestrian facilities on Mesa Drive that run along a western parcel of land that contains the Roy Wilson Community Center, south of I-10 and along the frontage of the Valero gas station, north of I-10. There are no bicycle facilities and no posted speed limit. Southbound construction traffic is prohibited on this road south of the Mesa Drive/I-10 interchange.
- **Hobsonway** is an east-west, two-to-four-lane, undivided major arterial located between Mesa Drive and the Colorado River. The road transitions into Donlon Street at an I-10 underpass west of the Colorado River. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. The posted speed limit ranges from 30 MPH up to 55 MPH, depending on the segment.
- **5th Avenue** is an east-west, two-lane, undivided roadway located between Rannels Boulevard and Stephenson Boulevard and is north of the Project site. The General Plan Circulation Element does not classify 5th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. There is no posted speed limit.
- **6th Avenue** is an east-west, two-lane, undivided roadway located between the eastern boundary of the project site and the Colorado River. The General Plan Circulation Element does not classify 6th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. There is no posted speed limit.
- **7th Avenue** is an east-west, two-lane, undivided roadway located between Megin Avenue and Stephenson Boulevard. The General Plan Circulation Element does not classify 7th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. There is no posted speed limit.
- **8th Avenue** is an east-west, two-lane, undivided roadway located between the eastern Project boundary and dead ends approximately a mile east of U.S. Route 95. The General Plan Circulation Element does not classify 8th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. The posted speed limit is 35 MPH.
- **9th Avenue** is an east-west, two-lane, undivided roadway located between Magin Avenue and Stephenson Boulevard. The road dead ends immediately east of Stephenson Boulevard. The General Plan Circulation Element does not classify 9th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. No speed limit is posted.
- **10th Avenue** is an east-west, two-lane, undivided roadway located between Arrowhead Boulevard and Olive Lake Boulevard. The road dead ends west of Arrowhead Boulevard and east of Olive Lake Boulevard. The General Plan Circulation Element does not classify 10th Avenue. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. No speed limit is posted.
- **Buck Boulevard** is a north-south, two-lane, undivided roadway located between Hobson Way and 9th Avenue and serves as the primary access point to the site. The General Plan Circulation Element does not classify Buck Boulevard. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. No speed limit is posted.
- **Stephenson Boulevard** is a north-south, two-lane, undivided roadway located between Chanslor Way and 7th Avenue. The General Plan Circulation Element does not classify Stephenson Boulevard. There

are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. No speed limit is posted.

- **Dracker Road** is a north-south, two-lane, undivided roadway located between Black Rock Road and Black Creek Road. Secondary access to the project will be provided from Draker Road. The General Plan Circulation Element does not classify Dracker Road. There are no pedestrian or bicycle facilities present on either side of the roadway within the vicinity of the Project site. Posted speed limits are 25 MPH and 35 MPH.

### Public Transportation within the Vicinity

#### *Public Transportation Service*

The nearest public bus service is offered by the Palo Verde Valley Transit Agency (PVVTA), which serves the Blythe area. The nearest stop to the Project site is located at the intersection of Neighbours Boulevard and Hobson Way and provides stops for the Red, Green, and Silver routes. The Red route operates during the weekdays with two buses stopping at the bus stop twice during the morning hours, two hours a part. In the afternoon, the Red route is provided by request at the Neighbours Boulevard and Hobson Way stop. The Red route operates exclusively westbound in the mornings and exclusively eastbound in the afternoons. The Green route services riders during the weekdays with two-hour headways throughout the day, between 7:40 AM and 3:40 PM, and provides services by request afterwards. The Silver route operates on Saturdays and holidays and has 30 to 90-minute headways in the morning for the westbound route. The eastbound route has 90-minute headways (PVVTA 2024).

#### *Pedestrian and Bicycle*

Pedestrian facilities include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape amenities. Many of the roads in the area are unimproved and lack pedestrian and bicycle facilities, except for some segments along Mesa Drive and Black Roack Road that have sidewalks. Given the rural nature of local roads and lack of pedestrian and bicycle facilities, pedestrian and bicycle use of the roadway is minimal.

## 3.16.3 Impact Analysis

### Methodology

The analysis focuses on potential impacts related to the construction, operation, maintenance, and future decommissioning of the Project on the surrounding transportation systems and roadways. The assessment of transportation-related impacts is based on technical analyses designed to compare the existing conditions (pre-Project) to those during construction of the Project, as well as potential cumulative impacts, and impacts related to Project operations and decommissioning of the Project. This analysis considers the effects of the Project on transportation in the context of Caltrans and County requirements. Caltrans is responsible for permitting and regulating the use of state-administered roadways within the state, including I-10 and SR-78, and the City and the County are responsible for regulation of the use of roadways within their respective jurisdictional boundaries. BLM is responsible for use of approved routes and new rights-of-way for use of routes within its jurisdiction. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### *Trip Generation*

Construction

Generally, construction work schedules are expected to be up to 12 hours per day, 7 days a week, excluding federal holidays. Typically, the workday would consist of one shift beginning as early as 6:00 a.m. and ending as late as 6:00 p.m. The work schedule may be modified throughout the year to account for the changing weather conditions.

Additional hours and/or nighttime work and weekend work (Saturdays and Sundays) may be necessary to make up schedule deficiencies, or to complete critical construction activities (e.g., photovoltaic block construction, or working around time-critical shutdowns and constraints). To provide a conservative analysis, all construction workers were assumed to arrive inbound to the site during the AM peak period (7:00 a.m. to 9:00 a.m.) and all workers were assumed to depart the site during the PM peak period (4:00 p.m. to 6:00 p.m.). Truck deliveries are typically sporadic throughout the workday. To provide a conservative analysis, truck arrivals and departures were assumed to be distributed evenly over the course of a 12-hour workday. Construction would average 50-100 employees with a maximum daily workforce of 600 employees.

The peak period of construction would occur when multiple phases of construction overlap, resulting in peak worker and truck trips and maximum traffic impacts. The trip generation estimates during the peak construction period for the Project are summarized in Table 3.16-1 below. To account for the impact construction-related trucks may have compared to passenger vehicles, passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic associated with construction activity. A 1.0 PCE factor was applied to passenger vehicles, a 2.0 PCE factor was applied for vendor trucks (which also includes trucks hauling water from off-site locations), and a 3.0 PCE factor was applied for haul trucks.

**Table 3.16-1. Peak Period of Construction Trip Generation Estimates**

| | | | | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **Daily Quantity** | | **Daily Trips** | **In** | **Out** | **Total** | **In** | **Out** | **Total** |
| **Non-PCE Adjusted Trip Generation** | | | | | | | | | |
| Construction Workers[1] | 600 | workers | 1200 | 600 | 0 | 600 | 0 | 600 | 600 |
| Vendor Trucks[2] | 70 | trucks | 140 | 6 | 6 | 12 | 6 | 6 | 12 |
| Water trucks[2] | 23 | Trucks | 46 | 2 | 2 | 4 | 2 | 2 | 4 |
| Haul Trucks[2] | 3 | trucks | 6 | 1 | 0 | 1 | 1 | 0 | 1 |
| **Peak Total Trip Generation (Non-PCE)** | | | **1,392** | **609** | **8** | **617** | **9** | **608** | **617** |
| **PCE Adjusted Trip Generation** | | | | | | | | | |
| Construction Workers | 600 | workers | 1,200 | 600 | 0 | 600 | 0 | 600 | 600 |
| Vendor Trucks[3] | 70 | trucks | 280 | 12 | 12 | 24 | 12 | 12 | 24 |
| Water trucks[3] | 23 | trucks | 92 | 4 | 4 | 8 | 4 | 4 | 8 |
| Haul Trucks[3] | 3 | trucks | 18 | 2 | 0 | 2 | 2 | 0 | 2 |
| **Peak Total Trip Generation (PCE)** | | | **1,590** | **618** | **16** | **634** | **18** | **616** | **634** |

**Source:** Appendix H.
**Notes:** PCE = passenger car equivalent.
[1] Conservatively assumes all construction workers arrive in the AM peak hour and depart the site in the PM peak hour.
[2] Vendor and haul trucks are assumed to arrive and depart the site evenly throughout an 12-hour workday.
[3] Vendor trucks were estimated to have 2.0 PCE adjusted value, while haul trucks were estimated to have 3.0 PCE adjusted value.

As shown in Table 3.16-1, the peak period of construction for the Project would generate approximately 1,392 daily trips, 617 AM peak hour trips, and 617 PM peak hour trips. After trip generation estimates were adjusted utilizing PCE factors, the peak period of construction for the Project would generate approximately 1,590 daily trips, 634 AM peak hour trips, and 634 PM peak hour trips.

In addition to the trips above, Phase 1 (Solar and WAPA Tie-In), requires the removal of existing orchard trees. Depending on the circumstances, wood chips from this phase would either be buried on site or hauled to an off-site disposal facility. In the event of hauling the wood chips offsite, it is estimated that there would be an additional 10 daily haul truck trips (equivalent to 30 daily PCE haul truck trips).

For all other phases of construction, the amount of vehicular traffic is estimated to be less than the peak period. Similar to the Palo Verde Mesa Solar Project, all construction-related traffic to the Project would be temporary and short term and would be removed from the study area roadway network upon completion of the Project.

Decommissioning

The Project has an operational life of at least 35 years. Transportation impacts of decommissioning at the end of the Project's operational life are expected to be similar to the impacts from construction outlined above. However, traffic volumes within the study area cannot be projected that far in the future, and as such a specific analysis and outcome of impacts cannot be determined at this time. A Closure, Decommissioning, and Reclamation Plan has been prepared for the Project, which includes measures specific to transportation impacts of decommissioning if necessary.

The Palo Verde Mesa Solar Project anticipates similar equipment and workforce to be used during decommissioning as construction, but would be less than that of peak construction. Mitigation measures used during the construction phases would be applied to the decommissioning phase.

Operations

For the duration of the operational phase, the Project would be maintained by up to six permanent staff employees and monitored remotely via a Supervisory Control and Data Acquisition (SCADA) system. On-site maintenance staff would be responsible for security, vegetation management, permit compliance, and Project repairs. Daily trips generated by the Project's permanent employees commuting to the site, visitors, and/or light deliveries assumed to be less than 20 daily trips.

Project maintenance performed on the site would consist of vegetation management, maintaining compliance with Project permits, minor repairs, and inspection and replacement of Project equipment as needed. Maintenance would occur during daylight hours, when possible. Maintenance program elements include:

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

The permanent operations, or O&M phase, of the Project is expected to have nominal operational vehicular trips associated with routine maintenance and upkeep of facilities, including annual panel washing; therefore, the number of permanent trips (less than 20 daily trips) associated with the Project are not expected to impact the study area roadway network. The roadway conditions in the Project vicinity would not substantially differ from existing conditions. This mirrors the operational impact of the Palo Verde Mesa Solar Project.

***Vehicle Miles Traveled***

Per the County Transportation Analysis Guidelines (County of Riverside 2020b) and the OPR Technical Advisory, a VMT analysis is not required for projects that are presumed to have a less-than-significant impact, including small projects resulting in 110 daily trips or less (OPR 2018b).

- The permanent O&M of the Project would be maintained by up to six permanent staff employees and monitored remotely via a SCADA system. O&M-related trips would be less than 20 daily trips. Project operation is presumed to have a less-than-significant impact to VMT because it would generate 110 or less (permanent) daily trips; therefore, VMT analysis of Project operation is not required. During some phases of construction, construction-related traffic would exceed 110 daily trips. However, all construction-related traffic would be temporary and short term and would be removed from the study area roadway network upon completion of the Project. Therefore, a qualitative analysis of construction traffic is appropriate per CEQA Guidelines Section 15064.3(c).

The Palo Verde Mesa Solar Project analysis was conducted in 2016, prior to the change from LOS to VMT as the transportation metric. As such, the Palo Verde Mesa Solar Project did not analyze VMT impacts.

## Criteria for Determining Significance

Section XVII of Appendix G to the State CEQA Guidelines addresses typical adverse effects to transportation and includes the following questions to evaluate a project's impacts on transportation. Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section XVII of Appendix G to the State CEQA Guidelines (listed above), and state that a project would have a significant impact on transportation if construction and/or operation would:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b).

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

d) Cause an effect upon, or a need for new or altered maintenance of roads.

e) Cause an effect upon circulation during the project's construction.

f) Result in inadequate emergency access or access to nearby uses.

## Environmental Impacts

This section includes an examination of the Project's impacts to the local circulation system per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Previous Environmental Impacts*

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that traffic impacts would be temporary and would not occur during operation of the project. It was determined that no impact would occur to pedestrian, bicycle, transit, rail, or airport services. Emergency access would not be affected due to the implementation of applicable BMP's. Additionally, the project would not increase airport traffic levels or change air traffic patterns, and would not create obstructions at Blythe Municipal Airport. Implementation of MM-TRAF-1 through MM-TRAF-3, and applicable BMPs would reduce impacts during construction activities regarding traffic to less than significant.

### *Threshold a: 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.* The Project would not conflict with applicable programs, plans, ordinances, or policies addressing the circulation system, as further discussed below. This includes the County's LRTS and the County's General Plan Circulation Element, and the existing roadway, pedestrian, bicycle and transit facilities and services in the study area. Furthermore, Section 3.16.3 presents the Project's consistency with the current RTP/SCS.

The Project does not include permanent roadway widening of existing roads or otherwise induce travel on County roadways. The Project would also restrict heavy truck through-traffic in residential and community areas consistent with Policy C 3.8. The Project would comply with Policy C 3.10 in which the project would provide all onsite facility improvements necessary to mitigate any development-generated circulation impacts. The Project would support the County's requirement for all-weather access to the Project site in accordance with Policy C 6.2. The Project's access roads would conform to the requirements of the County Transportation Department Subdivision Regulations and Road Improvement Standards and Specifications, being consistent with Riverside County Municipal Ordinance Numbers 460 and 461.

Construction would not affect bicycle or pedestrian facilities as none exist in the areas of proposed construction. Thus, the Project would not conflict with multimodal system performance standards put forth by the County's LRTS. Construction-related trips could result in temporary delays, but would not impede transit service. The closest transit stop to the Project site is located at the intersection of Neighbours Boulevard and Hobson Way and provides a bus stop for the multiple PVVTA routes. Like construction traffic, decommissioning traffic would be temporary and would be eliminated from the roadway network completely upon the completion of decommissioning. Unlike the Palo Verde Mesa Solar Project, which evaluated LOS, the Proposed Project would have a less than significant impact during construction and decommissioning. Therefore, mitigation would not be required.

Once constructed, daily trips generated by the Project would be less than 20 daily trips associated with the six permanent employees commuting to the site, visitors, and/or light deliveries. This is considered a nominal increase to existing traffic volumes and operation of the Project would not result in the need to increase roadway capacity, generate a substantial permanent increase in traffic, or change traffic patterns. Further, the number of permanent trips associated with the Project are not expected to impact

the study area roadway network. Therefore, operation of the Project would comply with the General Plan Circulation Element and the impact of Project operations related to conflicts with adopted policies, plans, or programs addressing the County's circulation system including transit, roadway, bicycle, and pedestrian facilities would be **less than significant**. This is consistent with the impact of the Palo Verde Mesa Project during operation.

***Threshold b: Would the Project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?***

*LESS THAN SIGNIFICANT (CONSTRUCTION AND DECOMMISSIONING); LESS THAN SIGNIFICANT (OPERATION).* As mentioned, the Palo Verde Mesa EIR analysis was conducted in 2016, prior to the change from LOS to VMT as the transportation metric. As such, the Palo Verde Mesa Solar Project did not analyze impacts to VMT under this threshold.

Construction would result in temporary traffic that would be eliminated from the roadway network upon completion of construction. Once construction is completed, VMT would return to pre-Project conditions and all temporary, construction-related VMT would be eliminated. The same would be true for temporary decommissioning trips. The VMT thresholds described in either the OPR Technical Advisory or the County guidelines do not apply to construction trips. Therefore, VMT associated with Project construction and decommission activities would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) and there would be a less than significant impact.

As previously noted, Project operations would generate fewer than 110 daily trips and would qualify as a "small project" that does not require further VMT analysis. Any increase in traffic associated with O&M of the Project would be nominal and would not directly generate a substantial increase in VMT or conflict with or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). Additionally, the Project does not include permanent County road widening or otherwise inducing travel on local roadways. Therefore, Project operations would have nominal direct impacts related to changes in VMT and would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). Therefore, the operational impact of the Project related to VMT would be **less than significant**.

***Threshold c: 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 INCORPORATED.* The Project includes development of a solar facility in a rural area of the County that includes various supporting uses including an O&M building, battery storage, a substation, transmission lines, and access road. The Project would provide access from Buck Boulevard in an area with good visibility and no intersections or other potential hazards. Project operation would require a total of six fulltime employees. Operational vehicle traffic associated with six fulltime employees would be de minimis and would not increase hazards.

Construction and decommissioning of the Project would require the delivery of heavy construction equipment and materials, which may require transport by slow-moving and/or oversize vehicles. The use of oversize vehicles may create a hazard to the public, by limiting motorist views of the roadways, limiting shoulders on roadways, and resulting in changing traffic conditions that are unexpected by the road user. Once construction and decommissioning are complete, roadway conditions would return to existing conditions. To minimize impacts during construction, **MM-TRAF-1** (Construction Traffic Management Plan) is recommended, which is consistent with the recommendation in the Palo Verde Mesa Solar Project. **MM-TRAF-1** may include measures such as the use of warning signs to notify drivers in advance of construction activity, the use of flaggers to alert motorists of slow-moving trucks, limiting time for heavy vehicle deliveries, and other measures to reduce potential hazards. With implementation of **MM-TRAF-1**, impacts would be less than significant. Thus, construction and decommissioning impacts would be **less**

**than significant with mitigation** incorporated. The Palo Verde Mesa Solar Project also included an additional mitigation measure, which is not required for the Proposed Action. The previous mitigation measure included regulatory requirements and thus, does not require a separate mitigation measure for the Proposed Action. A Closure, Decommissioning, and Reclamation Plan has been prepared for the Project, which includes measures specific to transportation impacts of decommissioning ensuring that decommissioning impacts would be **less than significant**.

***Threshold d: Would the Project cause an effect upon, or a need for new or altered maintenance of roads?***

*LESS THAN SIGNIFICANT.* The Project is bounded on the north by BLM lands, on the east by 9th Avenue, on the west by Dracker Road, and on the south by 10th Avenue. Primary and secondary construction and operation access to the site would be provided via Buck Boulevard and Stephenson under Phase 1 and Dracker Road under Phase 2, respectively. The east side of the Project site is located adjacent to SR-78/Neighbours Boulevard. Figure 2-1, Project Location, illustrates the location of the Project relative to major highways and access roads.

As discussed above, the PCE adjusted estimates for peak period trip generation for construction would include approximately 1,590 daily trips, 634 AM peak hour trips, and 634 PM peak hour trips. For all other phases of construction, the amount of vehicular traffic is estimated to be less than the peak period. While construction of the Project would generate additional trips on the Project access roads, the construction-related traffic would be temporary and short term and would be removed from the project roadway network upon completion of the Project. Therefore, the Project's impacts associated with causing an effect upon or need for new or altered maintenance of roads during construction would be less than significant, consistent with the analysis in the Palo Verde Mesa Solar Project. Even with the addition of the trips associated with removal of the existing orchard trees, an additional 10 daily haul truck trips (equivalent to 30 daily PCE haul truck trips), impacts would be less than significant.

The permanent operations, or O&M phase, of the Project is expected to have nominal operational vehicular trips associated with routine maintenance and upkeep of facilities, including annual panel washing; therefore, the number of permanent trips (less than 20 daily trips) associated with the Project is not expected to impact the study area roadway network. The roadway conditions in the Project vicinity would not substantially differ from existing conditions. Therefore, the Project would not cause an effect upon or a need for new or altered maintenance of roads and impacts would be **less than significant** consistent with the analysis in the Palo Verde Mesa Solar Project.

***Threshold e: Would the Project cause an effect upon circulation during Project construction?***

*LESS-THAN-SIGNIFICANT WITH MITIGATION INCORPORATED. C*onstruction and decommissioning of the Project would result in a temporary increase in the number of local trips as a result of the construction traffic, including worker trips, vendor trucks, and haul trucks. **MM-TRAF-1** is recommended to minimize impacts during construction and manage circulation in and around the site. **MM-TRAF-1** may include measure such as staggering work shifts to reduce peak periods of congestion, limiting time for heavy vehicle deliveries, and other measures to improve circulation. With **MM-TRAF-1**, circulation impacts associated with construction would be less than significant. Similarly, the Palo Verde Mesa Solar Project includes a traffic management plan to mitigate potential impacts during construction. A Closure, Decommissioning, and Reclamation Plan would be prepared for the Project, which would include measures specific to transportation impacts of decommissioning if necessary, ensuring that decommissioning impacts would be **less than significant with mitigation**.

The small amount of traffic associated with Project operations would not materially affect existing traffic conditions in the Project site; therefore, any operational impacts related to circulation would be less than significant.

***Threshold f: Would the Project result in inadequate emergency access or access to nearby uses?***

*LESS-THAN-SIGNIFICANT WITH MITIGATION INCORPORATED.* Construction of the Project would result in a temporary increase in the number of local trips as a result of construction traffic, including worker trips, vendor trucks, and haul trucks. The direct impacts would include short-term and intermittent delays due to lane closures at times when such lane closures are required. The same would be true for temporary decommissioning impacts. Due to the possibility of lane closures this is considered a potentially significant impact and **MM-TRAF-1** is recommended to facilitate access to nearby uses and ensure adequate emergency access is maintained. Construction and decommissioning impacts would be **less than significant with mitigation** incorporated. The Palo Verde Mesa Solar Project identified a less than significant impact due to no road closures being anticipated during construction. Despite the potential road closures for the Proposed Project, emergency access and access to nearby uses during construction activities would be maintained at all times, consistent with Palo Verde Mesa Solar. The minimal amount of traffic associated with Project operations would not materially affect existing traffic conditions in the Project area and would not interfere with access to nearby uses nor result in inadequate emergency access. Therefore, operational impacts associated with access to nearby uses or emergency access would be **less than significant**.

## Cumulative Impacts

**Geographic Scope**. The geographic scope of the cumulative analysis for transportation is the same study area as described for the Project-specific impacts and includes the segments of I-10 and SR-78, which would have the greatest potential to experience an increase in traffic, and local roadways connecting to the site.

***Plan, Program, Ordinance, or Policy Addressing Circulation***

**Cumulative Impacts**. As described in Threshold "a" above, and examined in Section 3.9, Greenhouse Gas Emissions, and Section 3.12, Land Use and Planning, of this SEIR, the Project would not conflict with adopted policies, plans, or programs addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Construction of reasonably foreseeable future projects, specifically the Easley Renewable Energy Project listed in Table 3.1-2, Contingent Future Projects or Programs in the Project Area, in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario, may overlap with construction of the Project. However, construction of the Project would not affect bicycle or pedestrian facilities as none exist in the areas of proposed construction. Construction-related trips could result in temporary delays, but would not impede transit service and would be eliminated from the roadway network upon completion of construction. Therefore, the Project would not combine with cumulative projects that would conflict with adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities under cumulative conditions. Furthermore, during Project operations, the Project would not increase roadway capacity, generate a permanent increase in traffic, or change traffic patterns that could cause an impact to the circulation system including transit, roadway, bicycle, and pedestrian facilities. Therefore, the cumulative impact of Project operations related to conflicts with adopted policies, plans, or programs addressing the circulation system would be less than significant.

As described in Threshold "b" above, once construction is completed, VMT would return to pre-Project conditions and all temporary, construction-related VMT would be eliminated. The same would be true for temporary decommissioning impacts. The VMT thresholds described in either OPR or County guidelines do not apply to construction trips. Therefore, Project construction and decommissioning would not result in a cumulatively considerable impact related to VMT.

Any increase in traffic associated with O&M of the Project would be nominal and would not directly generate substantial new VMT or conflict with or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). Even though the Project is not a land use project, it would generate fewer than 110 daily trips and would qualify as a "small project" that does not require a quantitative VMT analysis. Therefore, Project operations would not result in a cumulatively considerable impact related to VMT.

As described in Threshold "c," the Project would not include a design feature or utilize vehicles with incompatible uses that would create a hazard on the roadways surrounding the Project site. As previously discussed, the cumulative impact analysis focuses on traffic volumes generated during construction of the Project in combination with cumulative projects in the area, as well as applying an annual growth rate of 2% through the cumulative year scenario. The Easley Renewable Energy Project has the potential to generate construction-related traffic concurrently with the Project along potentially the same roads used by the Project. Therefore, there would be a combined, but temporary, increase in trips and increased risk of hazards under cumulative conditions. However, the Project's contribution to potentially significant cumulative impacts would be reduced to less than cumulatively considerable with implementation of **MM-TRAF-1. MMTRAF-1** requires the preparation of a Construction Traffic Management Plan in coordination with Caltrans and the County, prior to and during construction, to minimize cumulative impacts of multiple simultaneous construction projects affecting shared portions of the circulation system. The Easley Renewable Energy Project would also be required to abide by state, and local laws and regulations regarding lane closures to reduce any potential impacts. Therefore, the Project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to hazards.

As described in Threshold "d," the permanent operations, or O&M phase, of the Project is expected to have nominal operational vehicular trips associated with routine maintenance and upkeep of facilities. The Calyspo I and II Solar Projects are also estimated to each add 15 permanent daily trips to the local roadways, with the majority being passenger vehicles. However, access to each of the sites are via separate entrances and the Project trips would not occur on the same local roads. The roadway conditions in the Project vicinity would not substantially differ from existing conditions and there would be no additional maintenance needed beyond existing levels. While the cumulative Project trips are anticipated to each use SR-78, the total cumulative number of trips would represent an approximate 2% increase in traffic on SR-78. The negligible increase in permanent trips associated with the cumulative projects are not expected to impact the roadway. Therefore, the Project, in conjunction with other planned and approved projects, would not have a cumulatively significant impact related to new or altered maintenance of roads.

As described in Threshold "f," **MM-TRAF-1** is recommended to minimize impacts during construction and manage circulation in and around the site. **MM-TRAF-1** may include measures such as staggering work shifts to reduce peak periods of congestion, limiting time for heavy vehicle deliveries, and other measures to improve circulation. With **MM-TRAF-1**, circulation impacts associated with construction would be less than significant. A Closure, Decommissioning, and Reclamation Plan would be prepared for the Project, which would include measures specific to transportation impacts of decommissioning if necessary, ensuring that decommissioning impacts would be less than significant. The Easley Renewable Energy

Project would also be required to abide by state, and local laws and regulations to reduce any potential impacts related to circulation during construction. Therefore, with implementation of **MM-TRAF-1**, the Project would result in a less-than-significant cumulative impact to circulation.

As previously described, the Easley Renewable Energy Project has the potential to generate construction-related traffic concurrently with the Project along potentially the same roads used by the Project. Therefore, there would be a combined, but temporary, increase in trips and impact on emergency access and access to nearby uses under cumulative conditions. However, the Project's contribution to potentially significant cumulative impacts would be reduced to less than cumulatively considerable with implementation of **MM-TRAF-1. MM-TRAF-1** requires the preparation of a Construction Traffic Management Plan in coordination with Caltrans and the County, prior to and during construction, to minimize cumulative impacts of multiple simultaneous construction projects affecting shared portions of the circulation system. The Easley Renewable Energy Project would also be required to abide by state, and local laws and regulations regarding lane closures to reduce any potential impacts. Therefore, the Project would not result in a cumulative significant impact to emergency access or access to nearby uses.

Similar to Palo Verde Mesa Solar Project, the Proposed Project would not have cumulative significant impacts associated with operation and decommissioning. However, the Proposed Project would also not have cumulative significant impacts associated with construction, which is unlike Palo Verde Mesa Solar Project. This difference is accounted for due to the change from LOS to VMT analysis. Additionally, the Palo Verde Mesa Solar Project included an addition mitigation measure for construction traffic coordination, which was removed as a requirement for the Proposed Project as applicable components would be detailed in the Construction Management Plan required by **MM-TRAF-1**.

## 3.16.4 Mitigation Measures

The following mitigation measure was developed to substantially lessen the potentially significant effects to transportation that could result from the construction and decommissioning of the Project.

**MM-TRAF-1** **Construction Traffic Management Plan**. Prior to initiation of construction activities, a Construction Traffic Management Plan shall be prepared by the Project contractor and filed with the County. Potential traffic management measures may include:

- Warning signage to meet County and California Department of Transportation requirements for driver awareness of construction activity in the vicinity.
- Staggering work shifts of construction workers to reduce peak periods of congestion.
- Limiting time for heavy truck deliveries.
- Using flaggers at key locations to alert motorists to slow-moving trucks.
- Informing emergency service providers of construction traffic schedule.

***Significance after Implementation***

Implementation of **MM-TRAF-1**, which would help manage circulation at the Project site, would reduce impacts to less than significant.

## 3.16.5 References

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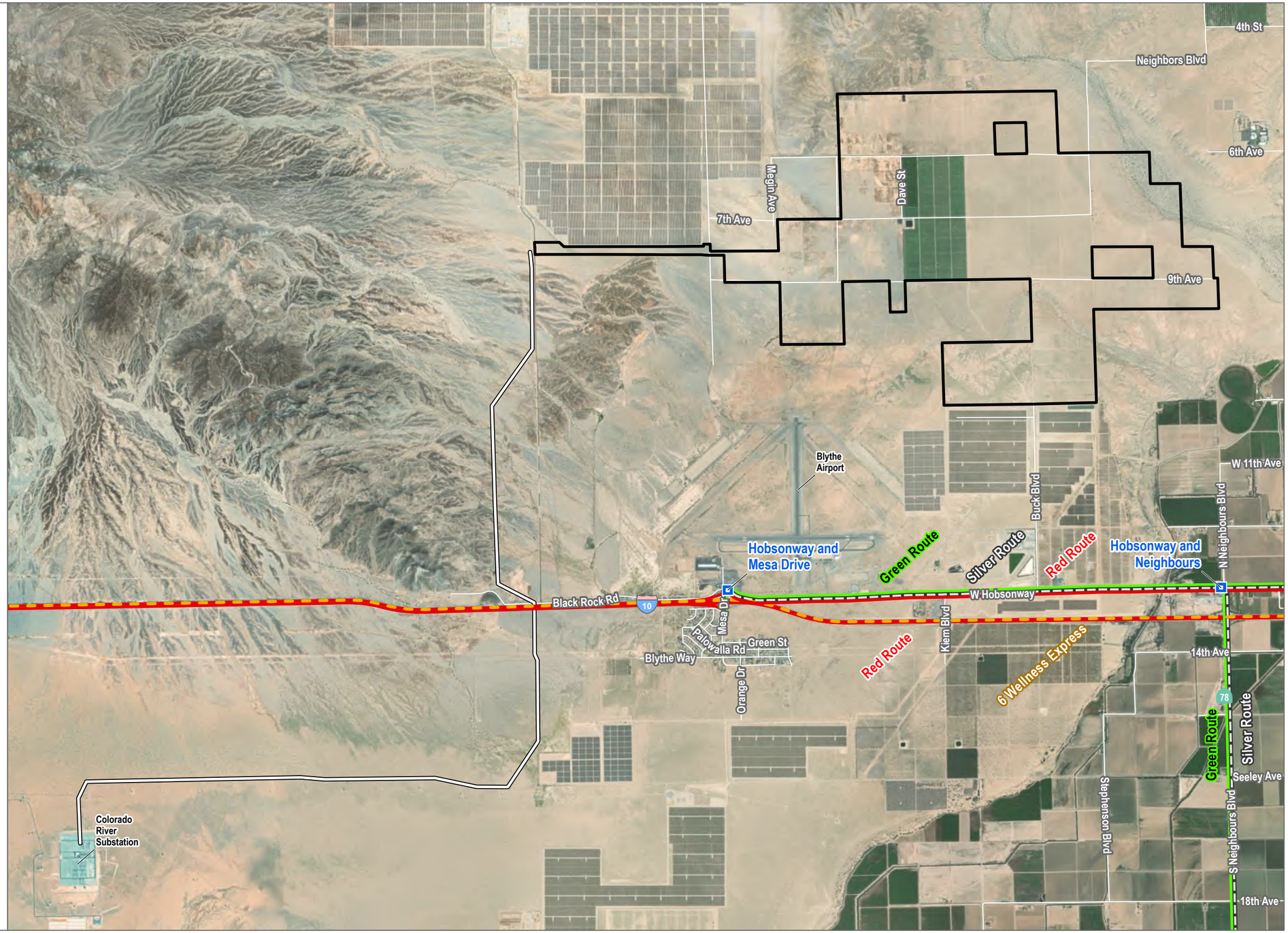
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- Project Site (onsite)
- Existing Arlington Solar Transmission Line
- Transit Stop

**Transit Line**

- 3 Red Route - Express to CA Prison Facilities
- 4 Green Route - Service to Ripley and Mesa Verde
- 5 Silver Route - Saturday and In Service Holidays
- 6 Wellness Express - Express Service to Coachella Valley




SOURCE: Esri World Imagery 2023; Open Street Map 2019; Palo Verde Valley Transit Agency 2024

DUDEK

N

0 2,050 4,100 Feet

**FIGURE 3.16-1**

Existing Transit Facilities

Grace Solar Energy Center

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# 3.17 Tribal Cultural Resources

This section includes an analysis of the impacts to Tribal Cultural Resources (TCRs) that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning of the proposed project (Project). The analysis in this section describes applicable regulations, provides information on existing Tribal Cultural Resources in and surrounding the Project area, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts related to TCRs.

Issues raised during scoping for the Project related to TCRs include concern about impacts to known and unknown TCRs, including the potential for impacts to the landscape, and the need for appropriate mitigation. Analysis in this section is based on both the technical documents described below and the results of the Native American consultation conducted by the County for purposes of compliance with California Environmental Quality Act (CEQA) requirements prompted by Assembly Bill (AB) 52. Due to the confidential nature of the location of tribal cultural resources, information regarding location of cultural resources has been redacted from the report and is not included in the publicly available appendices.

Information in this section is based on government-to-government consultation.

The portion of the Project footprint proposed on BLM administered lands will be evaluated in an environmental review document pursuant to the National Environmental Policy Act (NEPA), which is currently under preparation with the BLM. A Class III Cultural Resources Inventory will be prepared by the BLM to inform NEPA as part of the federal action on the Project. The non-confidential elements of the Class III Cultural Resources Inventory and ancillary cultural resources assessments as required by the BLM will be incorporated herein, once available.

## 3.17.1 Regulatory Framework

Numerous laws and regulations require federal, state, and local agencies to consider the effects a project may have on cultural resources and, for purposes of the CEQA, on TCRs. These laws and regulations prescribe required agency processes, define the responsibilities and obligations of the various agencies proposing related action, and describe the relationship between and related requirements governing the interaction among other involved agencies and interested parties.

TCRs are a defined class of resources under state law. 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 (CRHR) or other local historic register; or (2) constitute a resource that the lead agency, at its discretion and as supported by substantial evidence, determines should be treated as a TCR (California Public Resources Code [PRC], Section 21074[a]). California Native American tribes that are traditionally and culturally affiliated with a geographic area can provide lead agencies with expert knowledge of their TCRs.

CEQA, as amended in 2014 by AB 52, requires a lead agency to send a formal notice and invitation to consult about a proposed project to all tribal representatives who request such notice. The purpose of this consultation is to obtain tribal information and recommendations regarding the significance of TCRs, the significance of the project's impacts on TCRs, and, if necessary, potentially feasible project alternatives or mitigation measures that may avoid or substantially lessen significant or potentially significant effects to TCRs to the extent feasible. (Refer to PRC Section 21080.3.2[a].) This section describes the regulatory

framework for TCRs and describes available information regarding TCRs in and surrounding the Project's area from existing reports and as provided to Riverside County (County) through ongoing consultation with California Native American tribes.

## Federal Laws, Regulations, and Policies

Both the National Environmental Policy Act and National Historic Preservation Act require analysis and protection of cultural resources. These acts are described in detail in Section 3.6, Cultural Resources.

## State Laws, Regulations, and Policies

### *Native American Heritage Commission*

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the PRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

### *Assembly Bill 52*

AB 52 (which amended Section 5097.94 of, and added Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the PRC) established a process and related requirements governing state and local agency consideration of California Native Americans as a part of required public review of proposed projects under CEQA. The goal of AB 52, among other things, is to promote the involvement of California Native American tribes in the decision-making process, especially to identify resources significant to tribes and feasible ways to avoid or substantially lessen significant or potentially significant impacts to those resources. To reach this goal, AB 52 established a formal role for tribes in the CEQA process and formally recognized the unique expertise California Native American tribes may provide as substantial evidence to identify the locations, types, and significance of TCRs within their traditionally and culturally affiliated geographic area (PRC Section 21080.3.1[a]). CEQA defines a California Native American tribe as a "Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission." This definition does not distinguish between federally recognized and non-federally recognized tribal groups and is therefore more inclusive than the federal definition of "Indian tribe" (PRC Section 21073).

CEQA lead agencies are required to consult with tribes about potential TCRs in a project area, the potential significance of project impacts on those resources, the development of project alternatives, and the type of environmental document that should be prepared. AB 52 specifically states that a project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC Section 21084.2).

CEQA Section 21074(a)(1), which incorporates by reference PRC Section 5024.1(c), defines TCRs to include either of the following:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.

b. Included in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

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 Public Resources Code section 5024.1(c). In applying the criteria set forth in 5024.1(c) for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets one or both of the two criteria highlighted above is also a TCR under CEQA Section 21074(b), where the landscape is geographically defined in terms of the size and scope of the landscape. Likewise, historical resources, unique archaeological resources, and "non-unique archaeological resources," as defined by CEQA, that conform with one or both of the two criteria highlighted above are also TCRs under CEQA Section 21074(c). All of these resources, including cultural landscapes, can be significant and TCRs because of their sacred and/or cultural tribal value rather than being important for their scientific value, as determined by a CEQA lead agency.

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

### Local Laws, Regulations, and Policies

#### *Riverside County General Plan*

The Riverside County General Plan includes policies in the Multipurpose Open Space Element that address cultural resources (County of Riverside 2015), as identified in Section 3.6 Cultural Resources of this SEIR. However, the General Plan does not include any goals and policies related to TCRs.

#### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan is an Area Plan within the General Plan that includes the Project site (County of Riverside 2021). The Palo Verde Valley Area Plan does not include any goals and policies related to TCRs.

## 3.17.2 Environmental Setting

The discussion in this section is based on the confidential cultural resources technical report and impact analysis prepared for the Project (Appendix J; Appendix A of Appendix J).

### Prehistoric Setting

The Project site is near the boundary of the Colorado and Mojave deserts and is located in the Palo Verde Mesa area. Scholars suggest multiple groups were present in the region at various times. The majority of archaeologists working in the region use the following cultural sequence for the prehistory of the region: Paleoindian Period (about 12,000 to 7,000 BP), Archaic Period (7,000 to 1,500 BP), and Late Prehistoric Period (1,500 to 150 BP). During the Paleoindian Period, the Palo Verde Mesa area was not conducive to settlement due to the limited water resources and was likely used as a travel corridor between the mountains and rivers (von Werlhof 2004). During the late Archaic Period, sites have been recorded in more southern portions of Riverside County's low desert near the Peninsular Ranges where water was more available. During the late Prehistoric Period, long range travel for trade resulted in increased mobile

patterns and a trail system through the Colorado Desert. Please refer to Section 3.6 for a detailed description of the prehistory of the Project site.

## Ethnographic Setting

The Colorado Desert area of Riverside County is within the ethnographic boundaries of several different eighteenth and nineteenth century Native American groups. Ethnographic information indicates that several Native American groups, including the Quechan, Halchidhoma, Mojave, Chemehuevi, and the Cahuilla have been in the area for some time or at least traversed the vicinity of the Project. The traditional Cahuilla territory included most of central Southern California. The Cahuilla are subdivided into three geographical divisions, the Mountain Cahuilla, Western Cahuilla, and Desert Cahuilla. The Desert Cahuilla lived closest to the current physical APE (Kroeber 1925). Mojave territory was traditionally located where California, Arizona, and Nevada intersected. The Mojave historic territory varied because they were constantly moving. There was evidence of the Mojave extending their territory into the Chemehuevi and Colorado Valleys, and they have inhabited areas as far south as the Palo Verde Valley (Kroeber 1925; Stewart 1969). The Halchidoma lived along the Colorado River between California (Blythe) and Arizona (Parker), until about 1825. Conflicts with the Quechan and Mojave lead to the Halchidoma to move away from the Colorado River and to the Salt and Gila Rivers in southern Arizona (Kroeber 1925). The Quechan are among the Yuman groups who occupied the lower Colorado River where it forms the boundary between California and Arizona. Several Quechan villages were located along the Colorado River, including on the west side of the Colorado River between Blythe and Palo Verde Valley. Please refer to Section 3.6, Cultural Resources, for a description of the tribal territories associated with the Palo Verde Mesa and surrounding areas.

## Identified Tribal Cultural Resources

Dudek requested a Native American Heritage Commission (NAHC) search of their Sacred Lands File (SLF) on October 31, 2024, for the physical Area of Potential Effect (APE). The SLF consists of a database of known Native American resources and may include resources not included in the Eastern Information Center (EIC) database. The NAHC responded on November 22, 2024, with negative results The NAHC additionally provided a list of Native American tribes and individuals/organizations with traditional geographic associations that might have knowledge of cultural resources in this area.

Additionally, the NAHC suggested that 30 individuals representing 15 Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project. As part of the applicant's consulting activities, outreach letters were sent to the 30 recommended tribal contacts. The purpose of the outreach was to solicit tribal participation on the cultural resources field survey and inventory, and to request information regarding tribal resources of concern within or adjacent to the Project area.

Government-to-government consultation under AB 52 is complete. In compliance with AB 52, notices regarding this project were mailed to all requesting tribes on April 02, 2025. There was no response from the Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, Pala Band of Mission Indians, Morongo Band of Mission Indians, Yuhaaviatam of San Manuel Nation (formerly the San Manuel Band of Mission Indians), Gabrieleno Band of Mission Indians Kizh Nation, Gabrielino Tongva Indians of California Tribal Council, Cabazon Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, Twenty- Nine Palms Band of Mission Indians, Santa Rosa Band of Cahuilla Indians, Colorado River Indian Tribes (CRIT), Cahuilla Band of Indians, or the Ramona Band of Cahuilla. The Augustine Band of Cahuilla Indians responded in a letter dated April 17, 2025, stating that they were not aware of any specific resources in

the area and did not want to formally consult on this project. Consultations were requested by the Soboba Band of Luiseño Indians, Quechan Indian Nation, and the Agua Caliente Band of Cahuilla Indians.

***Soboba Band of Luiseño Indians***

The Soboba Band responded in an emailed letter dated May 05, 2025, requesting consultation. Project documents were provided to the tribe on June 25, 2025, and June 27, 2025. Meetings were held on July 15, 2025, and July 24, 2025, in which this project was discussed. Soboba provided substantial information regarding an identified TCR, including specific information regarding the sensitivity of the area and details regarding the landscape that the project sits within. The landscape is a TCR for the purposes of CEQA and this project. Impacts to the landscape include visual, cumulative, direct and indirect impacts. Mitigation measures were recommended by Soboba that include additional language within the Unanticipated Resources condition of approval. Consultation was concluded on August 21, 2025.

***Quechan Indian Nation***

The Quechan Tribal Historic Preservation Officer responded in an email dated April 07, 2025, requesting consultation on this project. Project documents were provided to the tribe on June 25, 2025, and June 27, 2025. A meeting was held on July 03, 2025, in which this project was discussed. Quechan expressed concerns regarding the sensitivity of the area. Quechan also requested clarification on which agency had jurisdiction on which parts of the project. Consultation was concluded with Quechan on August 04, 2025, with the caveat that the Ft. Yuma Quechan Indian Tribe opposes the project.

***Agua Caliente Band of Cahuilla Indians***

The Agua Caliente Band of Cahuilla Indians responded in an emailed letter dated April 02, 2025, requesting consultation. Project documents were provided to the tribe on June 25, 2025, and June 27, 2025. This project was discussed during a meeting held August 13, 2025. Specific information was provided by the tribe and mitigation was requested. On August 21, 2025, a letter was received from Agua Caliente which stated, “At this time the concerns of the ACBCI THPO have been addressed and proper mitigation measures have been proposed to ensure the protection of tribal cultural resources. This letter shall conclude our AB52 consultation efforts.” Consultation was concluded on August 21, 2025.

Additionally, the Bureau of Land Management (BLM) is conducting their own government-to-government tribal consultation for portions of the Project on BLM land. As such, this information will be updated following the completion of all ongoing consultation and prior to the certification of this SEIR and completion of the National Environmental Policy Act (NEPA) process.

## 3.17.3 Impact Analysis

### Methodology

This analysis relies on the results of government-to-government consultation under AB 52. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

***Criteria for Determining Significance***

Section XVIII of Appendix G to the State CEQA Guidelines addresses typical adverse effects on TCRs and includes the following threshold questions to evaluate a project’s impacts to TCRs. Would the project:

a) Cause a substantial adverse change in the significance of a TCR, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in

terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

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

Significance thresholds are set forth in the County's Environmental Assessment Checklist, are derived from Section XVIII of Appendix G to the State CEQA Guidelines (listed above), and state that the proposed project would have a significant impact on TCRs if the project or any project-related component would:

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

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

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

## Environmental Impacts

This section includes an examination of the Project's impacts to TCRs pursuant to the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Potential Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** TCRs were not analyzed in the Palo Verde Mesa Solar Project EIR as the Project was not subject to the requirements of AB 52. AB 52 applies to projects for which a Notice of Preparation (NOP) is filed on or after July 1, 2025, and the Palo Verde Mesa Solar Project's NOP was issued on August 8, 2012. However, tribes are discussed under the Ethnographic Setting of Section 3.5, Cultural Resources in the Palo Verde Mesa Solar Project EIR, and included in the proposed cultural MMs.

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

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

***ii. A resource determined by the lead agency in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources***

***Code Section 5024.1., the lead agency shall consider the significance of the resource to a California Native American tribe?***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. As mentioned, AB 52 consultation is complete and a total of 17 tribes were noticed of the Project. Only 3 out of 17 tribes requested consultation, including the Soboba Band of Luiseño Indians, Quechan Indian Nation, and the Agua Caliente Band of Cahuilla Indians. The Soboba Band of Luiseño Indians identified potential impacts to a TCR and recommended additional language to the MMs. Implementation of **MM-CUL-2** would ensure that impacts remain less than significant to the TCR identified by the Soboba Band of Luiseño Indians. The Agua Caliente Band of Cahuilla Indians also requested additional language to the MMs and confirmed that implementation of **MM-CUL-1**, **MM-CUL-2**, and **MM-CUL-4** through **MM-CUL-9** would ensure that impacts would remain less than significant. The Quechan Indian Nation expressed concerns regarding the sensitivity of the area and the Ft. Yuma Quechan Indian Tribe expressed continuing opposition to the Project. No other TCRs listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or determined by the County to be significant pursuant to criteria set forth in subdivision (c) of PRC 5024.1 (i.e., "known TCRs") have been identified within the Project area to date. Implementation of **MM-CUL-1**, **MM-CUL-2,** and **MM-CUL-4** through **MM-CUL-9** would ensure that impacts remain less than significant in the event of an unanticipated discovery of a tribal cultural resource that may be eligible for listing in the CRHR or determined to be significant pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Thus, impacts would be **less than significant with mitigation** incorporated. As mentioned, the Palo Verde Mesa Solar Project did not analyze impacts to TCRs, but did include tribes in the proposed MMs. The mitigations have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

## Cumulative Impacts

**Geographic Scope**. The geographic area for the cumulative analysis is eastern Riverside County and includes the existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario). This geographic scope is appropriate because any TCRs within this area would be expected to be similar to those that might occur on the Project site because of their proximity and because similar environments, landforms, and hydrology would result in similar land use and, thus, similar TCRs.

**Cumulative Impacts**. As discussed under Threshold "a" above, the Project would not cause a substantial adverse change in the significance of a TCR that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1[k], or determined by the County to be significant pursuant to criteria set forth in subdivision [c] of PRC Section 5024.1), either directly or indirectly. This is because the impacts to TCRs identified by the consulted Tribes would be reduced to less than significant with the implementation of **MM-CUL-1, MM-CUL-2,** and **MM-CUL-4** through **MM-CUL-9.** There are no other known TCRs in the Project area to date. The MMs identified below would ensure that impacts remain less than significant in the event of an unanticipated discovery of a tribal cultural resource eligible for listing in the CRHR or determined to be significant pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Therefore, the Project would not result in a cumulatively considerable contribution to a substantial adverse change in the significance of known TCRs. Impacts to tribal cultural resources would not be cumulatively considerable with the incorporation of mitigation. As mentioned, mitigation measures have been updated for the Proposed Project to reflect current County standard language, clarify monitoring procedures, and strengthen cultural protection.

## 3.17.4 Mitigation Measures

The following Mitigation Measures would ensure that impacts remain less than significant in the event of an unanticipated discovery of a tribal cultural resource eligible for listing in the CRHR or determined to be significant pursuant to the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

**MM-CUL-1** Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for the appropriate number of Native American Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall be invited to attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number of Native American Monitor(s) shall be invited to be on-site during all initial ground disturbing activities and excavation of soils in each portion of the project site (on-site and off-site work associated with this project) including clearing, grubbing, tree removals, grading and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. Activities will be documented in Tribal Monitoring Notes which will be required to be submitted to the County Archaeologist prior to grading final inspection. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this condition of approval. Upon verification, the Archaeologist shall clear this condition. This agreement shall not modify any condition of approval or mitigation measure.

**MM-CUL-2** The developer/permit holder or any successor in interest shall comply with the following for the life of this permit. If during ground disturbance activities, unanticipated cultural resources* are discovered, the following procedures shall be followed: All ground disturbance activities within 100 feet of the discovered cultural resource shall be halted and the ~~Project archaeologist~~applicant shall call the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be convened between the developer, the project archaeologist**, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

* A cultural resource site is defined, for this condition, as being a feature and/or three or more artifacts in close association with each other. ~~Tribal Cultural Resources are also considered cultural resources.~~

** If not already employed by the project developer, a County approved archaeologist ~~and a Native American Monitor from the consulting tribe(s)~~ shall be employed by the project developer to assess the significance of the cultural resource, attend the meeting described above, and continue monitoring of all future site grading activities as necessary.

**MM-CUL-3** Prior to issuance of grading permits: The applicant/developer shall provide evidence to the County of Riverside Planning Department that a County certified professional

archaeologist (Project Archaeologist) has been contracted to implement a Cultural Resource Monitoring Program (CRMP). A Cultural Resource Monitoring Plan shall be developed in consultation with the monitoring tribe(s) that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural, tribal cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. A fully executed copy of the contract and a digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance with this condition of approval. ~~If feasible, and as agreed upon by agency staff, a combined CRMP will be prepared covering work both on private and BLM lands. This will be intended to ensure consistency, where possible, in cultural resources management strategies.~~ Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.

**MM-CUL-4** Prior to Grading Permit Final Inspection, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance to procedures stipulated in the Cultural Resources ~~Monitoring~~ Management Plan.

**MM-CUL-5** If human remains are found on this site, the developer/permit holder or any successor in interest shall comply with State Health and Safety Code Section 7050.5. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission shall be contacted by the Coroner within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the "Most Likely Descendant". The Most Likely Descendant shall then make recommendations and engage in consultation with the property owner concerning the treatment of the remains as provided in Public Resources Code Section 5097.98. There will be no photography of human remains or associated resources.

**MM-CUL-6** Temporary fencing shall be required for the protection of cultural site(s) P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33- 020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951-during grading activities. Prior to commencement of

grading or brushing, the project archaeologist shall confirm the site boundaries and determine an adequate buffer for protection of the site(s). The applicant shall direct the installation of fencing under the supervision of the project archaeologist and Native American Monitor. The fencing can be removed only after grading operations have been completed.

**MM-CUL-7** Prior to issuance of grading permits: the developer/ applicant shall provide evidence to the Riverside County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate an area chosen in collaboration with the consulting tribes, that will be used, if needed, for reburial of any artifacts that have been identified during grading and cannot be avoided. This area will be protected and not disturbed in the future. This is confidential information and the exact nature of this area will not be called out on the grading plans.

**MM-CUL-8** At the conclusion of all construction activities, the Project proponent and landowner shall record a deed restriction on the avoidance areas, P-33-002846, P-33-020942, P-33-020943, P-33-020945, P-33-020946, P-33-020947, P-33-020948, P-33-020949, P-33-020950, P-33-020951 (and the reburial location, if used) with the County to restrict development of these areas in the future. Deed restrictions shall not disclose the nature of the avoidance areas. A copy of the deed restriction(s) shall be submitted to the County planning staff as proof of compliance prior to the issuance of certificates of occupancy for the Project.

**MM-CUL-9** Prior to Grading Permit Final Inspection. In the event cultural resources are identified during ground disturbing activities, the landowner(s) shall relinquish ownership of all cultural resources, (with the exception of sacred items, burial goods, and Human Remains) and Provide evidence to the satisfaction of the County Archaeologist that all archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), have been handled through the following methods.

Historic Resources- all historic archaeological materials recovered during the archaeological investigations (this includes collections made during an earlier project, such as testing of archaeological sites that took place years ago), shall be curated at the Western Science Center, a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines.

Desert Training Center related resources- any artifacts related to Desert Training Activities shall be curated with the General Patton Memorial Museum.

Pre-contact resources-A fully executed reburial agreement with the appropriate culturally affiliated Native American tribe(s) or band(s). This shall include measures and provisions to protect the reburial area from any future impacts. Reburial shall not occur until all cataloguing, analysis and special studies have been completed on the cultural resources. Details of contents and location of the reburial shall be included in the Phase IV Report. The details of any disposition of artifacts shall be documented in the Phase IV report.

## 3.17.5 References

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# 3.18 Utilities and Service Systems

This section includes an analysis of the impacts on utilities and service systems that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, presents an overview of existing conditions that influence utilities and service systems, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts to utilities and service systems, and lists mitigation measures (MMs) that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

Information below is sourced from publicly available resources as well as the following:

**Appendix F** Water Supply Assessment (WSA), Grace Solar Energy Center Project, prepared by Dudek.

## 3.18.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

There are no federal laws, regulations, plans, or policies for utilities and service systems that apply to the Project.

### State Laws, Regulations, and Policies

#### *California Energy Commission*

The California Energy Commission (CEC) is the state's primary energy policy and planning agency. Created in 1974, the CEC has five major responsibilities: forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency through appliance and building standards, developing energy technologies and supporting renewable energy, and planning for and directing the state response to energy emergencies.

#### *California Public Utilities Commission*

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Railroad Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Railroad Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

#### *California Integrated Waste Management Act of 1989*

Assembly Bill (AB) 939 codified the California Integrated Waste Management Act of 1989 (IWMA) in the California Public Resources Code (PRC) and established a hierarchy to help the California Integrated Waste Management Board and local agencies implement three major priorities under the IWMA: source reductions, recycling and composting, and environmentally safe transformation and land disposal. Waste diversion mandates are included under these priorities. After the California Integrated Waste Management Board was abolished in 2010, its duties and responsibilities were transferred to the

California Department of Resources Recycling and Recovery (CalRecycle), but all other aspects of the IWMA remain unchanged.

The IWMA 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 solid waste reduction goals of 25% by the year 1995 and 50% by the year 2000. Senate Bill (SB) 1016 (2007) streamlines the process of goal measurement related to AB 939 by using a disposal-based indicator: the per capita disposal rate. The per capita disposal rate uses only two factors: (1) the jurisdiction's population (employment can be considered in place of population in certain circumstances) and (2) the jurisdiction's disposal as reported by disposal facilities. CalRecycle encourages reduction measures through 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***

The Department of Toxic Substances Control (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 the 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 22 CCR Division 4.5, Chapters 10, 11, and 23) that will allow photovoltaic solar panels to be managed as "universal waste" beginning on January 1, 2021. By being classified as universal waste, photovoltaic solar panels will now be subject to a streamlined set of standards that are intended to ease the regulatory burden and promote recycling.

***California Code of Regulations (Title 27)***

Title 27 (Environmental Protection) of the California Code of Regulations (CCR) 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 of the CCR 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 Project would be enforced by the Colorado River Regional Water Quality Control Board (RWQCB) Region 7 and CalRecycle. Compost facilities are regulated by CalRecycle under Title 14 of the CCR, Division 7, Chapter 3.1, Sections 17850 through 17895. Permit requests, reports of waste discharge, and reports of disposal site information are submitted to the Regional Water Quality Control Board 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 2023).

### *Senate Bills 610 and 221*

SB 610 and SB 221, passed in 2001, are companion measures that seek to promote more collaborative planning among local water suppliers, cities, and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during normal, single and multiple dry years, presented in 5-year increments for a 20-year projection. In accordance with these measures, a WSA is required for a proposed industrial, manufacturing, or processing plant that would house more than 1,000 persons; occupy more than 40 acres of land; or have more than 650,000 square feet of floor area (California Water Code, Section 10912).

## Local Laws, Regulations, and Policies

### *Countywide Integrated Waste Management Plan*

The Riverside County (County) Countywide Integrated Waste Management Plan demonstrates the County's compliance with the IWMA's solid waste planning requirements. The Summary Plan Element of the County Integrated Waste Management Plan presents goals, policies, and measures to divert 50% of solid waste from landfills; this plan 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 the 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 General Plan*

The Riverside County (County) General Land Use Element include policies to ensure adequate utility services for new development. However, none of the policies are specifically relevant to the Project (County of Riverside 2021).

### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan (County of Riverside 2021) does not include any goals and policies related to utilities.

### *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. Construction activities would require the use of portable toilets.

## 3.18.2 Environmental Setting

### Utilities

Water supply in the Blythe area is primarily provided from the Palo Verde Irrigation District (PVID) to support agricultural users in the vicinity of the Project site. The Palo Verde Valley Groundwater Basin is under the jurisdiction of the PVID. Colorado River water is supplied via PVID canals and is pumped via private pumps to irrigate agricultural lands on the Palo Verde Mesa. Water is also supplied by wells developed by landowners (PVID 2024).

Water for Project construction and operation would be supplied to the site by groundwater wells or an existing, underground dedicated water conveyance system with water sourced via a local canal maintained by the water purveyor. To ensure water supply is available through construction and operation, the Project Applicant purchased a 320-acre property associated with a water source, located in the City of Blythe (Fully Executed Purchase Agreement Gila Farm-AM Growers-Mesaville Solar 4862-1921-4645 v.1) and secured use of this water supply (RRG-NE-Completion Certificate – Water System Executed MLB 6-28-23 with Gila Farmland, LLC and A&F Growers, LLC).

The Project site does not include any wastewater or storm drainage infrastructure. The Project would utilize portable sanitation facilities during construction and a septic system for the operations and maintenance (O&M) building during operation. Wastewater service in the surrounding area is generally collected and disposed of in septic tanks. Blythe Regional Wastewater Reclamation Facility is the local wastewater treatment plant.

Southern California Edison (SCE) provides electricity to Blythe and surrounding areas. The is an existing electrical transmission line located north to south through the solar facility on private line. The existing transmission line is the Parker – Blythe 161 kV transmission line owned by Western Area Power Administration. The Project would tie into the existing Parker – Blythe 161 kV transmission line under Phase 1. Under Phase 2, the Project would tie into the existing Arlington transmission line , which crosses an existing 161 kilo volt (kV) transmission line that parallels Interstate-10 (I-10). The existing Arlington transmission line would also cross one 12 kV distribution line and one 33 kV distribution line, which also parallel I-10. The Project would also require new transmission line structures near the existing SCE Colorado River Substation under Phase 2. There are multiple 12 kV distribution lines that run parallel to roads adjacent to the Project site, mainly on the north side. There is also a 12 kV distribution line and one 33 kV distribution line that parallel Stephenson Boulevard, which run through the eastern side of the Project (SCE 2024).

Southern California Gas Company provides natural gas to the area. There is an existing Southern California Gas Company transmission line that roughly parallels I-10, which is crossed by the existing Arlington transmission line. There are also two high pressure distribution lines near the Project site, one is located approximately 4.8 miles west of the Phase 2 transmission line leading to the Chuckwalla Valley State Prison and one is located approximately 1.5 miles east of the Phase 2 transmission line leading to the community of Mesa Verde (SoCalGas 2024).

Telecommunications in the area are provided by AT&T, T-Mobile, and Verizon.

### Solid Waste Services

Table 3.18-1 lists the capacities of the active landfills near the Blythe area. The closest landfill to the Project site is the Blythe Sanitary Landfill, located 4 miles to northeast.

**Table 3.18-1. Landfill Capacities**

| Landfill Name | Total Capacity (cubic yards) | Remaining Capacity (cubic yards) | Remaining Capacity (%) | Maximum Throughput (tons/day) | Distance to Project |
|---|---|---|---|---|---|
| Blythe Sanitary Landfill (Cease operation estimated 2047) | 6,003,343 | 3,271,203 | 54.4 | 400 | 4 miles northeast |
| Desert Center Sanitary Landfill (Cease operation estimated 2107) | 409,112 | 127,414 | 31.14 | 60 | 36 miles southwest |

**Sources:** CalRecycle 2024a, 2024b.

## 3.18.3 Impact Analysis

### Methodology

This section considers the potential impact to and disruption of utilities and service systems in the Blythe area during construction, operation, and future decommissioning of the Project. The analysis is based on Project characteristics, publicly available information, and the WSA that was prepared for the Project (Appendix F). Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section XIX of Appendix G to the State California Environmental Quality Act (CEQA) Guidelines addresses typical adverse effects to utilities and service systems and includes the following questions to evaluate a project's impacts on utilities and service systems. Would the project:

a) 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?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Section XIX of Appendix G to the State CEQA Guidelines (listed above), and state that a Project would have a significant impact on utilities if the project or any project related component would:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

c) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

d) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

e) 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?

f) Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?

g) Impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?

   iii. Electricity?

   iv. Natural gas?

   v. Communication systems?

   vi. Street lighting?

   vii. Maintenance of public facilities, including roads?

   viii. Other government services?

## Significance Threshold Criteria Not Applicable to the Proposed Project

### *Water and Wastewater Treatment*

The Project would only use an on-site septic system and would not include any off-site discharge of wastewater requiring treatment. A septic system and leach field would be located at the O&M building to serve the Project's sanitary and wastewater treatment needs. Additionally, temporary sanitary facilities would be installed for the construction period. Further, the Project would not require or result in the relocation or construction of new water treatment systems and stormwater drainage facilities during construction, operation, maintenance, and future decommissioning because the Project would not be connected to public water and would use either groundwater wells or an existing water conveyance system to supply water for construction and operation. Thus, there would be no impact and these issues are not discussed further in this document.

### *Electricity*

The Project would construct new solar array panels, a battery energy storage system (BESS), and two transmission lines and would generate up to as much as 500 megawatts (MW) of electricity. This electricity would be transmitted to the state's electrical grid via connections to the existing Western Area Power Administration transmission line (Phase 1) and the SCE Colorado River Substation (Phase 2). The environmental effects of constructing these facilities are addressed throughout Chapter 3 of this document. As a result, there would be no impact related to requiring new or expanded electrical facilities (e.g., to supply electricity for new residences and businesses) and this issue is not discussed further in this document.

### *Natural gas*

Natural gas is not required for construction, decommissioning, or operation of the Project. As a result, there would be no impact related to natural gas facilities, and this issue is not discussed further in this document**.**

### *Street lighting*

Lighting for the Project would include nighttime lighting for limited areas required for operation, safety, or security. The Project would not include streetlights; therefore, there would be no impact to street lighting. Therefore, this issue is not discussed further in this document.

### *Other government services*

The Project does not include a new population (i.e., residences) that require additional services including schools, parks, health services, and libraries. Construction and future decommissioning of the Project would temporarily increase the number of people in the Palo Verde Valley Area, but it would not substantially increase the population. Further, the addition of up to six O&M personnel would not substantially increase the population. Therefore, the Project is not anticipated to impact other government services, and this issue is not discussed further in this document.

## Environmental Impacts

This section includes an examination of the Project's impacts to utilities and service systems per the County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

### *Summary of Previous Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR prepared a water supply assessment that determined the Palo Verde Irrigation District has adequate water supplies for the project during construction, operation, and decommissioning activities. Solid waste disposal will be managed by the Blythe Sanitary Landfill, which has sufficient capacity until 2047. The project will generate 25 cubic yards of waste per week during construction and 0.6 cubic yards per week during operation. The implementation of a Waste Recycling Plan would limit landfill waste, ensuring compliance with regulations. Therefore, the EIR determined that the project would have a less than significant impact with compliance with existing regulations and applicable BMPs, and no mitigation measures would be required.

### *Threshold b: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

*LESS THAN SIGNIFICANT.* The majority of water use for the Project would occur during the initial 28-month construction phase. The water demand for Project construction is expected to be approximately 600 acre-feet total for the anticipated construction period (Appendix F). Construction water would be used primarily for dust control and soil compaction, with minor amounts for sanitary and other purposes. Water truck refilling stations (if required) would be established for dust control and other construction purposes. Daily water use would vary, depending on the weather conditions and time of year, both of which affect the need for dust control: hot, dry, windy conditions would require greater amounts of water. Tanker trucks would apply water to construction areas to aid in road compaction and reduce construction-generated dust where needed. Construction worker needs—including water for drinking and for sanitation facilities—would require a minimal amount of water. This water would be trucked in or delivered as bottled drinking water. A local sanitation company would provide and maintain appropriate construction sanitation facilities, including portable toilets and sinks. Once constructed, the average total

annual water usage during operation is estimated to be up to 2 acre-feet per year (AFY) for the assumed 40 years of operation. Water use during operations would be primarily for panel washing, restrooms, fire safety, and general maintenance activities.

The Project's water demands would be met by use of water sourced via groundwater wells or a local canal maintained by the PVID and supplied to the site by the existing, underground dedicated water conveyance system. The WSA prepared for the Project assumed the Project would operate for an estimated 43.3 years. As discussed in the WSA, the Project would require up to 600 AF of water for construction, 2 AFY for O&M, and 258 AF for decommissioning. The total Project water demand is anticipated to be approximately 636 AF (31.8 AFY) over 20 years and 938 AF (21.7 AFY) over the 43.3-year life of the Project. This represents an approximately 99% reduction from the estimated historical agricultural water usage at the Project site (Appendix F).

One of the proposed sources of Project water supply is imported Colorado River water provided by PVID. The Project Applicant has established an agreement with PVID to receive water under PVID's Water Toll No. 411830. PVID holds senior water rights to Colorado River water and, even during multiple dry years, it is not foreseen that PVID would need to reduce its allocation to the extent that it would impact the Project.

Groundwater from the Palo Verde Mesa Groundwater Basin (PVMGB) is another potential source of water supply for the Proposed Project. This is different from Palo Verde Mesa Solar Project, which did not analyze the use of groundwater. Based on an estimated baseline water budget for Palo Verde Mesa and Palo Verde Valley Groundwater Basins, the outflows are balanced by inflows (Appendix F). The calculated groundwater budget in the WSA was estimated based on inflow from the Colorado River, irrigation canals, and irrigation return flow, and outflow from groundwater pumping for agricultural, municipal, and domestic use, aquifer and groundwater discharge, and consumptive use of native vegetation. However, several solar projects have been constructed or are planned in the Groundwater Basins since the groundwater budget was developed. The estimated combined water demand of the existing and proposed solar projects in the area is approximately 298 AFY, which is within the range of error associated with the groundwater budget component estimates. Additionally, according to monitoring efforts of some of these existing projects, actual water use for both construction and operation is actually substantially lower than the planned estimates. Based on the groundwater budget and observed groundwater level trends, there is sufficient groundwater to satisfy the water demand of the Project, in addition to existing and planned uses of the groundwater supply. As discussed in the WSA, groundwater inflows and outflows are approximately balanced indicating groundwater is a stable and reliable source of Project water supply. Further, there is adequate water available to supply the proposed Project, in addition to other existing and future planned uses, under normal, single dry, and multiple dry year conditions over a 20-year projection. (Appendix F). The findings of the WSA also found that the PVMGB is not identified as a basin in a state of critical overdraft by the Department of Water Resources (DWR 2020). Additionally, the Project is not expected to have a significant impact on aquifer storage, groundwater levels, groundwater-dependent ecosystems, land subsidence, or water quality.

Therefore, there would be sufficient water supplies available to meet the water demands of the Project and reasonably foreseeable future development during normal, dry, and multiple dry years and the impact is considered less than significant. This is consistent with the Palo Verde Mesa Solar Project, which determined that impacts to water supply would be **less than significant** based on the availability of water from the PVID and the limited operational water demand.

***Threshold c: Would the Project require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?***

*LESS THAN SIGNIFICANT.* The Project would not be connected to a public sewer system and would not require construction of a new or expansion of an existing wastewater treatment plant. During Project construction portable toilets and handwashing facilities would be used and wastewater contained within portable toilet facilities and portable hand washing facilities would be disposed of at an approved off-site disposal site. As noted above, the Project would require the construction of a septic system for disposal of wastewater associated with the O&M building. The septic system would be permitted and constructed in accordance with all applicable County requirements. Therefore, construction of the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects. Impacts would be less than significant. The Palo Mesa Verde Solar Project assumed a similar use of a septic system and portable toilets, but determined that there would be no impact to wastewater treatment facilities. This is considered **a less than significant** impact for the Proposed Project as the Project would still need to comply with applicable County requirements.

***Threshold e: 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.* The Project would generate solid waste during construction, operation, maintenance, and future decommissioning. The County must comply with CALGreen, which includes mandatory recycling for construction projects. Section 5.408 of CALGreen requires that 65% of the nonhazardous waste from construction be recycled or salvaged for reuse. Section 5.408.3 (excavated soil and land clearing debris) requires that 100% of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing be reused or recycled.

Construction materials would be sorted on site throughout construction and transported to appropriate waste management facilities in accordance with a construction waste management plan which would be prepared for the Project, as required by CALGreen Section 5.408.1.1 and consistent with the County's Integrated Waste Management Plan (County of Riverside 1996). Recyclable materials would be separated from non-recyclable items and stored until they could be transported to a designated recycling facility. It is anticipated that at least 65% of construction waste would be recyclable. Wooden construction waste (such as wood from wood pallets) would be sold, recycled, or chipped and composted. Within the solar fields, roadways, and areas around the O&M building, management of vegetation would include composting and retaining on site. Non-hazardous construction materials that cannot be reused or recycled would likely be disposed of at a County landfills. Hazardous waste and electronic waste would not be placed in a landfill but would be transported to a hazardous waste handling facility. All construction workers and operations staff would be educated about waste sorting, appropriate recycling storage areas, and how to reduce landfill waste.

Non-hazardous waste generated during operation of the 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 a County landfill. The amount of solid waste generated during operation is anticipated to be negligible due to the limited number of staff personnel (six employees).

During operations, if needed, and during future decommissioning, solar panels would be removed and placed in secure transport crates or container boxes for storage, and then transported to another facility

for reuse, material recycling, or disposal. Solar panels are managed as universal waste and would need to be disposed of under the appropriate California standards applicable at the time.

During future decommissioning, Project infrastructure would be disassembled, removed, and salvaged or recycled according to the regulations in place at the time. As noted in Chapter 2, Description of the Project, all materials would be recycled to the greatest extent possible in appropriate recycling facilities.

The closest landfill to the Project site is the Blythe Sanitary Landfill (located 4 miles northeast), with a remaining capacity of over 3.2 million cubic yards. It is estimated to operate until year 2047. The second closest landfill is the Desert Center Sanitary Landfill (located approximately 36 miles southwest), which has 127,414 cubic yards of capacity remaining (see Table 3.18-1). The Project would comply with applicable federal, state, and local regulations related to solid waste, and would recycle up to 65% of construction waste and is anticipated to only generate a small amount of solid waste during operation. Sufficient capacity is anticipated at the two nearest waste disposal sites; therefore, potential impacts related to solid waste would be **less than significant**, consistent with Palo Verde Mesa Solar Project.

***Threshold f: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?***

*LESS THAN SIGNIFICANT.* The CIWMP does not identify project specific policies but does identify countywide goals and policies in accordance with the IWMA. Waste reduction actions during all phases of the Project would help the local and County governments meet the goals of the CIWMP and IWMA and comply with regulations outlined in Title 27 of the CCR. Additionally, construction, operation, maintenance, and decommissioning of the Project would comply with and attain the goals outlined in CALGreen including Section 5.408. At least 75% of construction waste would be recyclable, and it is anticipated that most of this waste would be recycled to meet the goals of CALGreen. 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 Project's impacts to the surrounding landfills in the area.

During operation of the Project, the small number of permanent workers (approximately six) would generate small amounts of solid waste (most likely in the form of paper, aluminum, food, and plastic) such that the waste would be handled sufficiently by existing waste management services and facilities. Disposal of wastes associated with construction, operation, maintenance, and decommissioning of the 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 CIWMP reduction statutes and regulations related to solid waste. Therefore, impacts related to complying with federal, state, and local solid waste regulations would be **less than significant**. This is consistent with the Palo Verde Mesa Solar Project, which determined that impacts associated with solid waste would be less than significant as the project would dispose waste in accordance with applicable waste reduction regulations, including the CIWMP.

***Threshold g. Would the Project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?***

***iii. Communication systems?***

*LESS THAN SIGNIFICANT.* As detailed in Chapter 2, the Project would require communication systems for operational purposes. All fiber-optic communication lines necessary would be buried within the

transmission line right-of way or within maintenance roads. The "SCADA" system requires a fiber optic transmission system, a telephone, radio and or microwave communications network, and other means of communication such as radio-links and phase loop communication systems. Impacts associated with installing this infrastructure is evaluated throughout this document. The Project would connect to one of the existing telecommunication providers that service the area and would not require the expansion or construction of this existing infrastructure. While the Palo Mesa Verde Solar Project determined that there would be no impact to communication systems, this is considered a less than significant impact for the Proposed Project as the Project would still require fiber-optic communication lines, but those would not adversely impact the existing communication systems and the impact would be **less than significant**.

***v. Maintenance of public facilities, including roads?***

*LESS THAN SIGNIFICANT.* Most construction equipment and vehicles would be brought to the Project site at the beginning of the construction process during mobilization and remain on site throughout the duration of construction for which they are needed. Generally, the equipment and vehicles would not be driven on public roads while in use. Once constructed, the O&M activities would require six workers with very limited deliveries that might be necessary for maintenance of solar panels, the battery storage facility, and other equipment. As also discussed in Section 3.19, Transportation, the nominal number of operational vehicular trips is not expected to impact the local roadway network. While the Palo Mesa Verde Solar Project determined that there would be no impact associated with maintenance of public roads, this is considered a **less than significant** impact for the Proposed Project as there would be very limited use and impact to public facilities including roads.

## Cumulative Impacts

**Geographic Scope.** The geographic scope of the cumulative impacts analysis includes the service areas of each of the utilities serving the Project. This geographic scope would include all projects listed in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario.

**Cumulative Impacts.** The Palo Verde Mesa Solar Project did not identify any adverse cumulative impacts related to utilities, which is similar to the findings for the Proposed Project. As discussed above, the Project would not impact water and wastewater treatment, electricity, natural gas, street lighting, or other government services. Therefore, the Project would not contribute to cumulative impacts associated with these issues.

The Project combined with other projects in the cumulative scenario, together, could temporarily increase demand for utility services in eastern Riverside County due to new demands associated with these projects. The cumulative projects are predominantly energy facilities that are located in generally sparsely inhabited areas with little existing infrastructure outside of the electrical transmission lines. Water supply would have to be sourced from canals and water conveyance systems, on-site wells, off-site wells, or trucked in from the region and following construction would have relatively low water demands. Solid waste disposal for cumulative projects, just like the Project, would be required to adhere to the County's solid waste regulations that require recycling. Thus, the Project would not contribute to a cumulatively considerable impact to utilities because the 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 the County including the County Integrated Waste Management Plan. 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 and, therefore, would not result in a cumulatively considerable or significant impact. Accordingly, the Project's incremental solid waste-related impact during construction, operation,

maintenance, and future decommissioning, when combined with the contributions of past, present, and reasonably foreseeable future projects, would not be cumulatively considerable or significant.

Regarding water supply, construction and decommissioning water use would be temporary. In addition, according to the WSA that was prepared for the Project, it was determined that the Project water use would represent an approximately 99% reduction from the estimated historical use at the Project site and it is not foreseen that Palo Verde Irrigation District will need to reduce its allocation to the extent that it will impact the Project. Additionally, groundwater inflows and outflows are approximately balanced indicating groundwater is stable and a reliable source of Project water supply. During operation, the Project would require very minimal water supplies for panel washing, maintenance, O&M restroom facilities, and fire safety. The Project would incrementally contribute to a cumulative demand for water supplies. However, the majority of cumulative projects are other solar energy facilities and/or supporting utility infrastructure projects (i.e., transmission lines and substations), which would result in similar temporary and minimal water demand as the Project. Accordingly, the Project's incremental water supply–related impact during construction, operation, maintenance, and future decommissioning, when combined with the contributions of past, present, and reasonably foreseeable future projects, would not be cumulatively considerable or significant.

## 3.18.4 Mitigation Measures

No mitigation would be required.

## 3.18.5 References

CalRecycle (California Department of Resources Recycling and Recovery). 2024a. "SWIS Facility/Site Summary, Blythe Sanitary Landfill (33-AA-0017)." Solid Waste Information System (SWIS). Accessed August 5, 2024. https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/2378.

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# 3.19 Wildfire

This section includes an analysis of the impacts associated with wildfire hazards that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, provides information on existing conditions that influence wildfire in and surrounding the Project site, identifies the criteria used for determining the significance of environmental impacts, describes the Project's potential impacts related to wildfire, and lists mitigation measures (MMs) that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

The analysis in this section is based on Project plans and a review of information from the California Department of Forestry and Fire Protection (CAL FIRE), Riverside County Fire Department Technical Policy #TP 15-002 commercial solar energy systems development standards, and the Wildfire Susceptibility Map in the Riverside County General Plan Safety Element (County of Riverside 2021b). The following reports were also reviewed.

**Appendix C** Biological Resources Technical Report, prepared by Dudek.

**Appendix G** Air Quality, Greenhouse Gas Emissions, and Energy Technical Report, prepared by Dudek.

**Appendix M** Fire Prevention Plan, prepared by Dudek.

## 3.19.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

#### *Federal Wildland Fire Management Policy*

On Bureau of Land Management (BLM) administered lands in the California desert, BLM implements the Department of the Interior's Federal Wildland Fire Management Policy, which establishes guiding principles and policy statements that guide the philosophy, direction, and implementation of fire management planning, activities, and projects on federal lands. 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 Electrical Safety Code and American National Standards Institute Guidelines*

A variety of line and tower clearance standards are used throughout the electric transmission industry. Nationally, most transmission line owners follow the National Electrical Safety Code rules or American National Standards Institute Guidelines, or both, when managing vegetation around transmission system equipment. The National Electrical Safety Code deals with electric safety rules, including transmission wire clearance standards, whereas the applicable American National Standards Institute code deals with the practice of pruning and removal of vegetation.

### *National Fire Protection Association (NFPA) Standard 855*

NFPA 855 was created to address the rise in the use of new technologies in modern energy storage systems (ESSs) and the fire and life safety hazards associated with them. NFPA standardizes criteria for fire protection of ESS installations based on the technology used in the ESS, environmental setting, size and separation of ESS installations, and the fire suppression and control systems in place. It also considers ventilation, detection, signage, listings, and emergency operations responding to ESS emergencies (NFPA 2023).

### *International Fire Code*

The International Fire Code contains regulations to safeguard life and property from fires and explosion hazards. It includes regulations for general precautions, emergency planning and preparedness, fire department access and water supplies, automatic sprinkler systems, fire alarm systems, special hazards, and the storage and use of hazardous materials (International Code Council 2021).

### *North American Electric Reliability Corporation Reliability Standards*

In compliance with Section 215 of the Federal Power Act, the North American Electric Reliability Corporation developed mandatory and enforceable reliability standards such as emergency preparedness and operations; facility design, connections, and maintenance; personnel performance, training, and qualifications; and protection and control. These standards are designed to ensure reliable energy production, as well as safe operation and maintenance (O&M) practices (NERC 2023).

### National Fire Plan

The National Fire Plan was developed in 2020 to guide swift and organized response to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity. The National Fire Plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The National Fire Plan provides technical, financial, and resource guidance and support for wildland fire management across the United States (Forests and Rangelands 2023).

### *Federal Energy Regulatory Commission Standards*

The Federal Energy Regulatory Commission requires utilities to adopt and maintain minimum clearance standards between vegetation and transmission voltage power lines. These clearances vary depending on voltage. In most cases, the minimum clearances required in state regulations are greater than the federal requirement. In California, for example, the state has adopted General Order (GO) 95 rather than the North American Electric Reliability Corporation Standards as the electric safety standard for the state. Federal Energy Regulatory Commission standards are not discussed further.

### *National Electrical Safety Code 2017*

The National Electrical Safety Code covers basic provisions related to electric supply stations, overhead electric supply and communication lines, and underground electric supply and communication lines. The code also contains work rules for construction, maintenance, and operational activities associated with electric supply and communication lines and equipment. The code, which must be adopted by states on an individual basis, is not applicable in the State of California. The State of California has adopted its own standard (GO 95) rather than a general national standard. The National Electrical Safety Code is not discussed further.

### *Institute of Electrical and Electronics Engineers Standards 516-2009*

The Institute of Electrical and Electronics Engineers is a leading authority in setting standards for the electric power industry. Standard 516-2009, Guide for Maintenance Methods on Energized Power Lines, establishes minimum vegetation-to-conductor clearances to maintain electrical integrity of the electrical system.

## State Laws, Regulations, and Policies

### *California Fire Plan*

The 2018 Strategic Fire Plan for California directs each California Department of Forestry and Fire Protection (CAL FIRE) Unit to prepare a locally specific Fire Management Plan. These documents assess the fire situation within each of CAL FIRE's 21 units and six contract counties. The plans include interested party contributions and priorities and identify strategic areas for pre-fire planning and fuel treatment, as defined by the people who live and work within the local area. The plans are required to be updated annually.

### *California Department of Forestry and Fire Protection*

CAL FIRE is tasked with reducing wildfire-related impacts and enhancing California's resources. CAL FIRE responds to all types of fires, including wildland fires and residential/commercial structure fires. In addition, CAL FIRE is responsible for the protection of approximately 31 million acres of private land within the state and, at the local level, is responsible for inspecting defensible space around private residences. CAL FIRE is responsible for enforcing State of California fire safety codes included in the California Code of Regulations and the PRC. California Code of Regulations, Title 14, Section 1254 identifies minimum clearance requirements required around utility poles.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. Joint inspections of the Project by CAL FIRE and the utility owner are recommended by CAL FIRE so that each entity may assess the current state of the facility and successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the responsible party could face criminal charges (CAL FIRE 2024b). For cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery Program, which requires parties liable for wildfires to pay for wildfire-related damages.

CAL FIRE maps Fire Hazard Severity Zones (FHSZs) based on fuel loading, slope, fire history, weather, and other relevant factors as directed by PRC Sections 4201–4204 and California Government Code Sections 51175–51189. FHSZs are ranked from Moderate to Very High and are categorized for fire protection within a Federal Responsibility Area (FRA), State Responsibility Area (SRA), or Local Responsibility Area (LRA) under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

### *Mutual Aid Agreements*

There are multiple regional, state, and local agreements and operating plans currently in use that provide for mutual aid between and among federal, state, and local fire agencies. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed. Riverside County has an

agreement with CAL FIRE for emergency services support through the CAL FIRE Cooperative Fire Protection Program (CAL FIRE 2024a).

**California Government Code.** California Government Code Sections 51175 through 51189 provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Furthermore, local agencies must designate, by ordinance, Very High FHSZs within their jurisdiction based on the recommendations of CAL FIRE.

### *Assembly Bill (AB) 1054*

**AB** 1054 provides for a Wildfire Fund, which electrical corporations may access upon meeting specific requirements. Electrical corporations must opt into the fund, make financial commitments, and maintain a safety certificate from the CPUC, among other conditions. In July 2019, Southern California Edison opted into the Wildfire Fund, which requires it to satisfy a burden of proof test and obtain a safety certification by satisfying the conditions of Public Utilities Code Section 8389(e)(1-7).

### *California Fire Code (CFC) 2019 Section 1206*

CFC 2019 Section 1206 outlines requirements for energy storage systems designed to provide electrical power to a building or facility. Permits shall be obtained prior to the installation and operation of energy storage systems, and construction documents shall provide information related to fire safety, such as the location and layout of the room in which the stationary storage battery system is to be installed; details on hourly fire-resistance-rated assemblies provided; quantities and types of storage batteries and battery systems; manufacturer's specifications, ratings, and listings of storage batteries/systems; details on energy management systems; location and content of signage; details on fire-extinguishing, smoke detection, and ventilation systems; and rack storage arrangement, including seismic support criteria. Additionally, this section establishes standards for the design of stationary storage battery systems, arrays, and signage to enhance fire safety and detect and extinguish fires.

### *California Public Resources Code (PRC) Section 4292*

PRC Section 4292 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line has primary responsibility for fire protection of such areas, and shall maintain around and adjacent to any pole or tower that supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole a firebreak that consists of a clearing of not less than 10 feet in each direction from the outer circumference of such a pole or tower. All vegetation shall be cleared within the firebreak.

### *PRC Section 4293*

PRC Section 4293 states that any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land that has primary responsibility for the fire protection of such area, shall maintain the following minimum clearances:

- A minimum radial clearance of 4 feet shall be established for any conductor of a line operating at 2,400 or more volts but less than 72,000 volts.
- A minimum radial clearance of 6 feet shall be established for any conductor of a line operating at 72,000 or more volts but less than 110,000 volts.

- A minimum radial clearance of 10 feet shall be established for any conductor of a line operating at 110,000 or more volts but less than 300,000 volts.
- A minimum radial clearance of 15 feet shall be established for any conductor of a line operating at 300,000 or more volts.

***PRC, Division 4, Chapter 6***

- Section 4427—Operation of fire-causing equipment
- Section 4428—Use of hydrocarbon-powered engines near forest, brush, or grass-covered lands without maintaining firefighting tools
- Section 4431—Gasoline-powered saws and firefighting tools
- Section 4442—Measures, requirements, and exemptions for spark arresters

***California Public Utilities Commission (CPUC) GO No. 95***

CPUC GO No. 95 formulates for the State of California requirements for overhead line design, construction, and maintenance, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation, or use of overhead lines and to the public in general.

***CPUC GOs 128 and 165***

GO 128 establishes rules governing the construction of underground electric and communication lines to promote and safeguard public health and safety. GO 165 establishes requirements for inspections of electric distribution and transmission facilities (excluding those facilities contained in a substation) in rural, high fire-threat areas to ensure safe and high-quality electrical service.

***CPUC GO 95: Rules for Overhead Transmission Line Construction***

CPUC GO 95 governs the design, construction, and maintenance of overhead electrical lines. Rule 31.1 generally states that this should be done in accordance with accepted good practices for the given location conditions known at the time by the persons responsible for the design, construction, and maintenance of the overhead electrical lines and equipment. Rule 35 of GO 95 requires the following clearances between bare-line conductors and vegetation in high fire-threat areas:

- 4-foot radial clearances for any conductor of a line operating at 2,400 volts or more, but less than 72,000 volts
- 6-foot radial clearances for any conductor of a line operating at 72,000 volts or more, but less than 110,000 volts
- 10-foot radial clearances for any conductor of a line operating at 110,000 volts or more, but less than 300,000 volts
- 15-foot radial clearances for any conductor of a line operating at 300,000 volts or more

***CPUC Fire Threat Zones***

In 2018, CPUC approved a statewide Fire-Threat Map (CPUC 2024), which delineates a High Fire-Threat District and is intended to assist with implementation of new fire prevention rules. The map delineates areas in the state where there is an elevated risk and an extreme risk (including likelihood and potential impacts on people and property) from utility-associated wildfires. The Fire-Threat Map helps prioritize fire

hazard areas to allow for implementation of new fire-safety regulations adopted by CPUC in December 2017. Electric investor-owned utilities must file an annual report that contains a fire-prevention plan containing specified information for its overhead electric facilities in the High Fire-Threat District. Increased vegetation management and new fire regulations also apply to the High Fire-Threat District. The Project site is not located in an area designated as having elevated or extreme fire threat (CPUC 2024).

#### *CPUC Section 8389(e)(1-7)*

This section of the CPUC specifies the requirements for an electrical corporation to obtain a safety certification by documenting the following: an approved wildfire mitigation plan, good standing, an established safety committee composed of members with relevant safety experience, an executive incentive compensation structure to promote safety as a priority, an established board-of-director-level reporting to the commission on safety issues, a compensation structure for new or amended contracts for executive officers, and implementation of its approved wildfire mitigation plan.

#### *Power Line Fire Prevention Field Guide*

The Power Line Fire Prevention Field Guide (2021 Edition**)** outlines procedures to minimize the risk of wildfire caused by electrical power lines and equipment. CAL FIRE, the state's three investor-owned utilities (Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric), and other California electric utilities have mutually developed the comprehensive field guide for their personnel. The guide details fire hazard reduction maintenance procedures for the safety of conductors and certain hardware.

### Local Laws, Regulations, and Policies

#### *Riverside County General Plan*

The intent of the Safety Element of the Riverside County (County) General Plan is to reduce death, injuries, property damage, and economic and social impact from hazards. The Safety Element addresses the fire-related hazards present within the county, aiming to mitigate wildfire hazards, eliminate earthquake-induced fire hazards, and reduce long-term safety hazards related to wildfire effects, including erosion and debris flow. The County has prepared graphics that identify fire-related hazards; the Project site and transmission lines do not intersect any high-risk hazards (County of Riverside 2021b).

The following policies generally relate to the Project with respect to fire (County of Riverside 2021b):

- **Policy S 4.1.** All development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire Department and Building and Safety Department for consistency with the following requirements before the issuance of any building permits: (AI 25, 81.1, 81.2, 104.1)
    a) All proposed development and construction shall meet minimum state, county, and local standards and other legal requirements for fire safety, as defined in the Riverside County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency, based on building type, design, occupancy, and use.
    b) In addition to the standards and guidelines of the California Building Code, California Fire Code, the Riverside County Code of Ordinances, Title 14 of the California Code of Regulations, and other appropriate fire safety provisions, developments shall incorporate additional standards for high-risk, high-occupancy, and dependent facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire

safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.

c) Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County ordinances, where required. There shall be multiple points of ingress and egress that allow for emergency response vehicle access. Points of access shall also include visible street addresses and signs and sufficient water supplies, infrastructure for structural fire suppression, and other applicable local and state requirements. 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.

d) Proposed development and construction in Fire Hazard Severity Zones shall provide defensible space or fuel modification zones to be located, designed, constructed, and maintained to provide adequate defensibility from wildfires.

e) Prior to the approval of all parcel maps and tentative maps, the County shall require, as a condition of approval and as feasible and appropriate, the developer meet or exceed the State Responsibility Area Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access (see Gov. Code, Section 66474.02.)

f) Proposed development and construction of more than four residential units or more than 10,000 square feet of nonresidential space located in Very High Fire Hazard Severity Zones, or other appropriate zones as determined by the Riverside County Fire Department, shall submit and implement a fire protection plan as feasible and appropriate. This plan shall include provisions for roadways and access, firefighting infrastructure, signage, vegetation management, construction materials, and evacuations.

- **Policy S 4.4.** Discourage development and activities in areas with limited water and access roads, unless adequate measures are implemented. (AI 60)
- **Policy S 4.4.** Require proposed development in High or Very High Fire Hazard Severity Zones be located where fire and emergency services are available or will be constructed as part of the proposed development activities, to the extent such locations are available. These services should meet the minimum response times as established by the Riverside County Fire Department. (AI 60, 61)
- **Policy S 4.6.** Request that conceptual landscaping plans for development in Fire Hazard Severity Zones be reviewed by TLMA [Transportation and Land Management Agency] and Fire Department prior to the issuance of development permits. The conceptual landscaping plan of the proposed development should, at a minimum, include: (AI 25)
  a) Plant palette suitable for high fire hazard areas to reduce the risk of fire hazards.
  b) Retention of existing natural vegetation to the maximum extent feasible.
  c) Removal of on-site combustible plants.
- **Policy S 4.7.** Site design for development in Fire Hazard Severity Zones should be required to account for topographical conditions and reduce the increased risk for sites located near ridgelines, plateau escarpments, saddles, hillsides, peaks, or other areas where the terrain or topography affect its susceptibility to wildfires by: (AI 60, 81.2, 91)

a) Providing fuel modification zones with removal of combustible vegetation while minimizing visual impacts and limiting soil erosion.

b) Replacing combustible vegetation with fire resistant vegetation to stabilize slopes.

c) Submitting topographic map with site-specific slope analysis.

d) Submitting erosion and sedimentation control plans.

e) Providing a setback from the edge of the fuel modification zones as deemed appropriate by the Fire Department.

f) Minimizing disturbance of 25 percent or greater natural slopes.

g) Or enacting other efforts as appropriate to provide comparable protection.

The following policy from the County's General Plan Circulation Element requires the provision of safe and efficient routes for emergency vehicles (County of Riverside 2020) and is applicable to the Project.

- **Policy C 3.24.** In the event of an emergency requiring evacuation and emergency vehicle access, the Riverside County Sheriff's Department, in collaboration with the Transportation and Land Management Agency, city law enforcement, California Department of Transportation, and California Highway Patrol, would establish evacuation routes.

***Riverside County Ordinances***

The Riverside County Ordinances includes County legislation. Chapter 8.32 in the Riverside County Ordinances includes Fire Code. The County Fire Code adopts the California Fire Code and describes its applicability.

***Riverside County Fire Department (RCFD) Technical Policy TP 15-002***

RCFD TP 15-002, titled Solar Energy Generating System 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 Solar Energy Generating System (i.e., solar facility). It addresses secondary access road requirements, which shall be determined by the County Fire Marshal given the specific conditions of a solar project. Each Solar Energy Generating System 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 13.5 feet. The grade of the access road shall not exceed 15%. 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 (RCFD 2020).

***Palo Verde Valley Area Plan***

The Wildland Fire section of the Palo Verde Valley Area Plan addresses wildland fire susceptibility for improved public safety in the Palo Verde Valley area. Wildfire susceptibility is moderate throughout the Palo Verde Valley Area. The following policy generally relates to the Project with respect to fire hazards (County of Riverside 2021c).

- **Policy PVVAP 14.1**. All proposed development located within Moderate Fire Hazard Severity Zones shall protect life and property from wildfire hazards through adherence to policies identified in the Fire

Hazards (Building Code and Performance Standards), Wind-Related Hazards and General and Long-Range Fire Safety Planning sections of the General Plan Safety Element.

***Riverside County Emergency Medical Services (EMS) Strategic Plan***

The EMS Strategic Plan describes the strengths of the County EMS system, identifies opportunities to improve healthcare within the County. The EMS Strategic Plan discusses topics including, but not limited to, descriptions of emergency services including available equipment, personnel, appropriate facilities, and capacity to assist and support wildfire suppression emergency service needs (County of Riverside 2014).

***Riverside County Emergency Operations Plan (EOP)***

The EOP is designed to help with County coordination during emergencies. The EOP outlines the functions, responsibilities, and regional risk assessments of the County for emergencies such as wildfire events and determines the planned response for managing these incidents. The plan addresses initial and extended emergency response and recovery processes (County of Riverside 2022).

## 3.19.2 Environmental Setting

The Project site is located in the unincorporated county approximately 2.8 miles north of Interstate (I) 10, adjacent, on the west side of the Blythe city limits (see Figure 2-1). The Project is primarily located on private lands with the Phase 2 transmission line located on BLM-administered land, within a Development Focus Area (DFA) for transmission, solar, wind, and geothermal projects as designated by the Desert Renewable Energy Conservation Plan (DRECP). Phase 2 proposes to construct approximately 1.9-miles of new 230-kV transmission line and to use approximately 8.6 miles of the open-circuit on the existing double-circuit Arlington transmission line. While the Phase 2 transmission line is within the land use jurisdiction of the BLM Palm Springs South Coast Field Office, the solar facility and Phase 1 transmission line are on private land within the land use jurisdiction of the County. Phase 1 proposes to construct 3.5-miles of new transmission line and a new 161 kV switchyard adjacent to the existing Parker – Blythe 161 kV transmission line owned by the Western Area Power Administration (WAPA). The Project site is bounded on the north and west sides primarily by BLM-administered lands, to the east and south by private land. Blythe Airport is located south of the Project. There is an inactive lemon orchard in the center of the Project site, and fallow agricultural or undeveloped land throughout the Project site.

Buck Boulevard, a paved, county-maintained road, runs through the Project boundary north of the intersection with 10$^{th}$ Avenue, and Stephenson Boulevard, an unpaved, non-county road, runs through the Project boundary on the project boundary north of the intersection with 10$^{th}$ Avenue. Buck Boulevard would be improved as part of the Project and used as the primary access. Stephenson Road would provide secondary access to Phase 1 of the Project. Under Phase 2, the transmission line is routed west from the proposed substation and crosses Dracker Road. Dracker Road, a non-county road that runs along the west side of the Project boundary, would be the secondary access under Phase 2 to access the proposed transmission line corridor (see Figure 2-6 and Figure 2-7). The Phase 2 transmission line also crosses Black Rock Road, a paved, county-maintained road and I-10, but there is an existing transmission line at these crossings. There are a few roads within the Project boundary, such as 9th Avenue and Kelm Boulevard, that are identified by the County as a road “accepted for public use”.

Southern California, which encompasses the County, is recognized as having one of the most fire-prone landscapes in the world due to dense, dry fuels and a warm, arid climate. Factors influencing wildfire behavior and magnitude include (but are not limited to) forest structure, fuel conditions, terrain, climate, weather, and ignition sources. Weather is one of the most significant biophysical factors of wildfire

behavior. Wet winters and dry summers with mild seasonal changes characterize the Southern California climate. The summer months are arid and warm, with very little precipitation. This climate pattern is occasionally interrupted by extreme periods of hot weather, drought, winter storms, or dry, easterly Santa Ana winds. Drought and Santa Ana winds are unique weather conditions that occur in Southern California that drive catastrophic wildfires. Santa Ana winds bring hot, dry desert air from the east into the region during late summer and fall, which increases wildland fire hazards during these seasons. Dry vegetation, low humidity, and high air temperature can combine to produce large-scale fire events. As Santa Ana winds blow westward toward denser development, fires driven by these winds have the potential to result in a greater risk of property damage. Much of the county is considered to be at risk from wildfires (County of Riverside 2021b).

## Fire Hazard Mapping and Fire History

CAL FIRE is responsible for mapping fire hazard areas throughout the state and provides these maps through the Fire and Resource Assessment Program (FRAP) database. The FRAP database includes data that identify areas of significant fire hazards throughout the state. Geographic areas of the state are designated as either Very High, High, or Moderate Fire Hazard Severity Zones (FHSZ), which are determined by a region's land cover, vegetation, terrain, climate, fire history, and several other factors that contribute to the fire environment. These areas are also classified as LRAs, SRAs, and FRAs, which indicate areas where the local, state, or federal government assume financial responsibility for fire prevention and protection. The Project site is within a LRA and FRA and the FRAP database identifies the site as a Moderate FHSZ. A few areas within the LRA portion of the Project site are designated as unzoned (CAL FIRE 2023a; County of Riverside 2021c). As illustrated in Figure 3.19-1, Fire Hazard Severity Zones, the solar facility and Phase 1 transmission line are on private land within an LRA under the jurisdiction of the RCFD with the Phase 2 transmission line on BLM-administered land within an FRA under the jurisdiction of the BLM.

The County has adopted a fire hazard map in the General Plan Safety Element (County of Riverside 2021b, Figure S6). The Safety Element identifies areas with rugged topography and flammable vegetation as being susceptible to fire hazards (County of Riverside 2021b). According to the Wildfire Susceptibility Map in the General Plan, Very High FHSZs in LRAs, SRAs, and FRAs are concentrated in the western portions of the County (County of Riverside 2021b). The Wildfire Susceptibility Map does not identify any FHSZs on the Project Site. The Project site lacks dense flammable vegetation and steep slopes. .

Fire history data provides valuable information regarding fire spread, fire frequency, ignition sources, and vegetation/fuel across a given landscape. The FRAP database[1] summarizes fire perimeter data dating to the late 1800s, but is incomplete because it does not include all fires under 10 acres in size and has incomplete perimeter data, especially for the first half of the twentieth century (Syphard and Keeley 2016). However, the data does provide a summary of recorded fires in the larger area and can be used to show whether large fires have occurred on or around the Project site, which is one of the indicators as to whether fires may be possible in the future. According to available data from the FRAP database, no fires have been recorded within a 5-mile perimeter of the Project site since the beginning of the historical fire data record (CAL FIRE 2023b). As depicted in Figure 3.19-2, Closest Fire to Project Site, the Coarsegold Fire is the closest historical fire to the Project site which burned approximately 8.4 miles south of the Southern

[1] Based on polygon geographic information system data from CAL FIRE's FRAP, which includes data from CAL FIRE, the U.S. Department of Agriculture's Forest Service Region 5, BLM, the National Park Service, contract counties and other agencies. The dataset is a comprehensive fire perimeter geographic information system layer for public and private lands throughout the state and covers fires 10 acres and greater between 1878 and 2018.

California Edison (SCE) Colorado River Substation in 1976. Other smaller fires that either exhausted all available fuels or were quickly extinguished before reaching the FRAP database threshold of 10 acres may have occurred near the Project site but were not included in the dataset.

### Slope/Terrain

The topography of the Project site is characterized by a slight slope to the southeast toward McCoy Wash. Elevations range from approximately 310 feet above mean sea level (amsl) in the southeastern end of the site to 430 feet amsl near the northwestern portion of the site.

### Vegetation/Land Cover and Surrounding Land Uses

Vegetation communities at the Project site are detailed in Section 3.5, Biological Resources, and primarily consist of fallow agriculture, creosote bush scrub, and desert pavement (See Figure 3.5-1). There is mesquite habitat bordered by large trees planted along the edge of private parcels southeast of the Project site. Tree species, such as *Olneya tesota* (Ironwood), were also identified onsite, primarily near the washes and along the Phase 2 transmission line (Appendix C).

Land uses in the vicinity of the Project site include transportation (I-10 and Blythe Airport), agricultural, renewable energy (both existing and proposed), energy transmission lines, historical military operations, and recreational facilities. There is an inactive lemon orchard generally in the center of the Project site (see Figure 2-6 and Figure 2-7). There is one residence adjacent to the northern Project boundary (approximately 175 feet from boundary) and rural residences are located about 4,400 feet to the east along 10th Avenue and about 5,500 feet to the east along Arrowhead Boulevard. The community of Mesa Verde is approximately 1.5 miles east of the Phase 2 transmission line, immediately south of I-10, Palo Verde College is located about a mile to the east, and the City of Blythe is located approximately 4.5 miles southeast.

The existing Blythe Solar Energy Project borders the Project on the northwest corner and Blythe Mesa borders the Project to the south, as illustrated in Figure 2-3, Project and Other Solar Projects. The existing Arlington Solar Energy Project and McCoy Solar Project are located north of the Project and the proposed Desert Quartzite project would be located south of the Phase 2 transmission line. The Phase 2 transmission line uses the open circuit of the existing double-circuit Arlington transmission line and ties into the existing SCE Colorado River Substation. The Phase 1 transmission line ties into the existing Parker – Blythe 161 kV transmission line owned by WAPA.

### Climate/Weather

The Project site experiences an average annual high temperature of above 89°F and an average annual low temperature of 57°F (U.S. Climate Data 2024). Wind speeds average approximately 7.5 miles per hour and relative humidity averages at approximately 27.4% (Weather Atlas 2024).

### Emergency Response

Fire protection services in the County are provided by a combination of federal (U.S. Forest Service, BLM Fire), state (CAL FIRE), and local agencies (RCFD). The RCFD is one of the largest regional fire service organizations in California (RCFD 2009). There are 101 fire stations located throughout the county that serve unincorporated communities, partner cities, and the state under the California Master Mutual Aid Agreement (County of Riverside 2021a). The County contracts with CAL FIRE for fire protection, but because the Project is not located in an SRA, CAL FIRE would not be responsible for fire management or suppression activities unless the area's responsible entity has been depleted (e.g., during a widespread

natural disaster or State of Emergency) (Cal OES 2010). Emergency fire response to the Project site would be provided by RCFD.

As described in Section 3.17, Public Services, the nearest RCFD/CAL FIRE station to the Project site is Station No. 45 – Blythe Air Base, located at 17280 West Hobson Way, Blythe, CA 92225, about 2 miles south of the Project site. Station No. 45 is part of Battalion 8. Station No. 45 is a one engine facility that operates 24 hours, 7 days a week. At any given time, the staff includes 3 personnel and 1 paramedic to the one engine. Station No. 45 has a service area from Desert Center to the Arizona border. Station No. 45 also provides backup for Station No. 43, all the way up Highway 43 on the California line. The station receives on average 1-2 calls per day, typically regarding medical support, vehicle fires, car accidents, and flood water rescue in the Colorado River and agricultural canals. The Station rarely receives calls from solar sites. Due to the stations vast service area, the average response time is 20-30 minutes (Engineer Perez 2024).

The Riverside County Emergency Medical Services Strategic Plan discusses topics including, but not limited to, descriptions of emergency services including available equipment, personnel, appropriate facilities, and capacity to assist and support wildfire suppression emergency service needs (County of Riverside 2014). The County EOP outlines the functions, responsibilities, and regional risk assessments of the County for emergencies such as wildfire events and determines the planned response for managing these incidents. The plan addresses initial and extended emergency response and recovery processes (County of Riverside 2022).

The BLM Fire Program is responsible for fire and fuels management and protection of federal lands identified as FRAs within the United States. The BLM Fire Program includes fire suppression, preparedness, predictive services, fuels management, fire planning, community assistance and protection, prevention and education, and public safety (BLM 2024). BLM establishes fire prevention orders and restrictions to assist with wildland fire prevention efforts throughout the public lands within the California Desert District, which consists of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego counties. Its field offices, such as the BLM Palm Springs–South Coast Field Office, may provide on-the-ground fire management.

## Environmental Effects of Wildfires

Wildfire risk can be detrimental to people and structures indirectly through the exposure of pollutant concentrations, as discussed further below.

### *Air Quality*

Carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons, and other constituent materials are all present in wildfire smoke. The specific composition of smoke depends largely on the fuel type (vegetation types contain different amounts of cellulose, oils, waxes, and starches, which when ignited produce different compounds). In addition, hazardous air pollutants and toxic air contaminants, such as benzene and formaldehyde, are also present in smoke. However, the principal pollutant of concern from wildfire smoke is particulate matter. In general, particulate matter from smoke is very small in size and can be inhaled into the deepest recesses of the lungs, presenting a serious health concern (CARB et al. 2021).

Factors including weather, stage of fire, and terrain can all dictate fire behavior and the impact of smoke on the ground. Wind, for instance, generally results in lower smoke concentrations because wind causes smoke to mix with a larger volume of air. Regional weather systems, such as the Santa Ana winds of Southern California, on the other hand, can spread fire quickly and result in numerous devastating

impacts. The Santa Ana winds effectively work to reverse the typical onshore flow patterns and blow winds from dry, desert Great Basin areas westward toward the coast. As a result, coastal communities can be impacted by fires originating in inland areas (CARB et al. 2021).

Large quantities of pollutants can be released by wildland fires over a relatively short period of time. Air quality during large fires can become severely hazardous and can remain impaired for several days after the fire is ignited.

***Water Quality***

Fire can impact water quality by increasing potential for erosion and sedimentation in areas where vegetation has been burned by fire, resulting in increased water temperature through removal or drastic modification of shade-providing trees and vegetation. Water chemistry can also be altered through the introduction of pollutants and chemical constituents. Aquatic environments may also be impacted through the introduction of fire-retardant chemicals used during firefighting activities.

## 3.19.3 Impact Analysis

### Methodology

Wildfire hazards associated with the Project are evaluated based on landscape characteristics and the Project's ability to ignite or exacerbate wildfire risk. Potential existing hazards are based on review of the Project location on CAL FIRE maps to determine its location within FHSZs. As illustrated in Figure 3.19-1, Fire Hazard Severity Zones, the solar facility and Phase 1 transmission line are on private land within an LRA under the jurisdiction of the RCFD with the Phase 2 transmission line located on BLM-administered land within an FRA under the jurisdiction of the BLM. CAL FIRE does not provide designations for federal land; thus, the Phase 2 transmission line would not be identified as being within a Fire Hazard Severity Zone. A majority of the LRA portion of the Project site are designated by CAL FIRE as a Moderate FHSZ. A few areas within the LRA portion of the Project site are designated as unzoned (CAL FIRE 2023a; County of Riverside 2021c). Additionally, given the electrical components of the Project and the arid climate, the potential for wildfire is present. Therefore, this analysis identifies design features and compliance with existing safety procedures, standards, and regulations that would be part of the Project. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Appendix G to the State CEQA Guidelines addresses typical adverse effects due to wildfire hazards and includes the following threshold questions to evaluate a project's impacts resulting from wildlife hazards. Would the project, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

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

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Significance thresholds, set forth in the County's Environmental Assessment Checklist, are derived from Appendix G to the State CEQA Guidelines (listed above), and state that the Project would have a significant impact due to wildfires if the Project or any Project-related component would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

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

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

## Environmental Impacts

This section includes an examination of the Project's impacts due to wildfires per the County's Environmental Assessment Checklist and Appendix G to the State CEQA Guidelines identified above.

### *Summary of Previous Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** While it does not include a stand-alone wildfire section, the Palo Verde Mesa Solar Project EIR evaluates fire impacts and impacts to emergency response or evacuation plans in the Hazards and Hazardous Material analysis. The Palo Verde Mesa Solar Project EIR determined that the Project would not create significant fire hazards to the public or the environment based on compliance with applicable requirements and design features incorporated as part of the project. It was also determined that there would be less than significant impacts to emergency response or evacuation plans without mitigation. The project would include the preparation of a Fire Management and Protection Plan, in consultation with the Riverside County Fire Department and other appropriate first responders, which would reduce the risk of an electrical fire on-site. The project would result in less than significant impact with implementation of the Fire Management and Protection Plan, and incorporation of other applicable best management practices.

### *Threshold a: Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?*

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* The Project is located in the unincorporated county near the City of Blythe (Figure 2-3). The County's General Plan Safety Element states, the backbone of the County's evacuation routes are the County's Circulation Plan routes (County of Riverside 2021b). According to the County's Circulation Plan, the nearest freeway is I-10 (approximately 1.7 miles south of the Project site), and the nearest major highways are US Route 95 approximately 2 miles southeast of the Project site, and State Route 78, approximately 6 miles east of the Project site. These roads are considered the nearest routes for evacuation purposes, along with Midland Road/North Lovekin Boulevard, a paved, county-maintained road located approximately 4 miles northeast of the Project site (County of Riverside 2021b). The County EOP addresses wildfire as one of the most common hazard incidents faced by the County (County of Riverside 2022).

Primary access to the Project site during construction and decommissioning would be along I-10 from the Airport/Mesa exit, then east to Buck Boulevard. Alternate access would be Stephenson Boulevard east of Buck Boulevard under Phase 1 or west from the Airport/Mesa exit along Hobsonway, then north on Dracker Road under Phase 2. Primary Project access roads would be 20 feet wide and would be designed to accommodate large vehicles, including emergency vehicles. Construction and future decommissioning could require temporary lane closures that could restrict the movements of emergency vehicles. In accordance with mitigation measure (**MM) TRAF-1**, a Construction Traffic Management Plan would be prepared to reduce potential impacts to traffic. The construction traffic management plan would include management measures, such as informing emergency service providers of the construction traffic schedule, which would help to ensure that emergency access routes would not be impeded. Refer to Section 3.19, Transportation, for an analysis of traffic-related impacts during the Project's construction. The Palo Verde Mesa Solar Project also includes an MM requiring a Traffic Management Plan, however, it is not specifically identified as necessary to reduce impacts related to emergency response or evacuation plans.

The Project would be monitored by six full-time, on-site staff during operation and all access gates would be equipped with a Knox-Box to allow emergency personnel to access the site in the event of an emergency. Primary and secondary access during operation would be the same as construction. In the event of a wildfire emergency requiring evacuation and emergency vehicle access, the County Sheriff's Department would establish evacuation routes and Project employees would follow evacuation orders (County of Riverside 2019). Access on Buck Boulevard, Stephenson Boulevard, Dracker Road, I-10, other public roads, and to the Project site would be unobstructed, and construction and operation of the Project would not impair any emergency access routes.

Consistent with the Palo Verde Mesa Solar Project, Project access roads would be designed in compliance with applicable requirements to ensure emergency access. Circulation and access to the Project site would be in accordance with County Fire Department Technical Policy (TP) 15-002, which states primary and secondary access roads shall be no less than 20 feet wide and on-site access roads through solar panel arrays shall be 16 feet wide (RCFD 2020). To comply with TP 15-002, onsite roads and site access would be reviewed and approved by RCFD prior to Project implementation. Therefore, construction, operation, and future decommissioning of the Project would not restrict the movement of emergency vehicles and would not impair any adopted emergency response plan or emergency evacuation plan. Therefore, with incorporation of **MM-TRAF-1**, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and the Project's impacts would be **less than significant with mitigation**.

***Threshold b: Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?***

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.* According to CAL FIRE's FHSZ mapping and the County's General Plan Safety Element, the solar facility and Phase 1transmission line is on private land within an LRA under the jurisdiction of the RCFD with the Phase 2 transmission line located on BLM-administered land within an FRA under the jurisdiction of the BLM. Consistent with the Palo Verde Mesa Solar Project, the project site is not located in an area of high or very high fire hazard. A majority of the LRA portion of the Project site is designated as a Moderate FHSZ by CAL FIRE. A few areas within the LRA portion of the Project site are designated as unzoned, as shown on Figure 3.19-1 (CAL FIRE 2023a; County of Riverside 2021c). The surrounding area includes agricultural, renewable energy projects (both existing and proposed), energy transmission, historical military operations, and recreational facilities. Construction

and decommissioning activities would be limited to the temporary presence of construction workers, and during operation up to six full-time, on-site staff would be present to perform daily visual inspections, minor repairs, and annual panel cleaning.

The Project site is located within Southern California where Santa Ana winds are prevalent; however, the topography of the Project site is relatively level and there are no slopes 15% or greater on the site. Grading is expected to be minor in most instances. However, grading would occur throughout the site, at a minimum for access roads, inverter pad locations, transmission tower foundations, internal roadways, and work areas. The proposed grading would not create new slopes or create wind patterns that would facilitate wildfire spread. Due to the presence of scarce vegetation and minimal slopes, the potential for the Project to exacerbate wildfire risks and the potential for wildfire spread and expose construction workers and permanent employees as well as the surrounding areas to the hazards of a wildfire is considered low.

Vegetation clearance would commence prior to the onset of Project construction activities, and when practical, vegetation removal for the Project would be minimized. The vegetation communities present within the Project area include fallow agriculture, creosote bush scrub, and desert pavement. Vegetation would be trimmed or knocked down as needed for construction safety and allowed to re-grow to a height that would not interfere with facility operations or create a fire risk. This reduction of vegetation would further reduce the availability of flammable fuels around the Project site. Electrical utilities, particularly transmission lines are known to have been ignition sources of historically large fires in California. The Project would also involve preparation, installation, and testing of electrical components such as cables, inverters, wiring, modules, and a transformer. Wires would be buried 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, if necessary, 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. Any potentially hazards materials or chemicals would be stored in appropriate containers in an enclosed and secured location with secondary containment to prevent leakages and accidental fires. The Project would comply with by the appropriate Occupational Safety and Health Administration and California Code of Regulations standards (8 CCR 4846) and all welding and hot work would be conducted using fire safety best practices.

The Project also includes operation of an up to 500-megawatt battery energy storage system (BESS) that would consist of batteries housed in storage containers. A BESS was not included in the Palo Verde Mesa Solar Project and therefore was not included in the evaluation of fire hazards. The storage system would be installed following all applicable design, safety, and fire standards for the installation of energy storage systems, including, but not limited to, NFPA Standard 855 (Standard for the Installation of Stationary Energy Storage Systems) and Section 1206 of the California Fire Code. NFPA Standard 855 includes criteria for fire prevention associated with ESS installations, such as setbacks and proper design of sprinkler systems. It considers ventilation, detection, signage, listings, and emergency operations responding to ESS emergencies (NFPA 2023). Implementation and compliance with these design and safety regulations would ensure wildfire risk associated with the Project is reduced.

To transmit energy the Project would construct a transmission line, including new poles to connect the Project to the existing electrical grid through interconnection to either the existing Western Area Power Administration transmission line under Phase 1 or the existing SCE Colorado River Substation. The transmission line structures would be constructed using tubular steel monopoles and would not exacerbate fire risks due to the nonflammable nature of their foundations. Because the transmission line would be strung on poles over

39 feet above ground, the transmission line would not contact any low-growing desert vegetation and would not exacerbate fire risk during hazardous weather conditions. Construction of transmission line would use existing access roads where feasible. New temporary and/or permanent access roads may be constructed if needed to access the transmission facilities. The lack of substantial vegetation within the transmission line corridors would pose a minimal wildfire risk during construction and operation of the transmission line. As described previously, fire safety measures would be implemented to ensure that construction and operation of the Project components, including the transmission line, are implemented in accordance with applicable fire protection and environmental, health, and safety requirements.

Consistent with the Palo Verde Mesa Solar Project, all Project facilities would be designed, constructed, and operated in accordance with applicable County fire protection and other environmental, health and safety requirements. In addition, a Project-specific Fire Prevention Plan would be prepared for both construction and operation prior to initiation of construction (**APM-HAZ-2**). As described in Chapter 2, Description of the Project, Section 2.5.7, Fire Safety, fire safety measures would be implemented as part of the Project. Section 2.5.7 notes that the Fire Prevention Plan complies with applicable BLM and County regulations and is being developed in coordination with RCFD. Of concern are fire-safe construction, reduction of ignition sources, control of fuel sources, availability of water, and proper maintenance of firefighting systems.

The Fire Prevention Plan includes the following steps to identify and control fires and similar emergencies:

- 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 biodegradable and contains no polychlorinated biphenyls or other toxic compounds.

The Project's location, components, and safety measures would ensure the safe construction, operation, and future decommissioning of the solar facility. Future decommissioning activities are anticipated to be similar to construction, but less intense. Once operational, up to six full-time, on-site 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 be limited to inspections, repairs, and annual panel washing, which would require on-site water use, and would not involve the handling, usage, or production of flammable materials. Fire risk during construction, operation, and decommissioning of the solar facility would be minimal and further reduced through compliance with the Fire Prevention Plan (**APM-HAZ-2**) and **MM-FIRE-1** which requires all maintenance trucks are equipped with a fire extinguisher or other firefighting equipment in accordance with state and federal regulations. This is consistent with Palo Verde Mesa Solar Project, which included the incorporation of a Fire Management and Protection Plan and fire extinguishers on site.

As such, with incorporation of **MM-FIRE-1** and **APM-HAZ-2**, construction, operation, and future decommissioning of the solar facility, transmission line, and access roads would not exacerbate wildfire risks or expose construction workers, future employees or the surrounding areas to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Additionally, **MM-BIO-5** requires the preparation of an Integrated Weed Management Plan and **MM-BIO-6** requires vegetation resources management, which would reduce the likelihood for highly flammable invasive plants and guide management of native vegetation near Project facilities to prevent overgrowth and reduce fire risk. An Integrated Weed Management Plan was included as a best management practice under the Palo Verde

Mesa Solar Project but is included for the Proposed Project with language to reflect current best practices and project specifics. The Palo Verde Mesa Solar Project did not include a mitigation measure or best management practice associated with vegetation resources management but is included for the proposed project to reflect current best practices and project specifics. With implementation of **MM-FIRE-1, APM-HAZ-2, MM-BIO-5, and MM-BIO-6,** the Project impacts would be **less than significant with mitigation** incorporated.

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

*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*. The Project would construct a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would deliver electricity to the statewide transmission grid. The Project site is in a desert setting within unincorporated Riverside County[2]; and is not within a CAL FIRE designated High or Very High FHSZ; however, the electrical components still pose a risk of fire if they are tampered with or become damaged. Electrical components that may pose a risk of fire include high voltage transformers, inverters, batteries, backup generators, and the substation. Although the Project's fire risk is considered low, the potential to exacerbate fire risk could occur during construction, operation, and/or decommissioning.

The Project would include the construction of access roads, including the road to connect the substation and BESS to Dracker Road under the Phase 2 transmission line, and other internal access roads between the solar arrays. Consistent with the Palo Verde Mesa Solar Project, Project access roads would be designed in compliance with applicable requirements to ensure emergency access. Access roads would be designed in accordance with applicable RCFD requirements. In addition, a Project-specific Fire Prevention Plan would be prepared for both construction and operation prior to initiation of construction (**APM-HAZ-2**) and all maintenance trucks would be equipped with a fire extinguisher or other firefighting equipment in accordance with state and federal regulations (**MM-FIRE-1**). This is consistent with Palo Verde Mesa Solar Project, which included the incorporation of a Fire Management and Protection Plan and fire extinguishers on site. With the incorporation of **MM-FIRE-1** and **APM-HAZ-2**, construction and operation of the access roads would not exacerbate wildfire risks.

Construction of the solar facility would require the installation of infrastructure to support the generation, delivery, and storage of electricity. Construction would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. Prior to construction, vegetation would be trimmed and removed as needed. The limited amount of already sparse vegetation would further minimize the potential for ignition. Additionally, assembly and installation of the electrical equipment would meet existing electrical and safety standards. Certified electricians and utility "journeymen" would be part of the construction workforce to ensure that all electrical equipment is assembled properly. The Project's substation would be secured in 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. The Project includes the installation of up to 500-megawatt alternating current or direct current coupled centralized BESS configuration, which would include batteries housed within containers in a centralized location adjacent to the proposed on-site substation. The BESS would likely consist of containers housing batteries connected in strings and

[2] Blythe, with a population of approximately 18,000, is located 5 miles southeast of the Project site. The community of Mesa Verde, with a population of approximately 1,000, at its closest point is 1.5 miles east of the Phase 2 transmission line.

mounted on racks. The California Fire Code (2022) details design standards for BESS, which include lighting, monitoring equipment, cooling units, active exhaust venting, multiple fire detection units including gas/heat/smoke detectors, and fire protection systems that adequately address fire risk associated with the unit. Most of the solar facility's equipment would consist of solar PV panels and their mounting systems, which would be assembled from materials that are not combustible or flammable. The fire emergence risk in PV systems is very low (TUV Rheinland Energie und Umwelt GmbH 2018).

Construction of the transmission line and pole structures would occur within a transmission line corridor on BLM-administered land under Phase 2 and within the solar facility on private land under Phase 1. Wire setup sites within this corridor would be cleared and graded to ensure enough clearance for large equipment used for the wire stringing operation. Removal of potentially flammable materials and vegetation would occur in work areas, such as wire setup, puller, and tensioner sites and access spur roads within the construction corridor or solar facility boundary, to reduce the risk of wildfire during construction. The transmission line would be supported by tubular steel monopoles and would not exacerbate fire risks due to the nonflammable nature of their foundations. Construction of the transmission line and structures would use existing access roads where feasible. New temporary and/or permanent access roads may be constructed if needed in areas without existing access roads, and construction of all permanent access roads would comply with RCFD specifications.

The lack of substantial vegetation along either transmission line would pose a minimal wildfire risk during construction of the transmission line. Future decommissioning activities, as with construction, would involve the temporary use of heavy construction equipment and vehicles during the removal of the solar facility's components and would be similar to impacts during construction. As described previously, fire safety measures (**MM-FIRE-1, APM-HAZ-2**, **MM-HAZ-2** and **MM-BIO-2**) as well as **MM-BIO-5 and MM-BIO-6** would be implemented to ensure that construction and decommissioning of the Project's components, including the transmission line, are implemented in accordance with applicable fire protection and environmental, health, and safety requirements. Therefore, short-term construction impacts, including decommissioning, of the Project's solar facility and transmission line would not exacerbate wildfire risks and impacts would be **less than significant**.

During operation, the Project would have up to six full-time employees on site. Regular O&M of the solar facility would involve daily visual inspections and maintenance when needed to address damage or deterioration of equipment. Because O&M activities would ensure that all equipment is in working condition, accidents would be minimized. Fire safety measures would be implemented during operations, which may include installation of sprinkler systems in the O&M building, a fire protection system (or equivalent), and portable carbon dioxide fire extinguishers mounted at the power conversion system units. The Project would also include the installation of a water tank in proximity to the O&M building to provide a sufficient water reservoir for fire safety as required by the RCFD. As discussed above, the Project includes preparation of a Fire Prevention Plan for both construction and operation (**APM-HAZ-2**). Incorporation of the Project Fire Prevention Plan would provide safe operating conditions and fire response protocols to minimize the risk of wildfire occurring. This is consistent with Palo Verde Mesa Solar Project, which included the incorporation of a Fire Management and Protection Plan and fire extinguishers on site. Furthermore, as discussed in response to Threshold "b," additional MMs (**MM-HAZ-2, MM-BIO-2, MM-BIO-5, and MM-BIO-6**) would be implemented, which would also reduce fire risk. **MM-BIO-2** and **MM-HAZ-2** include the incorporation of a Worker Environmental Awareness Program (WEAP), which would further reduce fire risks. The requirement of a WEAP is consistent with Palo Verde Mesa Solar Project, but the WEAP MM language is revised for the Proposed Project to clarify the requirements and reflect current best practices and site-specific needs. Additionally, **MM-BIO-5** requires the preparation of an Integrated Weed Management Plan and **MM-BIO-6** requires vegetation resources management, which would reduce

the likelihood for highly flammable invasive plants and guide management of native vegetation near Project facilities to prevent overgrowth and reduce fire risk.

Construction, operation, or future decommissioning of the Project would not directly or indirectly require new or expanded infrastructure other than that which is planned as part of the Project. As discussed in Section 3.21, Utilities and Service Systems, no new utility connections, water/wastewater facilities, or other service utilities would be required for the Project. Project construction, operation, and decommissioning of the solar facility, access roads, transmission line, and staging areas/laydown areas and vegetation clearance are part of the Project analyzed herein. As such, any potential temporary or ongoing environmental impacts related to these components of the Project have been accounted for and analyzed in this supplemental environmental impact report as part of the impact assessment conducted for the entirety of the Project. In addition, the Project would be required to comply with all regulatory requirements, in addition to MMs, specifically those listed in Section 3.5 Biological Resources, Section 3.10 Hazards and Hazardous Materials, Section 3.11 Hydrology and Water Quality, and Section 3.19 Transportation for the purposes of avoiding or substantially lessening potential impacts associated with trenching, grading, site work, and the use of heavy machinery to the extent feasible. No adverse physical effects beyond those already disclosed and addressed would occur as a result of implementation of the Project or associated infrastructure. Therefore, the construction, operation, and decommissioning of associated infrastructure would not exacerbate wildfire risk or result in impacts to the environment beyond those already disclosed throughout this document, and impacts would be **less than significant with mitigation.**

***Threshold d: 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 solar facility and Phase 1 transmission line are on private land within an LRA under the jurisdiction of the RCFD with the Phase 2 transmission line located on BLM-administered land within an FRA under the jurisdiction of the BLM (see Figure 3.19-1). A majority of the LRA portion of the Project site are designated as a Moderate FHSZ by CAL FIRE. A few areas within the LRA portion of the Project site are designated as unzoned (CAL FIRE 2023a; County of Riverside 2021c). The closest developed communities are Mesa Verde and the City of Blythe. There is one residence located within 175-feet if the northern Project boundary; however, there are no densely populated communities or residential areas near or directly adjacent to the Project site. The community of Mesa Verde is approximately 1.2 miles east of the Phase 2 transmission line and the City of Blythe is located approximately 4.5 miles southeast of the Project site. As discussed above, the solar facility would be constructed in an area with minimal slopes and the site would be graded so operation occurs on a nearly level surface. As discussed in Section 3.8, Geology and Soils, the Project site has a low potential for slope instability or landslide hazards because the site elevation ranges from 330 feet amsl in the southeastern end of the site to 430 feet amsl near the northwestern portion. Because the Project site is fairly level, grading is expected to be minor in most instances. However, grading would occur throughout the site, at a minimum for access roads, inverter pad locations, transmission tower foundations, internal roadways, and work areas. As discussed under threshold “b”, the Project’s proposed grading would not create new slopes.

Slope failures, mudflows, and landslides are common in areas where steep hillsides (typically slopes 15% or greater) and embankments are present, and such conditions would be exacerbated in a post-fire environment where vegetative cover has been removed. Vegetation plays a vital role in maintaining existing drainage patterns and the stability of soils. Plant roots stabilize the soil and leaves, and stems and branches intercept and slow water, allowing it to more effectively percolate into the soil. Removal of surface vegetation reduces the ability of the soil surface to absorb rainwater and can allow for increased

runoff that may include large amounts of debris and mud flows. The potential for surface runoff and debris flows increase significantly for areas recently burned by large wildfires since water percolation into the soil is reduced (Moench and Fusaro 2012). A review of historical fire data revealed that no fires have been recorded within 5 miles of the Project site (CAL FIRE 2023b), though smaller fires may have ignited closer to the Project site that were not included in the FRAP database. The solar facility site and transmission line are in an area that has a low risk of downslope or downstream flooding, landslides, or post-fire slope instability due to the Project's location on relatively gentle topography.

As such, impacts regarding downslope or downstream flooding or landslides as a result of post-fire slope instability would be **less than significant**.

***Threshold e: 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 INCORPORATED*. There are no buildings or structures that exist on the Project site. Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. As discussed under threshold "a", the Project would be required to comply with state requirements for fire safety practices, to reduce the possibility of fires during construction activities including California Fire Code Section 3304. Access for firefighting would be maintained throughout construction per California Fire Code Section 3310.1. Any motorized equipment within the site would comply with fire protection regulations outlined in California Fire Code Section 3316. Further, vegetation where necessary would be removed from the site or trimmed prior to the start of construction. The adjacent residence on the north side of the Project boundary would be at risk in case of a fire. However, adherence to state regulatory standards during Project construction would reduce the risk of wildfire ignition and spread during construction activities. While under construction, the site is required to have no less than one portable extinguisher at each construction trailer and area where combustible materials have accumulated, in every storage or construction shed, and where any additional hazards exist (California Fire Code Section 3315). During operation, fire extinguishers are to be provided throughout the O&M building. All pickup trucks on the Project site would also be equipped with fire extinguishers. This is consistent with Palo Verde Mesa Solar Project, which included the incorporation of fire extinguishers on site. Therefore, short-term construction impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

During operations, the Project would have up to six full-time employees on-site. Regular O&M of the solar facility would involve daily visual inspections and maintenance when needed to address damage or deterioration of equipment. Because O&M activities would ensure that all equipment is in working condition, accidents would be minimized as would potential fires. Additionally, fire safety measures would be implemented during operations, which may include installation of sprinkler systems, a fire protection system (or equivalent), and portable carbon dioxide fire extinguishers mounted at the power conversion system units. The Project would also include the installation of a water tank in proximity to the O&M building to provide a sufficient water reservoir for fire safety as required by the RCFD. Similar to the Fire Management and Protection Plan identified for the Palo Verde Mesa Solar Project, the Project also includes preparation of a Fire Prevention Plan for both construction and operation (**APM-HAZ-2**).

Compliance with applicable state and County fire code requirements and the Fire Prevention Plan would ensure construction and operation of the Project is implemented with fire safety best practices, including defensible space requirements, proper circulation and fire road widths, and firefighting equipment to ensure safe operating conditions and fire response protocols are in place to minimize the risk of wildfire. Furthermore, as discussed under threshold "b," additional MMs (**MM-HAZ-2, MM-BIO-2, MM-BIO-5, and MM-BIO-6**), would be implemented, which would also reduce fire risk. **MM-BIO-2** and **MM-HAZ-2** include

the incorporation of a WEAP, which would further reduce fire risks. The requirement of a WEAP is consistent with Palo Verde Mesa Solar Project, but the WEAP MM language was revised for the Project to clarify the requirements and reflect current best practices and site specific needs. Additionally, **MM-BIO-5** requires the preparation of an Integrated Weed Management Plan and **MM-BIO-6** requires vegetation resources management, which would reduce the likelihood for highly flammable invasive plants and guide management of native vegetation near Project facilities to prevent overgrowth and reduce fire risk. Future decommissioning activities, as with construction, would involve the temporary use of heavy construction equipment and vehicles during the removal of the solar facility's components and would be similar to impacts during construction.

Compliance with applicable state and County fire code requirements, the Fire Prevention Plan, and mitigation measures would substantially reduce the potential of the Project to expose people or structures, indirectly or directly, to significant risk of loss, injury, or death involving wildland fires. As identified in the Palo Verde Mesa Solar Project, the impact is **less than significant with mitigation**.

## Cumulative Impacts

**Geographic Scope.** The geographic scope of the cumulative impact analysis is considered to be a 2-mile radius surrounding the Project site, which is a conservative assumption for ember casting given available fuels, topography, and climate for the area. This geographic scope would include all projects within 2 miles of the Project site, which are included in Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario.

**Cumulative Impacts.** As discussed in Threshold "a" above, the Project is located in the unincorporated county with existing, approved, and proposed solar projects in the vicinity. The County's General Plan Safety Element states that the County's Circulation Plan routes are considered the backbone routes for evacuation purposes (County of Riverside 2021b). For the Project, the evacuation routes include I-10, US Route 95, State Route 78, and Midland Road/North Lovekin Boulevard and no permanent impacts would occur to these roadways as a result of the Project. During construction and decommissioning of the Project, temporary impacts to roadways could occur; therefore, the Project would incorporate **MM-TRAF-1,** Construction Traffic Management Plan, to reduce impacts to less than significant. Cumulative projects in the Project's vicinity are other large-scale solar and energy projects, many of which are operational, and permanent or temporary road closures are not anticipated to occur during O&M that could restrict emergency vehicle movements. All cumulative projects would be required to implement a construction traffic management plan to reduce potential impacts to evacuation routes and to comply with all requirements of RCFD, including compliance with all applicable policies. Therefore, the Project's less than significant impacts with mitigation incorporated, combined with those of nearby projects would not result in a cumulatively significant impact with respect to substantially impairing an adopted emergency response plan or emergency evacuation plan.

As discussed under Threshold "b," the solar facility and Phase 1 transmission line are on private land within an LRA under the jurisdiction of the RCFD and the Phase 2 transmission line is on BLM-administered land within an FRA under the jurisdiction of the BLM. A majority of the LRA portions of the Project area are designated as a Moderate FHSZ by CAL FIRE. A few areas within the LRA portion of the Project site are designated as unzoned (CAL FIRE 2023a; County of Riverside 2021c). The Project site is within Southern California where Santa Ana winds are prevalent; however, the wildfire risk of the Project site is low as the site has minimal slope and limited vegetation. Although not in a High or Very High FHSZ, factors that could increase wildfire risk include the electrical components associated with the Project (e.g., cables, inverters, transformer). To reduce potential impacts related to the exposure of construction workers, future employees and nearby areas to pollutant concentrations from a wildfire, the Project includes preparation

of a Wildfire Prevention Plan for construction and operation (**APM-HAZ-2**) and would incorporate **MM-FIRE-1, MM-BIO-5, and MM-BIO-6**. With implementation of these measures, the Project would result in less than significant impacts with mitigation.

Cumulative projects in the Project's vicinity are other large-scale solar and energy projects, many of which are operational and have a similar environmental setting to the Project (e.g., relatively flat, exposure to Santa Anas, sparse vegetation). As discussed above, the overall wildfire risk for the area is relatively low; however, the addition of multiple large-scale utilities does increase wildfire risk and the cumulative impact could be significant. Similar to the Project, all cumulative projects would be required to comply with all applicable codes for the installation of the electrical components, which would limit the wildfire risk associated with these features. Therefore, the Project's less than significant impact with mitigation incorporated combined with the potential impacts of nearby projects would not result in a significant cumulative impact with respect to exacerbating impacts related exposing the population to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

As discussed under Threshold "c," the Project would construct utility-scale solar PV electrical generating and battery storage facility in a desert setting, which would deliver electricity to the statewide transmission grid. The Project does not occur within a High or Very High FHSZ, however the electrical components still pose a fire risk. The Project would prepare a Fire Prevention Plan for both construction and operation (**APM-HAZ-2**) and would implement the following MMs to reduce impacts related to the installation or maintenance of infrastructure (e.g., utilities, power lines): **MM-FIRE-1, M- BIO-5, and MM-BIO-6.** With the incorporation of these measures, the Project's impact would be less than significant with mitigation.

Cumulative projects in the Project's vicinity are other large-scale solar and energy projects, many of which are operational and have a similar environmental setting to the Project (e.g., relatively flat, Santa Anas, sparse vegetation). As discussed above, the overall wildfire risk for the area is relatively low; however, the addition of multiple large-scale utilities does increase wildfire risk and impact could be significant. Similar to the Project, all cumulative projects would be required to comply with all applicable codes and regulations related to construction, operation, and decommissioning, which would reduce fire risk associated with cumulative projects. Therefore, the Project's less than significant impacts with mitigation incorporated, combined with the potential impacts of nearby projects would not result in a significant cumulative impact with respect to impacts related to 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.

As discussed under Threshold "d," the Project would be constructed and operated in an area with relatively gentle topography. Because the ground surface at the Project site has minimal slope and nonflammable solar PV panels would be installed on most of the Project's area, it is unlikely that the Project would expose people or structures to downslope or downstream flooding, 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 not directly adjacent to communities with dense populations. There is only one residence directly adjacent to the Project boundary, to the north.

Cumulative projects in the Project's vicinity are other large-scale solar and energy projects, many of which are operational and have a similar environmental setting to the Project (e.g., relatively flat,). Similar to the Project, all cumulative projects are in the unincorporated county, not near any densely populated communities, which would limit the population that could be exposed to risks associated with off-site post-fire slope instability. Therefore, the Project's less than significant impacts combined with the

potential impacts of nearby projects would not result in a significant cumulative impact with respect to exacerbating impacts related exposing the population to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes post-fire slope instability.

As discussed under Threshold "e," construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with state requirements for fire safety practices to reduce the possibility of fires during construction activities. During operation, the Project would have up to six full-time employees on-site. Regular O&M of the solar facility would involve daily visual inspections and maintenance when needed to address damage or deterioration of equipment. Because O&M activities would ensure that all equipment is in working condition, accidents would be minimized as would potential fires. Additionally, fire safety measures would be implemented during operations, which may include installation of sprinkler systems, an FM200 fire protection system (or equivalent), and portable carbon dioxide fire extinguishers mounted at the power conversion system units. The Project would also include the installation of a water tank in proximity to the O&M building to provide a sufficient water reservoir for fire safety as required by the RCFD. The Project would comply with applicable fire code and incorporate **APM-HAZ-2**, which would implement a Fire Prevention Plan Additional MMs (**MM-HAZ-2, MM-BIO-2, MM-BIO-5, and MM-BIO-6**) would be implemented that would also reduce fire risk. Future decommissioning activities, as with construction, would involve the temporary use of heavy construction equipment and vehicles during the removal of the solar facility's components and would be similar to impacts during construction. As such, impact from the construction, O&M, and future decommissioning of the Project would be less than significant with mitigation incorporated.

Cumulative projects in the Project's vicinity are other large-scale solar and energy projects, many of which are operational and have a similar environmental setting to the Project (e.g., relatively flat). Similar to the Project, all cumulative projects are in unincorporated Riverside County and not near densely populated communities, which would limit the population that could be exposed to risks associated with wildfire. Therefore, the Project's less than significant impacts with mitigation incorporated combined with the potential impacts of nearby projects would not result in a significant cumulative impact with respect to exposing people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. These findings are consistent with those for the Palo Verde Mesa Solar Project, and the Proposed Project fire impacts would not be considered cumulatively considerable.

## 3.19.4 Applicant Proposed Measures and Mitigation Measures

### Applicant Proposed Measures

Applicant Proposed Measures (APMs) are considered as part of the project description and would be incorporated into the design of the Project.

**APM-HAZ-2** *See full text in Section 3.10, Hazards and Hazardous Materials.*

### Mitigation Measures

The following MMs were developed to substantially lessen impacts to wildfire expected to result from the construction, operation, maintenance, and decommissioning of the Project.

**MM-FIRE-1** **Maintenance Truck Equipment**. The Applicant shall ensure all maintenance trucks are equipped with a fire extinguisher or other firefighting equipment in accordance with state and federal regulations. Compliance with this measure shall be documented in monitoring logs provided to the California Department of Fish and Wildlife and Bureau of Land Management.

**MM-BIO-2** **Worker Environmental Awareness Program (WEAP)**. *See full text in Chapter 2, Project Description.*

**MM-BIO-5** **Integrated Weed Management Plan**. *See full text in Chapter 2, Project Description.*

**MM-BIO-6** **Vegetation Resources Management**. *See full text in Chapter 2, Project Description.*

**MM-TRAF-1** **Construction Traffic Management Plan**. *See full text in Chapter 2, Project Description.*

**MM-HAZ-2** **Worker Environmental Awareness Program (WEAP)**. *See full text in Chapter 2, Project Description.*

## 3.19.5 References

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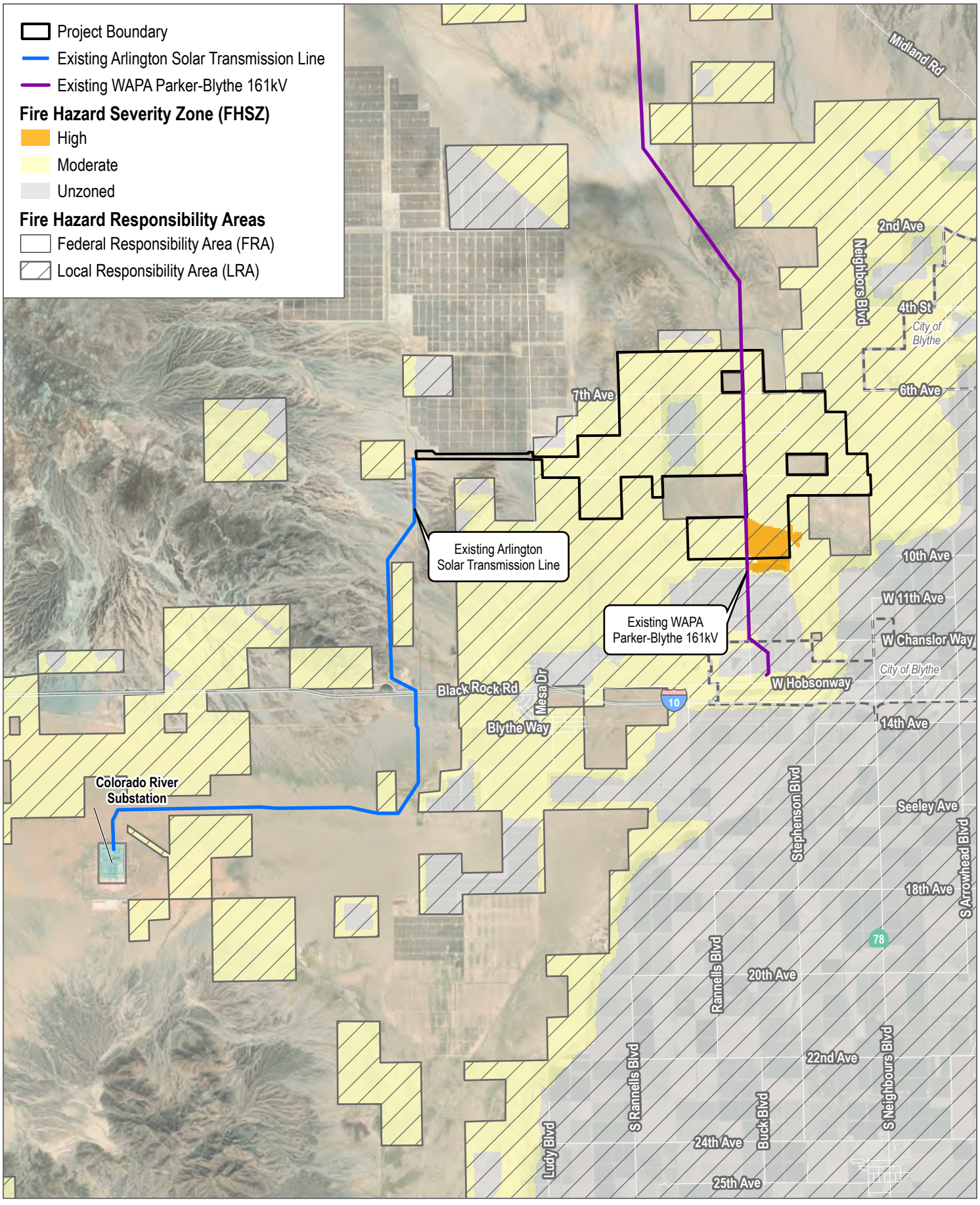
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SOURCE: Esri World Imagery (accessed 2025); CALFIRE 2025

DUDEK

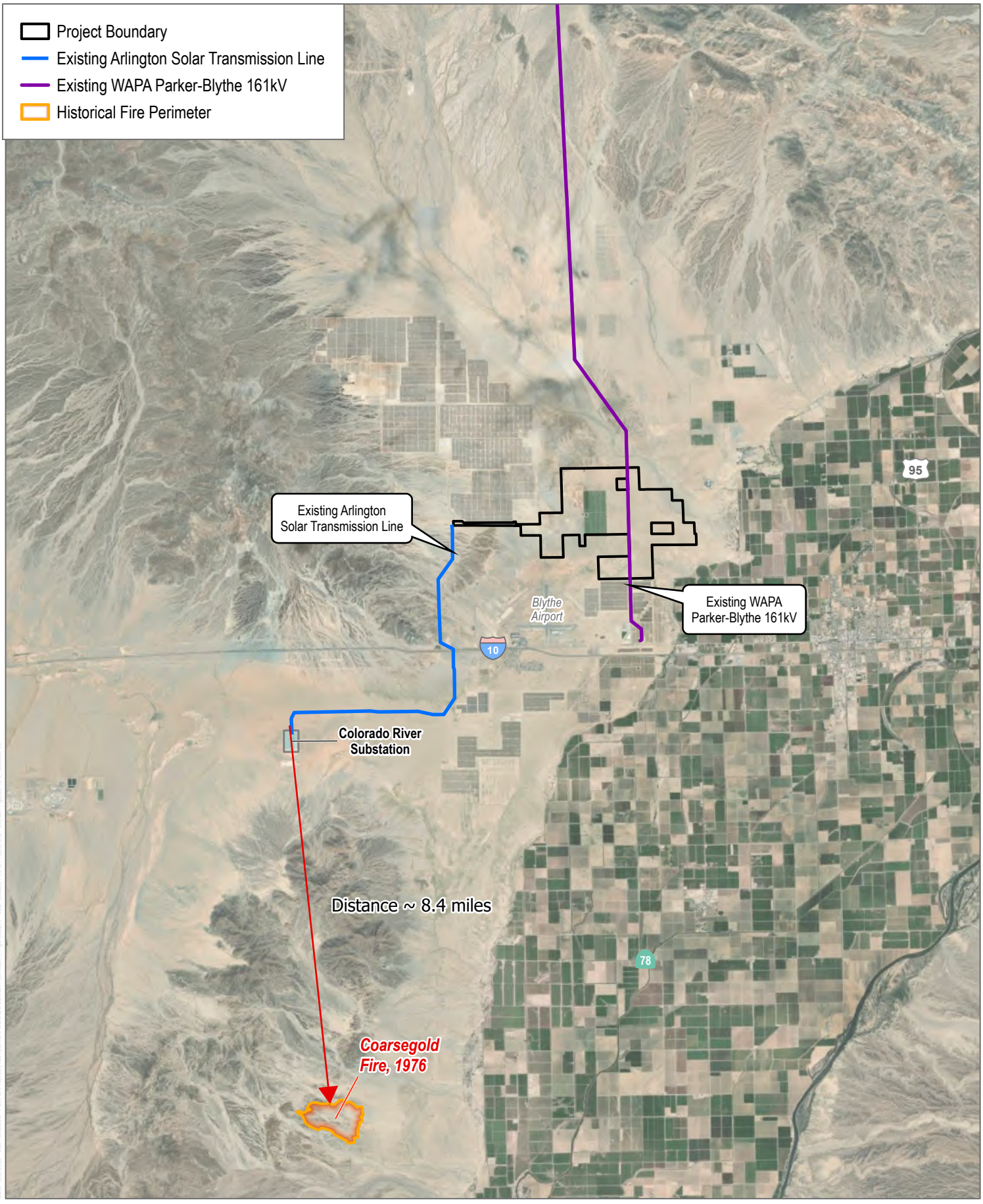
0 4,000 8,000 Feet

**FIGURE 3.19-1**

Fire Hazard Severity Zones

Grace Solar Energy Center

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SOURCE: Esri World Imagery (accessed 2024); CALFIRE 2023

DUDEK

0 1.5 3 Miles

**FIGURE 3.19-2**

Closest Fire to Project Site

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# 3.20 Mineral Resources

This section includes an analysis of the impacts on mineral resources that may result directly, indirectly, or cumulatively from constructing, operating, maintaining, and decommissioning the proposed project (Project). The analysis in this section describes the applicable regulations, presents an overview of existing conditions, identifies the criteria used for determining the significance of environmental impacts, and describes the Project's potential impacts to mineral resources, and includes mitigation measures that would avoid and/or substantially lessen to the extent feasible potentially significant impacts.

## 3.20.1 Regulatory Framework

### Federal Laws, Regulations, and Policies

The Bureau of Land Management (BLM) manages the federal lands that fall under their jurisdiction in accordance with the California Desert Conservation Area (CDCA) Plan, as amended. With respect to mineral resources, the CDCA Plan aims to maintain the availability of mineral resources on public lands for exploration and development. The Desert Renewable Energy Conservation Plan (DRECP) amended the California Desert Conservation Plan with a focus on transmission, renewable energy, and conservation. With regards 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 Laws, Regulations, and Policies

#### *Surface Mining and Reclamation Act: California Public Resources Code Sections 2710 et seq.*

The Surface Mining and Reclamation Act of 1975 (SMARA) is the primary regulator of onshore surface mining in the State of California, which is administered by the Division of Mine Reclamation, one of the divisions of the California Department of Conservation (DOC). It delegates specific regulatory authority to local jurisdictions. The act requires the State Geologist (California Geological Survey [CGS]) to identify all mineral deposits within the state and to classify them as: (1) containing little or no mineral deposits; (2) significant deposits; or (3) deposits identified, but further evaluation is needed (DOC 2023). Lands where such deposits are identified are designated Mineral Resource Zone (MRZ) 1, 2, 3, or 4, respectively, as shown below in Table 3.20-1, Mineral Resources Zones.

Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of state legislators in enacting SMARA was the premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction.

**Table 3.20-1. Mineral Resource Zones**

| | |
|---|---|
| MRZ-1 | Areas where the available geologic information indicates no significant mineral deposits or minimal likelihood of significant mineral deposits. |
| MRZ-2a | Area where the available geologic information indicates that there are significant mineral deposits. |
| MRZ-2b | Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits. |
| MRZ-3a | Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposits is undetermined. |

**Table 3.20-1. Mineral Resource Zones**

| | |
|---|---|
| MRZ-4 | Areas where there is not enough information available to determine the presence or absence of mineral deposits. |

**Source**: County of Riverside 2015a.

The potential impacts to mineral resources are based on where MRZs are identified and if the Project would result in the loss of any known mineral resources. In addition, the Phase 2 transmission line is located on entirely on federal public lands administered by the BLM, the analysis considers applicable plans and policies of the BLM, namely the California Desert Conservation Area Plan and Desert Renewables Energy Conservation Plan.

Nonfuel mineral resources that are covered by SMARA include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate including sand, gravel, and crushed stone. Urban development generally results in a demand for minerals, especially construction aggregate.

### Local Laws, Regulations, and Policies

#### Riverside County General Plan

The Multipurpose Open Space Element of the Riverside County (County) General Plan (County of Riverside 2015b) contains goals and policies regarding mineral resource within the County. However, they are not applicable to the Project site due to its location and the MRZ classification (MRZ-4), as described in detail below in Section 3.20.2, Environmental Setting.

#### *Palo Verde Valley Area Plan*

The Palo Verde Valley Area Plan (County of Riverside 2021) does not include any goals and policies related to mineral resources.

## 3.20.2 Environmental Setting

### Mineral Resource Zones

The County's General Plan provides the classification of non-renewable mineral resources within the County in accordance with SMARA requirements. According to mapping provided in the Multipurpose Open Space Element of the General Plan, the Project site, including the solar facility, Battery Energy Storage System, and transmission lines, is located in an area designated as MRZ-4 (Figure 3.20-1, Mineral Resource Zones), which is identified as an area of no known mineral occurrences and where geologic information does not rule out either the presence or absence of industrial mineral resources (County of Riverside 2015b). The closest area where there are significant mineral deposits (MRZ-2 zone) to the Project site is located approximately 14 miles to the northwest. The closest areas where available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposits is undetermined (MRZ-3) zone is located 4 miles south of the Southern California Edison (SCE) Colorado River Substation (Figure 3.20-1). In addition, there are no active mines on the Project site; the closest mines would be the Midland Pits located approximately 4 miles northeast of the Project site (DOC 2023) (Figure 3.20-1). The Project site is not located within an established Production-Consumption or P-C Region. The closest aggregate production areas are located approximately 4 miles northeast of the Project site (CGS 2018). The Project site, including the Phase 2 transmission line located on BLM-administered land, does not overlap with any known mineral resource recovery areas or active mining claims.

## 3.20.3 Impact Analysis

### Methodology

This section considers the potential impact to mineral resources based on the identified MRZ zones and DOC resources for the identification of known mineral resource areas. In addition, the Phase 2 transmission line is located on federal public lands administered by the BLM, the analysis considers applicable plans and policies of the BLM, namely the CDCA Plan and DRECP. The methodology used to evaluate potential mineral resource impacts includes the following: (1) evaluation of existing mineral resources and the reviewed resources from the DOC and CGS, aerial photographs, and topographical maps to identify surrounding land uses near the this Project site; (2) determination of whether the County's General Plan has identified any applicable mineral designations; and (3) determine whether the Project would cause potential impacts to mineral resources. Using the aforementioned resources and professional judgment, impacts were analyzed according to California Environmental Quality Act (CEQA) significance criteria described below. Applicable significance conclusions are also compared to those of the Palo Verde Mesa Solar Project.

### Criteria for Determining Significance

Section XII of Appendix G to the State CEQA Guidelines addresses typical adverse effects to mineral resources and includes the following questions to evaluate a project's impacts on mineral resources. Would the project:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the State?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Significance thresholds are set forth in the County's Environmental Assessment Checklist, are derived from Section XII of Appendix G to the State CEQA Guidelines (listed above), and state that a project would have a significant impact on mineral resources if the project or any project-related component would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines.

### Environmental Impacts

This section includes an examination of the Project's mineral resource impacts per the County's Environmental Assessment Checklist and Appendix G to the State CEQA Guidelines identified above.

#### *Summary of Previous Impact Analysis*

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined the project would not significantly impact the availability of valuable mineral resources in the region. The project site is not designated as an important mineral resource recovery area and is not currently used for mineral production. Classified as MRZ-4, the area lacks sufficient information to confirm the presence of mineral

deposits. It was determined that, although the site contains sand and gravel, which could be used as saleable minerals, impacts are considered less than significant due to the widespread availability of similar deposits in eastern Riverside County. Therefore, the impacts would be less than significant and no mitigation measures are required.

***Threshold a: Would the Project result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?***

*NO IMPACT.* The Project site is located in an area that currently does not contain any known mineral resources. The solar facility, battery energy storage system, and transmission lines are located within a MRZ-4 zone and no mining or production of aggregate materials is occurring on or in the vicinity of the site (County of Riverside 2015a; CGS 2018). A MRZ-4 zone is defined as an area where there is not enough information available to determine the presence or absence of mineral deposits. There are no known areas with mineral resources within the Project vicinity (DOC 2022). The closest MRZ-2 zone to the Project site, where mineral deposits are present is located approximately 14 miles to the northwest. The closest MRZ-3 zone is located 4 miles south of the SCE Colardo River Substation.

Therefore, due to lack of any known mineral resources within the Project site (including the transmission line on BLM land) that would be of value to the region and the residents of the state, and due to the distance between the Project site and any known mineral resources, the Project would not result in the loss of availability of a known mineral resource and there would be no impact to mineral resources. The Palo Verde Mesa Solar Project similarly determined that the project would not result in the loss of availability of a known mineral resource and was located within an MRZ-4 zone. The Proposed Project is consistent with these findings and concludes no impact rather than a less than significant impact based on current analysis.

***Threshold b: Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?***

*NO IMPACT.* The Project site is not designated as a mineral resource recovery site in the County's General Plan or the Palo Verde Valley Area Plan, there are no known resources within the Project vicinity, and there are no other land use plans that identify the site for mineral resources (DOC 2023; CGS 2018; County of Riverside 2015a). Further, the Project would not result in the loss of a known mineral resource on BLM lands and would not conflict with the DRERCP (DRECP 2016). Therefore, the Project would not impact a locally important mineral resource recovery site and no impact would occur.

The Palo Verde Mesa Solar Project also determined that the project would not result in the loss of availability of a locally important mineral resource recovery site and was located within an MRZ-4 zone. The Proposed Project is consistent with these findings and concludes no impact rather than a less than significant impact based on current analysis.

***Threshold c: Would the Project potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?***

*NO IMPACT.* The Project site is not near a state-classified or designated MRZ area of known mineral resources, nor are there existing surface or dormant mining activities in the vicinity of the site (CalGEM 2023; CGS 2018). According to the DOC, there are no areas directly adjacent to the Project site that contain proposed, existing, or abandoned mines or quarries. Therefore, there would be no potential for the Project to expose construction workers or future employees to hazards from existing or abandoned quarries and mines and there would be no impact.

The Palo Verde Mesa Solar Project also determined that the project would not expose people or property to hazards from existing or abandoned quarries or mines. The Proposed Project is consistent with these findings and concludes no impact rather than a less than significant impact based on current analysis.

### Cumulative Impacts

**Geographic Scope.** Mineral resource cumulative impacts include the Project's impacts and those likely to occur as a result of other existing, proposed, and reasonably foreseeable projects (refer to Tables 3.1-1 and 3.1-2 in Chapter 3, Environmental Analysis, Section 3.1.2, Cumulative Impact Scenario). The geographic area for evaluation of potential impacts to mineral resources is Riverside County. This geographic area was selected as mineral resources, especially when it concerns aggregate resources, are typically assessed on a County-wide basis.

**Cumulative Impacts.** As discussed above, the Project would not impact a mineral resource recovery site, quarry, or mine. Therefore, the Project would not contribute to cumulative impacts regarding these issues.

As discussed in Threshold "a" above, the Project site is designated as MRZ-4 (an area where there is not enough information available to determine the presence or absence of mineral deposits) (County of Riverside 2015b). As such, the Project has no potential to result in cumulatively considerable impacts due to the loss of availability of a known mineral resource that would be of value to the region or residents of the state. No cumulatively considerable or significant impacts would occur.

As discussed under Threshold "b," the Project site is not designated as a mineral resource recovery site by the County's General Plan and there are no other land use plans that identify the site for mineral resources. As such, the Project has no potential to result in cumulatively considerable impacts due to the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. No cumulatively considerable or significant impacts would occur.

As discussed under Threshold "c," the Project site is not near a state-classified, designated area, or an existing surface or dormant mine (CalGEM 2023). There are no known proposed, existing, or abandoned quarries or mines in the Project vicinity. The closest open mines are approximately 4 miles northeast of the Project site. As such, the Project has no potential to expose people or property to hazards from proposed, existing, or abandoned quarries or mines, and no cumulatively considerable or significant impacts would occur.

The Palo Verde Mesa Solar Project did not identify a cumulative impact on mineral resources which is consistent with the findings for the Proposed Project.

## 3.20.4 Mitigation Measures

No mitigation would be required.

## 3.20.5 References

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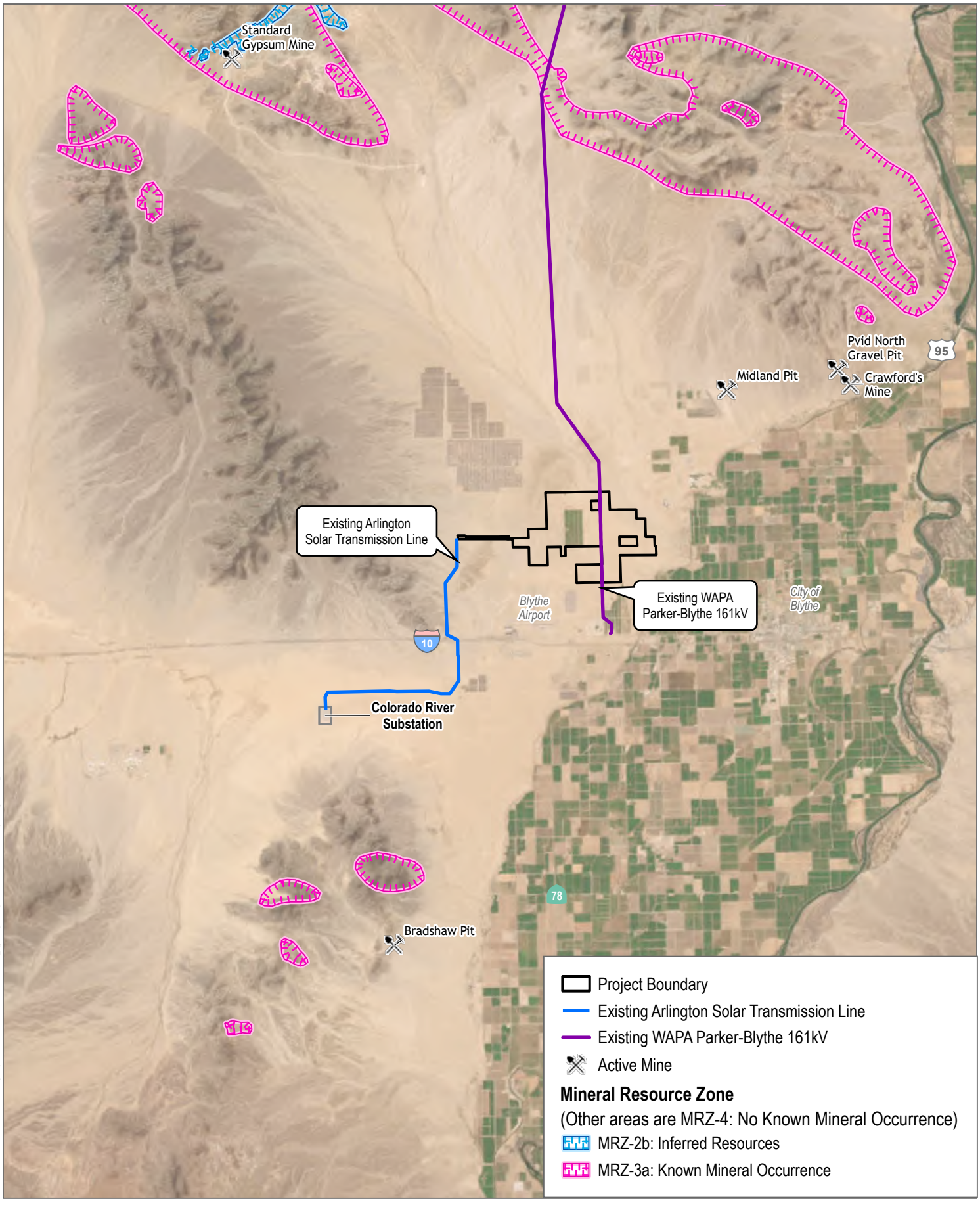
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SOURCE: Esri World Imagery (accessed 2024); California Department of Conservation 1994, 2024

DUDEK

0 2 4 Miles

**FIGURE 3.20-1**

Mineral Resource Zones

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# 3.21 Effects not Found to be Significant

Section 15128 of the State California Environmental Quality Act (CEQA) Guidelines requires that an EIR (Environmental Impact Report) briefly describe potential environmental effects that were determined not to be significant and therefore are not discussed in detail in this Supplemental EIR (SEIR). This chapter includes an overview of the effects not found to be significant but does not describe the regulatory framework, environmental setting, or cumulative impacts for the issues with effects not found to be significant. Rather, this chapter summarizes the environmental issues that are not considered significant for the Project and provides a brief analysis explaining the reasons for these no-impact significance determinations, as discussed below.

## 3.21.1 Population and Housing

### Methodology

According to CEQA, economic or social aspects of a project may be mentioned in a CEQA document, but would not to be considered environmental effects. While an increase in population or new employees resulting from new development does not necessarily cause direct adverse physical environmental effects, indirect physical environmental effects such as increased vehicle trips and associated increases in air pollutant emissions and noise could occur. The availability of the local workforce and the population in the area were studied to see whether the Project would result in an increase in population resulting in the need for new housing.

### Criteria for Determining Significance

Section XIV of Appendix G to the State CEQA Guidelines addresses typical adverse effects to population and housing and includes the following threshold questions to evaluate a project's impacts on population and housing. Would the project:

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

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Significance thresholds are set forth in Riverside County's Environmental Assessment Checklist, are derived from Section XIV of Appendix G to the State CEQA Guidelines (listed above), and state that the proposed project would have a significant impact on population and housing if construction and/or operation of the project would:

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere; or

c. Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income.

## Environmental Impacts

This section includes an examination of the Project's impacts to population and housing per Riverside County's Environmental Assessment Checklist and Appendix G of the State CEQA Guidelines identified above.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that the project would temporarily increase the local population with 300-500 daily workers, primarily sourced from nearby regions, during the three-year construction period. The area has sufficient vacant housing to accommodate these workers, so new housing will not be needed. The project will not induce substantial permanent population growth or displace existing populations. During operation, only 12 permanent employees will be required, which will not significantly impact local population levels. Decommissioning activities will be less intensive than construction and will also have a less than significant impact on population growth. Impacts would be less than significant and no mitigation measures are required.

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

*NO IMPACT.* The Project is a utility-scale solar photovoltaic (PV) electrical generating and storage facility that would generate and deliver renewable electricity to the statewide electricity transmission grid. Development of renewable and transmission infrastructure in this area of the County is consistent with the Riverside County General Plan, as well as the DRECP. The Project would require a temporary construction workforce and up to six full-time staff to manage ongoing operation, maintenance, and repairs to the solar facilities.

The Palo Verde Mesa Solar Project determined a less than significant impact of construction and decommissioning, and no impact of operation and maintenance on population growth. However, the Proposed Project would have no impact overall as the Project does not include development of new homes or businesses that could result in a direct increase in a new, unplanned population.

Indirect factors that could induce growth, such as the removal of impediments to growth (e.g., constructing utility infrastructure in a previously undeveloped region), are accounted for. The Project would result in construction of utility infrastructure; however, such infrastructure would consist of large-scale solar power facilities to be connected to the existing state power grid rather than constructing new distribution-scale utility lines that could induce future population growth in the Project's vicinity. The Project would include construction of a new road to access the Project site and development of internal roads to provide access throughout the Project site. Internal roads within the Project site would be private and the construction of the new access road would only provide a connection to the Project site and would not extend into undeveloped areas. Therefore, the Project would not result in the extension of infrastructure or roads that could lead to a substantial indirect increase in population growth.

As such, the Project would not stimulate population growth or result in a population concentration above what is assumed in local and regional land use plans, resulting in **no impacts** related to unplanned population growth.

***Threshold b: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?***

*NO IMPACT.* There are no existing residences located on the Project site; therefore, no people or housing would be displaced by the Project. The closest residence to the Project site is located approximately 175

feet north of the Project boundary. The closest community is Mesa Verde located approximately 1.2 miles east of the Phase 2 transmission line. Construction, operation, and maintenance of the solar facilities would occur within the Project boundaries and there would be no displacement of any off-site residences. Thus, consistent with the conclusion for the Palo Verde Mesa Solar Project, the Proposed Project would not displace any people or housing requiring the construction of replacement housing and **no impact** would occur.

***Threshold c: Would the project create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?***

*NO IMPACT.* The construction workforce would likely be recruited from Riverside and San Bernardino counties. Many workers are likely to commute weekly or may temporarily relocate while working on the Project. It is anticipated that future decommissioning activities would require similar equipment and workforce as construction but would be substantially less intensive and would likely be recruited from the same areas as construction personnel. It is anticipated the Project's approximately 28-month construction period would not trigger the need for new, permanent housing, including affordable housing.

During operation of the Project, up to six full-time and or part-time workers would be part of the regular operations and maintenance workforce. This small number of operations and maintenance staff would not create a demand for additional housing, particularly affordable housing.

Overall, consistent with the conclusion for the Palo Verde Mesa Solar Project, the Project would not create a significant demand for additional housing, including housing affordable to households earning 80% or less of the County's median income due to the temporary nature of Project construction activities and the nominal workforce required during Project operation and there would be **no impact**.

## 3.21.2 Recreation

### Methodology

The potential effects of the Project related to an increase in demand for recreational facilities are evaluated.

### Criteria for Determining Significance

Section XVI of Appendix G to the State CEQA Guidelines addresses typical adverse effects to parks and recreation and includes the following threshold questions to evaluate a project's impacts to recreational resources. Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Significance thresholds are set forth in the County's Environmental Assessment Checklist, are derived from Section XVI of Appendix G to the State CEQA Guidelines (listed above), and state that a project would have a significant impact on recreational resources if the project or any project-related component would:

a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees).

d) Include the construction or expansion of a trail system.

## Environmental Impacts

This section includes an examination of the Project's impacts to recreational resources per the County's Environmental Assessment Checklist and Appendix G to the State CEQA Guidelines identified above. Note that as both the County and the CEQA checklist have the same language for Thresholds a and b, (although inverted); the following uses the County's alpha numeric formatting.

***Summary of Previous Impact Analysis***

**2017 Palo Verde Mesa Solar Project EIR:** The Palo Verde Mesa Solar Project EIR determined that approximately 48 acres of Class M public lands would be permanently disturbed by the installation of the proposed transmission line. Recreationists may shift to other nearby desert lands, potentially leading to more concentrated use and minor environmental impacts. However, high recreational use has not been observed in the project area, and there are sufficient recreational facilities to accommodate any increased demand. During construction and decommissioning, there may be a temporary increase in population using local parks and recreational facilities, but this impact was expected to be minimal and temporary. Impacts to recreation would be less than significant and no mitigation would be required.

***Threshold a: Would the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?***

*NO IMPACT.* The Project includes construction and operation of a utility-scale solar PV electrical generating and storage facility and would not include new recreational facilities. The Project site would be fenced and would not be accessible to the public. As discussed above, the construction workforce would likely be recruited from Riverside and San Bernardino counties and many workers are likely to commute weekly or may temporarily relocate while working on the Project. The temporary presence of construction workers would not require the construction of new recreation facilities or the expansion of existing recreational facilities. It is anticipated construction workers that may use local recreational facilities would be limited as a majority of workers would return home to their respective communities at the end of the workday. For those workers that would stay in local hotels, there would be no impact to recreational facilities.

Operation of the Project would require up to six full-time permanent employees that would not create a demand for local recreational facilities that would be great enough to require the construction and/or expansion of recreational facilities. Therefore, implementation of the Project would not require the construction and/or expansion of recreational facilities which might have an adverse effect on the environment.

Overall, the Project would not directly or indirectly result in substantial unplanned population growth generally associated with new residential development that would lead to increased use of parks or recreational facilities or require the construction or expansion of recreational facilities. Consistent with the conclusion for the Palo Verde Mesa Solar Project, **no impacts** would occur.

***Threshold b: Would the Project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?***

*NO IMPACT.* There are no neighborhood or regional parks within 1 mile of the Project site. The closest public parks are located in the City of Blythe. As discussed above under Threshold "a", the Project would not induce substantial unplanned population growth that would markedly increase the use of existing neighborhood or regional parks or other recreational facilities. Construction workers are unlikely to use local recreation facilities, and any use would be temporary. While the long-term workforce would likely live within the area, additional recreational use by up to six workers and their families would have a negligible impact on existing recreation areas.

The Palo Verde Mesa Solar Project discussed off-highway vehicle routes as related to neighborhood or regional parks, and other recreational facilities, but the off-highway vehicle routes on Bureau of Land Management land are not included in County documentation and are discussed further as related to conformance with the Northern and Eastern Colorado Desert Coordinated Management Plan, in this SEIR under Section 3.12, Land Use and Planning.

While the Palo Verde Mesa Solar Project determined a less than significant impact, the Proposed Project would not increase the use of existing neighborhood or regional parks or other recreational facilities that could result in substantial physical deterioration. Thus, there would be **no impact**.

***Threshold c: Would the Project be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?***

*NO IMPACT.* The Project site (including the Phase 2 transmission line) is not located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (County of Riverside 2015). The nearest CSA is the Mesa Verde CSA located approximately 0.5 miles east of the existing transmission line. Therefore, consistent with the conclusion for the Palo Verde Mesa Solar Project, there would be **no impact** to a CSA or recreation and park district with a Community Parks and Recreation Plan.

***Threshold d: Would the Project include the construction or expansion of a trail system?***

*NO IMPACT.* There are no public trails located within the Project site (County of Riverside 2015). The Project includes construction and operation of a utility-scale solar PV electrical generating and storage facility on private land. Because the Project does not include any residential uses or a sizable number of permanent employees, construction of a trail system is not warranted. As such, **no impact** would occur.

## 3.21.3 References

County of Riverside. 2015. "Multipurpose Open Space Element". Figure OS-6 in Chapter 5 in *Riverside County General Plan*. December 8, 2015. Accessed August 2024. https://planning.rctlma.org/sites/g/files/aldnop416/files/migrated/Portals-14-genplan-general-Plan-2017-elements-OCT17-Ch05-MOSE-120815.pdf.

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# 4 Alternatives

Section 15126.6(a) of the California Environmental Quality Act (CEQA) Guidelines states that an Environmental Impact Report (EIR) "shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives governed by the rule of reason that will foster informed decision making and public participation. Alternatives in an EIR must be potentially feasible (CEQA Guidelines Section 15126.6(a)). The CEQA Guidelines state that factors that may be considered when determining the feasibility of alternatives are "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context) and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent)" (14 CCR 15126.6[f][1]). Therefore, an EIR must describe a range of reasonable alternatives to the proposed project (or to its location) that could feasibly attain most of the basic objectives of the project.

An EIR need not evaluate the environmental effects of alternatives in the same level of detail as a proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project. The alternatives discussion is intended to focus on alternatives to a proposed project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if the alternatives would impede to some degree the attainment of the project objectives.

Additionally, a "No Project" Alternative is required under Section 15126.6(e)(1) to allow decision makers to compare the impacts of a proposed project with the impacts of not approving the project. The EIR must explain the rationale for selecting the alternatives to be discussed (see Section 4.3.1, Alternative 1: No Project Alternative, and Section 4.3.2, Alternative 2: Reduced Development Alternative), 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 4.4, Comparison of Alternatives). If the environmentally superior alternative is the No Project Alternative, the EIR must identify an additional environmentally superior choice among the other alternatives.

Several options were considered to determine potential alternatives that might produce fewer significant impacts, or reduce the severity of significant impacts identified, compared to Grace Solar Energy Center (Project), including the No Project Alternative. Possible alternatives were assessed as to whether they would satisfy the following:

- The alternative is technically feasible.
- The alternative would avoid or substantially lessen any of the significant impacts of the Project.
- The alternative would attain most of the basic Project objectives.

As noted in Chapter 1, Introduction, Section 1.3, Project Objectives, the Applicant's objectives for the Project are as follows:

1. Utilize property within Riverside County to develop an economically feasible and commercially financeable project for the delivery of up to 500 MW of affordable wholesale solar PV energy generation

and up to 500 MW of battery energy storage capacity to California ratepayers under long-term contracts with electricity service providers.

2. Minimize environmental impacts and land disturbance associated with solar development by maximizing facility siting on relatively flat, previously disturbed agricultural lands with high solar insolation value, near an identified "solar energy zone" / "Development Focus Area" and in close proximity to road access and established utility corridors.
3. Support California's efforts to reduce greenhouse gas (GHG) emissions consistent with the timeline established in 2006 under California Assembly Bill 32, the Global Warming Solutions Act of 2006, which requires the California Air Resources Board to reduce statewide emissions of GHGs to at least the 1990 emissions level by 2020.[1] This timeline was updated in 2016 under SB 32, which requires that statewide GHG emissions are reduced to at least 40% below the statewide GHG emissions limit by 2030.[2]
4. Support California's aggressive RPS Program consistent with the timeline established by SB 100 (De León, also known as the "California Renewables Portfolio Standard Program: emissions of greenhouse gases"), as approved by the California legislature and signed by Governor Brown in September 2018, which increases RPS in 2030 from 50% to 60% and establishes a goal of 100% RPS by 2045.[3]
5. Further the goals of AB 1279, the California Climate Crisis Act, to achieve net zero greenhouse gas emissions no later than 2045, and SB 1020, the Clean Energy, Jobs, and Affordability Act of 2022, requiring that eligible renewable energy resources and zero-carbon resources supply 90 percent of all retail sales of electricity to California end-use customers by 2035.
6. Increase energy storage opportunities through the creation of high-capacity battery energy storage systems (BESS) that help to solve California's "duck curve" power production problem and to meet statewide energy goals and support grid reliability.
7. Bring sales tax revenues to Riverside County by establishing a point of sale in the County for the procurement of most major project services and equipment.
8. Provide green jobs with living wages to Riverside County residents and the State of California.

Alternatives considered include the No Project Alternative and the Reduced Development Alternative. An alternatives comparison is provided in Section 4.3. Alternatives considered but not carried forward for further analysis are presented in Section 4.4. This includes the Palo Verde Mesa Solar Alternative, Alternative Solar Technologies, Alternative Renewable Energy Technologies, and Conservation and Demand-Side Management Alternative.

## 4.1 Significant and Unavoidable Impacts

Chapter 3, Environmental Analysis, of this EIR describes the potential environmental impacts associated with the Project. Project and cumulative impacts in the following area, Aesthetics, would be significant and unavoidable with construction, operation and maintenance (O&M), and decommissioning of the Project, even with the incorporation of feasible measures that attempt to reduce impacts.

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1 Global Warming Solutions Act. September 2006. California State Assembly. Bill No. 32. www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf

2 Global Warming Solutions Act: emissions limit. September 2016. California State Senate. Bill No. 32. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32.

3 Senate Bill No. 100. September 2018. leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100.

**Aesthetics:**

Threshold "b". The Project could substantially degrade the existing visual character or quality of the site and its surroundings. The broad flat form and dark color of the solar panels, along with the developed and orderly look of the solar facility, would strongly contrast with the desert landscape surrounding the Project and would tend to dominate the view from KOPs due to the large scale of the Project and discordant forms and colors. Though the existing visual character of the Project area is already influenced by existing transmission lines and other energy projects, Project operations, and specifically, proposed grading and installation of solar panels and fencing in the valley landscape, would result in substantial degradation of the existing visual character and visual quality of the Project site when viewed from proximate foreground viewing locations. In addition to AM-VR-1 Lighting Control and AM-VR-2 Surface Treatment of Project Structures/Buildings, MM VIS-1 would reduce visual contrast of the Project as experienced from KOPs 3 and 5 during construction, operation, and decommissioning; however, these measures would not fully mitigate the significant visual impact of the Project. As such, impacts to existing visual character and quality would remain significant and unavoidable. Whereas the Palo Verde Mesa Solar Project concluded that development of the site would not substantially degrade its scenic value (and impacts to visual character would be less than significant), a conclusion of significant and unavoidable impacts is appropriate given the horizontal footprint of the project, characteristics of visible project components, and degree of change to the existing landscape.

## 4.2 Alternatives Considered and Eliminated from Further Analysis

Several alternatives were considered but eliminated from further analysis.

### 4.2.1 Palo Verde Mesa Solar Alternative

The Palo Verde Mesa Solar Alternative is the Approved Project included in the certified Palo Verde Mesa EIR (SCH 2012081026 -County No. 532). The Palo Verde Mesa Solar Project would include a 450 MW solar facility located on 3,250 acres of private land only including an approximately 14.5-mile 230 kV transmission line located on approximately 143 acres of private and BLM-administered land. The Palo Verde Mesa Solar Alternative, as approved, would not include a battery energy storage system (BESS). This alternative would construct the transmission line partially on private land and BLM-administered land, and does not include optionality for a full private land transmission line. However, it is infeasible for the transmission line to be located on the private land identified in the Palo Verde Mesa Solar Project due to site control constraints. The Applicant does not have site control of the parcels necessary for the transmission line alignment identified in the Palo Verde Mesa Solar Project; therefore, this alternative would be infeasible. In the case that the Applicant was able to gain site control necessary for the Palo Verde Mesa Solar Project, the impacts from this transmission line alignment would be more impactful as compared to the Project transmission line options. This is because the alternative transmission line would be longer and include a greater acreage of new disturbance, as compared to the Project's transmission line options which either use the open circuit of the existing double-circuit Arlington transmission line or include disturbance within the solar facility boundary which would already be permanently disturbed within the limits of disturbance of the solar facility. The proposed Project would result in less impacts to biological and cultural resources compared to the Palo Verde Mesa Solar Project. As the Approved Project does not include BESS, the Applicant does not have the site control for the Palo Verde Mesa Solar Project, and the alternative transmission line would have greater impacts, the No Federal Land Alternative was eliminated from further analysis.

### 4.2.2 Alternative Solar Technologies

The following alternative solar technologies were screened and eliminated from detailed analysis since they are 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 tower, which can be 350 feet tall or higher. This is known as a "power tower" solar project. In areas of high solar insolation potential (i.e., desert environments), the land required to develop a CSP power tower facility is comparable to that required for a PV project. This alternative was eliminated from consideration because no substantial reduction in impacts would occur under this alternative technology and visual impacts would likely be greater due to the height of the towers, which can be 350 feet tall or higher. In addition, due to the height of the power towers as well as a greater potential for glare, impacts to Blythe Municipal Airport could potentially be 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. Another solar project, Palen Solar Energy Project, previously included a solar power tower project and struggled to secure approvals due to these same impacts before switching to PV solar technology. This further supports the conclusion that this technology is not feasible in this area and this technology was eliminated from further analysis.

#### 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. Using this technology, most of the solar 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 solar site 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. The fact that the Palen Solar Energy Project was previously evaluated as a solar trough project (as well 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 and was eliminated from further analysis.

#### 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. To create a viable alternative to the 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 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. Although there may be 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. Rooftop systems typically consist of less efficient fixed-tilt systems that may not be oriented optimally towards the sun, meaning that developers would need to obtain more surface area for the Project if constructed on a rooftop instead of on the ground. The transaction costs of obtaining multiple rooftops, the complexity of mobilizing construction crews across multiple projects including the transporting and deployment of construction materials in a less efficient manner, the additional work needed to prepare rooftops to support a solar installation, and the need to develop the deals to secure the same amount of PV-produced electricity make this type of alternative infeasible. The fact that distributed generation projects might have fewer impacts on certain resources because they do not utilize substations and transmission facilities illustrates that distributed generation projects cannot meet one of the fundamental objectives of a utility-scale solar project: to provide renewable energy to utility off-takers and their customers. Rooftop systems that are not connected to the utility side of the electric grid only generate power for on-site consumption. At the same time, the difficulties in supplying a comparable amount of MWs of clean energy to the public through the utility sector has its own set of impacts due to failure to offset the impacts of counterpart fossil fuel energy sources. Challenges associated with the implementation of a distributed solar technology include widely varying codes, standards, and fees; environmental requirements and permitting concerns; interconnection of distributed generation; inefficiencies; and integration of distributed generation. The significant barriers to consolidating power generated through a distributed network of sites would furthermore make it unlikely that the Project could achieve its storage goals and provide energy when the sun is not shining.

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

### 4.2.3 Alternative Renewable Energy Technologies

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

### 4.2.4 Conservation and Demand-Side Management

This alternative is not technically feasible as a replacement for the 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.

# 4.3 Alternatives Analyzed in Detail

## 4.3.1 Alternative 1: No Project Alternative

The No Project (No Development) Alternative describes the environmental conditions that exist at the time that the environmental analysis commenced (CEQA Guidelines Section 15126.6 (e)(2)).

For this analysis, the No Project Alternative considers the effects of forgoing the project entirely, and leaving the project site in its current, undeveloped condition. Under the No Project Alternative, the Project would not be adopted. The development of solar array, substation, battery energy storage, O&M building, and other features as described for the Project would not occur. This alternative would also not meet any of the project objectives.

Under the No Project Alternative, construction of the Project and associated infrastructure would not occur. Because there would be no development there would be no ground disturbance, none of the impacts associated with the construction, O&M, and future decommissioning of the Project discussed in Chapter 3 would occur. The No Project Alternative would not contribute to any cumulative impacts.

The No Project Alternative would not require a Conditional Use Permit (CUP) or a Public Use Permit (PUP) for construction and operation of the solar project and associated facilities. The No Project Alternative would maintain the existing land uses, which consist mostly of fallow agricultural and undeveloped land. The No Project Alternative would fail to meet all the Applicant's objectives for the Project.

Furthermore, the No Project Alternative would not achieve any of the environmental benefits of increasing renewable energy generation consistent with the State of California's Renewable Portfolio Standard. If the energy needs that are unmet by the development of the Project are not replaced with comparable renewable sources, the development of other energy projects could result in greater emissions from, for example, the burning of fossil fuels and the replacement projects would not contribute to meeting the state's greenhouse gas reduction goals. This impact could be greater than with the Project.

The No Project Alternative also considers what would be reasonably expected to occur in the foreseeable future if the Project was not approved and did not take place. The Project site is primarily located on private lands and adjacent to a BLM DFA, near existing transmission infrastructure and an existing substation with available capacity for additional energy generation. If the Project were not constructed, it is extremely likely that a different developer would apply to construct an energy project in this location. If a different solar project were to be constructed in this location, the impacts of the other solar project would be similar or the same as those identified for the Project in Chapter 3 of this EIR.

## 4.3.2 Alternative 2: Reduced Development Alternative

Under this alternative, the Project footprint would be reduced through the removal of solar panels on private land to increase the distance from local roads (Figure 4-1, Reduced Development Alternative). As a result in the reduction of land, the solar energy production and integrated energy storage would be estimated to be equally reduced.

Under this alternative, panels would be setback an additional 50-feet to 200-feet from the road in specific locations, such as along Buck Boulevard, Stephenson Boulevard, 5$^{th}$ Avenue, among others. Along Buck Boulevard, the increased road setback under the Reduced Development Alternative would line up the

Project with the existing solar development to the south. This reduction in solar panels would result in a reduction of the permanent disturbance by approximately 158 acres on private land. The total permanent disturbance for this alternative would be approximately 2,793 acres, which is approximately a 5% reduction in permanent disturbance compared to the Project (2,951 acres). The transmission line options would not change and would remain the same as the Project. The proposed Project's transmission line options either use the open circuit of the existing double-circuit Arlington transmission line or route through the proposed solar facility where permanent disturbance is already anticipated, which minimizes impacts compared to an alternative transmission line route. Therefore, under this alternative, the transmission line options would be the same as the Project. The internal and external access roads would still be required to meet County fire requirements for emergency services to access to the Project site, the same as the Project.

Under this alternative, impacts associated with construction, operation, maintenance, and decommissioning would be significantly less than the Project due to the removal of 158 acres of permanent disturbance. It is expected this alternative would shorten the construction timeline, involve less construction and O&M staff, and require less operational water use as the Project due to the reduction in the size of the solar site. Construction assumptions are anticipated to be reduced by approximately 5%, consistent with the 5% reduction in permanent disturbance. For example, under this alternative a maximum of 570 workers and 570 acre-feet (AF) of water during construction are anticipated, compared to the 600 workers and 600 AF of water required under the Project. While this alternative would create changes in the existing environment, it would reduce the severity of impacts as compared to the Project. Similar to the Project, this alternative would still require the approval of a County CUP and PUP for the construction and operation of the Project.

This alternative would be technically, regulatory, and legally feasible and would reduce impacts to aesthetics, air quality, cultural resources, geology and soils, hydrology and water quality, noise, and wildfire, as discussed below.

### Relationship to Project Objectives

The Reduced Development Alternative would not completely meet all the Project objectives because it would result in an approximately 5% reduction of the permanent disturbance and therefore would reduce the amount of area available for placement of the solar array, which would result in a reduction of the energy generation and storage capacity of the Project. Specifically, the Reduced Development Alternative would not completely meet the Objectives 1 and 3 through 8, described above, to the same extent as the Proposed Project. However, the Reduced Development Alternative would meet Objective 2 to a greater extent than the Proposed Project, by reducing development and minimizing environmental impacts further.

### Impact Analysis

The Reduced Development Alternative would generally be in the same location as the Project. The impacts for the following resources are unlikely to appreciably differ from those of Project:

- Agricultural and Forest Resources
- Energy
- Hazards and Hazardous Materials
- Mineral Resources
- Land Use and Planning
- Public Services
- Paleontological Resources
- Transportation

- Utilities and Service Systems

The following analyzes resources where the impacts of the Reduced Development Alternative could appreciably differ from those of the Project. The analyses below assume incorporation of the same mitigation measures (MMs) and applicant proposed measures (APMs) as the Project.

**Aesthetics.** The Proposed Project includes the implementation of APMs to minimize impacts to aesthetics through lighting control and surface treatment of project structures and implementation of a MM to minimize visual impacts through project design. Despite implementation of these measures, the Proposed Project has a significant and unavoidable impact during operation. The Reduced Development Alternative would increase setbacks from local roads, including an additional 50-feet to 200-feet from the road in specific locations, such as along Buck Boulevard, Stephenson Boulevard, 5th Avenue, among others. Because the solar site would be visible from Key Observation Point (KOP) 3, 5th Avenue (Figure 3.2-7), and KOP 5, Buck Boulevard (Figure 3.2-9), reducing the footprint of the solar site by increasing setbacks from local roads would reduce the visual effects on views of the site from local roads in general and specifically from 5th Avenue and Buck Boulevard. Under the Reduced Development Alternative, the dark and low line created by the proposed solar panels would be more distant and less apparent in the landscape as compared to the Project. Additionally, the increased setbacks of the Reduced Development Alternative along Buck Boulevard would be more consistent with the setbacks of the existing solar development to the south of the Project site. This consistency would reduce the level of visual impact due compared to the Proposed Project. Potential light and glare impacts under this alternative would also be slightly reduced as compared to the Project. The overall visual impacts to the Reduced Development Alternative would be reduced in comparison to those of the Project and would be less than significant with mitigation.

**Air Quality.** The Proposed Project includes the implementation of APMs to minimize impacts to air quality through a dust control plan and use of construction equipment that meets U.S. Environmental Protection Agency Tier 3 emission standards and implementation of a MM to minimize air quality impacts through valley fever training. With mitigation, the Proposed Project would have less than significant impacts to air quality. The Reduced Development Alternative would reduce the solar site component by 158-acres. The reduction of the solar site would result in a shorter construction schedule which would reduce the amount of construction-phase emissions relative to the Project. This reduction in construction emissions could avoid some localized air quality impacts, such as air pollution from construction equipment. Mitigation would still be implemented under this alternative. Operational emissions would also likely be reduced under this alternative as fewer maintenance trips would be required to oversee the facilities. As such, similar to the Project, operational impacts would be less than significant. Overall, air quality impacts from the Reduced Development Alternative would be slightly less than those of the Project. Similar to the Project, impacts would be less than significant with mitigation incorporated.

**Biological Resources.** The Proposed Project includes the implementation of APMs to minimize impacts to biological resources through monitoring and various plans and implementation of MMs to minimize biological resource impacts through additional protections. With mitigation, the Proposed Project would have less than significant impacts to biological resources. Under the Reduced Development Alternative, there would still be impacts to habitat and vegetative communities, although to a less extent than the Proposed Project. Similar to the Project, impacts would be less than significant with mitigation incorporated.

**Cultural Resources.** The Proposed Project includes the implementation of an APM to minimize impacts to cultural resources through a cultural resources monitoring and discovery plan and implementation of MMs to minimize cultural resource impacts through potential monitoring and other plans. With mitigation, the Proposed Project would have less than significant impacts to cultural resources. As

discussed in Section 3.6, Cultural Resources, there are four cultural resources within the Project Area of Potential Effect (APE) on private land that are recommended eligible for the California Register of Historical Resources (CRHR). Similar to the Project, the Reduced Development Alternative would avoid ground-disturbing activities at or within 100 feet of cultural resources present within the Project APE that have been previously recommended CRHR-eligible. Also similar to the Project, the Reduced Development Alternative would implement the APMs to minimize impacts to cultural resources, including the implementation of a cultural resources monitoring and discovery plan. In some cases, distance from the cultural resources would increase under the Reduced Development Alternative because there would be a smaller area of disturbance. Additionally, due to the smaller Project footprint, the Reduced Development Alternative would disturb less land thereby reducing the potential for inadvertent discovery of resources during construction. However, the potential for inadvertent discoveries is considered low because the lands proposed for development have previously been disturbed by past agricultural use. As such, the potential direct impacts to unknown cultural resources would be only slightly less than the Project. Similar to the Project, impacts would be less than significant with mitigation incorporated.

**Geology and Soils.** The Proposed Project includes the implementation of a MM to minimize geological and soil impacts through minimization of impacts to desert pavement and does not include APMs. With mitigation, the Proposed Project would have less than significant impacts to geology and soils. Because the Reduced Development Alternative would have the same geologic and soil features as the Project, the impacts would be similar to the Project but in a smaller area. Overall, there would be slightly less impacts compared to the Project regarding soil erosion and grading. Similar to the Project, impacts would be less than significant with mitigation incorporated.

**Greenhouse Gas Emissions.** The Proposed Project does not include the implementation of MMs or APMs, and impacts related to greenhouse gas emissions would be less than significant. As discussed above under Air Quality, the Reduced Development Alternative would reduce the solar site component by 158-acres resulting in a shorter construction schedule and a reduction in construction activities, reducing $CO_2e$ emissions relative to the Project. Overall, greenhouse gas construction impacts from the Reduced Development Alternative would be slightly less than those of the Project. Similar to the Project, impacts would be less than significant and would not require mitigation.

**Hydrology and Water Quality.** The Proposed Project includes the implementation of an APM to minimize impacts to hydrology and water quality through a stormwater pollution prevention plan and does not include MMs. The Proposed Project would have less than significant impacts to hydrology and water quality. Under this Alternative, impacts to hydrology would be reduced in magnitude due to the elimination of solar panels (approximately 5% less) in the amount of water demand. Similar to the Project, the Reduced Development Alternative would adherence to existing regulatory requirements and implementation of the APMs to avoid or reduce impacts related to violating water quality standards or degradation of surface or groundwater quality during construction and operation. Related to water supply, Palo Verde Irrigation District's water supply can meet the water requirements under the Reduced Development Alternative, similar to the Project, and is unlikely to affect the supply of imported Colorado River water. Related to groundwater supplies, water requirements under the Reduced Development Alternative, similar to the Project, would be relatively small and would represent a small portion of the established safe yield of the basin, and would not substantially deplete groundwater levels in comparison to existing conditions. Under this alternative changes to drainage patterns would be reduced and thus a slight reduction in the potential for adverse water quality and quantity impacts to occur related to stormwater runoff. Due to the reduction in ground disturbance and changes to drainage patterns, the Reduced Development Alternative would result in slightly less severe impacts to hydrology and water

quality as compared to those of the Project. Impacts to hydrology and water quality under this alternative would be less than significant.

**Noise.** The Proposed Project includes the implementation of an APM to minimize noise impacts through adherence to the County noise ordinance limitations and no MMs. The Proposed Project would have less than significant impacts to noise. The Reduced Development Alternative would remove approximately 158 acres from the solar site, which would increase the distances to the closest sensitive receptors from the sources of construction noise and vibration. The closest sensitive receptor is a residence located along the north boundary of the Project. The Reduced Development Alternative would result in a slight decrease in the potential for this residence to be exposed to noise when compared with the Project. Overall, noise impacts from this alternative would be less than the Project because noise attenuates with distance and the peak construction noise would be reduced at the nearest receptor; operational noise would remain less than ambient noise levels at the nearest receptors, and impacts during operation would be less than significant, under the Project and under the Reduced Development Alternative. Similar to the Project, impacts would be less than significant.

**Tribal Cultural Resources.** The Proposed Project includes the implementation of MMs to minimize tribal cultural resource impacts through potential monitoring and other plans. With mitigation, the Proposed Project would have less than significant impacts to tribal cultural resources. As discussed in Section 3.17, Tribal Cultural Resources, no tribal cultural resources have been identified within the Project area to date but there is potential for unanticipated discovery. Similar to the Project, the Reduced Development Alternative has the potential for unanticipated discovery of tribal cultural resources. Also similar to the Project, the Reduced Development Alternative would implement the MMs to minimize impacts to tribal cultural resources, including the implementation of a cultural resources monitoring plan. Due to the smaller Project footprint, the Reduced Development Alternative would disturb less land thereby reducing the potential for inadvertent discovery of resources during construction. However, the potential for inadvertent discoveries is considered low because the lands proposed for development have previously been disturbed by past agricultural use. As such, the potential direct impacts to unknown tribal cultural resources would be only slightly less than the Project. Similar to the Project, impacts would be less than significant with mitigation incorporated.

**Wildfire.** The Proposed Project includes the implementation of a MM to minimize wildfire impacts through maintenance truck equipment and implementation of other MMs related to biological resources and traffic. With mitigation, the Proposed Project would have less than significant impacts to wildfire. Similar to the Project, this alternative would include the installation of a centralized BESS, which would include batteries housed within containers in a centralized location near the proposed on-site substation. However, the BESS would be smaller in size under this alternative; therefore, the risk of fire ignition would be slightly reduced in comparison to the Project. Similar to the Project, most of the solar facility's equipment would consist of solar PV panels and their mounting systems, that are not combustible or flammable. Similar to the Project, wildfire impacts from this alternative would be less than significant with mitigation incorporated. Overall, wildfire impacts of the Reduced Development Alternative would be slightly reduced in comparison to the Project.

## 4.4 Comparison of Alternatives

This comparison is based on the assessment of environmental impacts of the Project and each alternative, as identified in Chapter 3, Environmental Analysis, and in Section 4.2, Alternatives Analyzed in Detail.

CEQA requires the following for alternatives analysis and comparison (14 CCR 15126.6[d]):

> The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

If the environmentally superior alternative is the No Project Alternative, CEQA requires identification of an environmentally superior alternative among the other alternatives (14 CCR 15126.6[e][2]).

As described under Section 4.1, Significant and Unavoidable Impacts, impacts to aesthetics would be significant and unavoidable. Highlighting the Project's significant and unavoidable impacts typically 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, and whether an alternative would create new significant impacts. This simplifies identification of the environmentally superior alternative while considering all issue areas equally.

The environmental impacts of the Project were compared to those of each alternative to determine the environmentally superior alternative. The environmentally superior alternative was then compared to the No Project Alternative.

### 4.4.1 Comparison of Alternatives Summary

Each alternative was evaluated for its ability to meet the Applicant's Project objectives and purpose and need for the Project, which are listed in the Executive Summary, Section ES.2, Project Objectives. The No Project Alternative (Alternative 1) would fail to meet any of the Project's objectives and would not achieve any of the environmental benefits of increasing renewable energy generation consistent with the State of California's Renewable Portfolio Standard (RPS). The Reduced Development Alternative (Alternative 2) would not fully meet all of the Project's objectives including delivery of up to 500 MW of solar energy generation, maximizing of siting on fallow agricultural lands, and bringing sales tax and green job benefits to Riverside County. The Reduced Development Alternative would assist Californians in meeting their renewable energy generation goals. However, Alternative 2 would generate and store less renewable energy compared with the Project, and as a result could assist Californians to a lesser degree in meeting their renewable energy generation goals.

Table 4-1 compares the potential impacts of the Project prior to mitigation to the proposed alternatives. As described above and indicated in Table 4-1, the Reduced Development Alternative (Alternative 2) would reduce the severity of the Project's impacts by reducing the area of disturbance, amount of solar panels added to the landscape, and setbacks from local roads.

**Table 4-1. Comparison of Alternatives to the Project**

| | Alternative 1: No Project | Alternative 2: Reduced Development |
|---|---|---|
| **Environmental Resource** | | |
| Aesthetics | Fewer | Fewer |
| Agriculture and Forest Resources | Fewer | Similar |
| Air Quality | Fewer | Slightly Fewer |
| Biological Resources | Fewer | Slightly Fewer |
| Cultural Resources | Fewer | Slightly Fewer |
| Energy | Fewer | Similar |
| Geology and Soils | Fewer | Slightly fewer |

**Table 4-1. Comparison of Alternatives to the Project**

| | Alternative 1: No Project | Alternative 2: Reduced Development |
|---|---|---|
| **Environmental Resource** | | |
| Greenhouse Gas Emissions | Greater | Slightly fewer |
| Hazards and Hazardous Materials | Fewer | Similar |
| Hydrology and Water Quality | Fewer | Slightly fewer |
| Land Use and Planning | Fewer | Similar |
| Mineral Resources | Fewer | Similar |
| Noise | Fewer | Slightly fewer |
| Paleontological Resources | Fewer | Similar |
| Population and Housing | Fewer | Similar |
| Public Services | Fewer | Similar |
| Recreation | Fewer | Similar |
| Transportation | Fewer | Similar |
| Tribal Cultural Resources | Fewer | Slightly fewer |
| Utilities and Service Systems | Fewer | Similar |
| Wildfire | Fewer | Slightly fewer |
| Mineral Resources | Fewer | Similar |

[1] The No Project Alternative would have no impacts, and the terms "fewer" and "greater" are used for ease of reference only. "Fewer" is used to indicate that the alternative, such as the No Project Alternative, would create reduced or fewer impacts than the Project would create. The term "greater" indicates that the alternative would result in a greater level of impact than would the Project.

### 4.4.2 Comparison of the Project and No Project Alternative

The No Project Alternative would avoid impacts from construction, O&M, and future decommissioning of the Project. This alternative would result in no impacts to aesthetics, agriculture and forest resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, paleontological resources, population and housing, public services, recreation, and transportation, tribal cultural resources, utilities and service systems, and wildfire. It would not realize the beneficial impacts of the Project relating to long-term air quality, energy production, and greenhouse gas emissions with the use of renewable energy generation and storage. Additionally, it is very likely that if the No Project Alternative were selected, another solar project may be proposed in the same location. The No Project Alternative would also fail to meet all the Applicant's objectives for the Project.

### 4.4.3 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Table 4-1 summarizes the comparison of impacts between the alternatives to the Project to help determine the environmentally superior alternative. As described in Section 4.2 and presented in the comparative summary in Table 4-1, the environmentally superior alternative for the Project would be the No Project Alternative. No substantially adverse and long-term impacts would occur to the environment under the No Project Alternative. The No Project Alternative would also avoid the impacts of the Project analyzed in Chapter 3. However, it is possible that if the Project is not approved, another solar project could be constructed on the site that would have impacts similar to the Project.

Therefore, the Reduced Development Alternative would be the Environmentally Superior Alternative since it would result in fewer impacts to environmental resources as compared to the Project. The

Reduced Development Alternative would have a reduced level of ground disturbance, which would reduce construction-related disturbances such as air quality and greenhouse gas emissions and noise. Further, under the Reduced Development Alternative, impacts to aesthetics would be reduced to less than significant with mitigation.

Although the Reduced Development Alternative would be feasible it would not meet all the Project objectives because it would reduce the amount of land available for placement of the solar array and BESS, which would result in a reduction of the energy generation and storage capacity of the Project, would not be economically feasible or commercially financeable project, and would not maximize the full potential of the solar resource on lands within the Project property. However, because the Reduced Development Alternative would achieve many of the Project objectives, however to a lesser extent than the Project, and would have fewer impacts when compared to the Project, the Reduced Development Alternative is considered environmentally superior.

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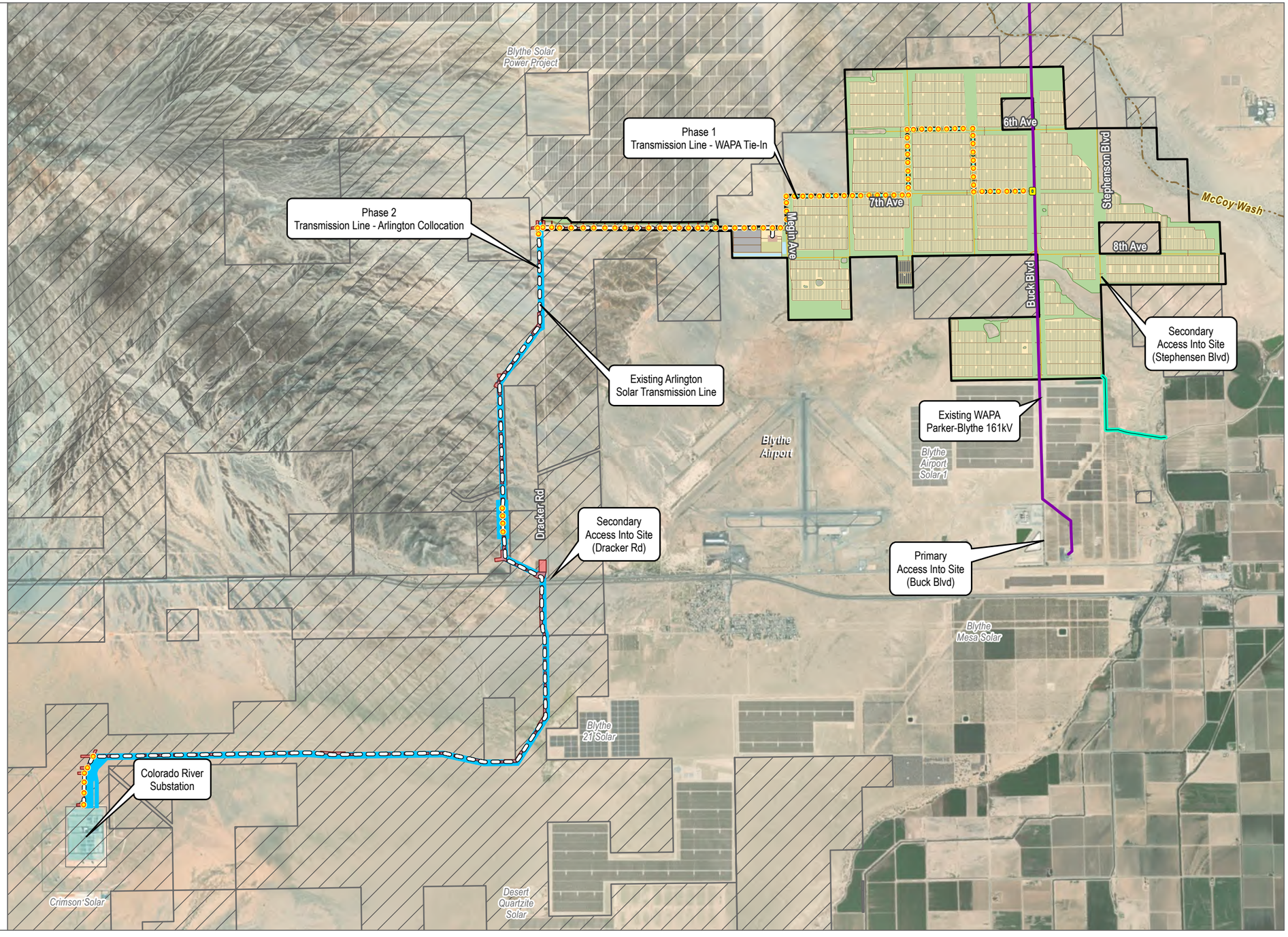
Project Boundary
BLM Lands

**Existing Infrastructure**

Existing Water Pipeline
Existing Access Routes
Existing WAPA Parker-Blythe 161kV
Existing Arlington Gen-Tie Corridor

**Site Plan**

Access Road
Basin
BESS
Fenced Area
Laydown
Public Road Improvement
Solar Array
Substation
Limits of Disturbance
Transmission Line Work Area
Phase 1 Transmission Line - WAPA Tie-In
Phase 2 Transmission Line - Arlington Collocation
Proposed Transmission Line Pole
Switchyard
O&M Building




SOURCE: Maxar 2023

DUDEK

0 2,050 4,100 Feet

**FIGURE 4-1**

Reduced Development Alternative

Grace Solar Energy Center

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# 5 Other CEQA Considerations

Chapter 5 includes discussions of various topics required by the California Environmental Quality Act (CEQA). These topics include Section 5.1, Significant and Unavoidable Environmental Impacts; Section 5.2, Irreversible and Irretrievable Commitments of Resources, including energy use; and Section 5.3, Growth-Inducing Impacts.

## 5.1 Significant and Unavoidable Environmental Impacts

### 5.1.1 Significant Direct Effects

As required by CEQA Guidelines Section 15126.2(b), an environmental impact report (EIR) must describe any significant impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less-than-significant level. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications, and the reasons the project is being proposed, notwithstanding their effect, should be described. Chapter 3, Environmental Analysis, of this Supplemental EIR (SEIR) describes the potential environmental impacts from the Grace Solar Energy Center (Project). Unlike the Palo Verde Mesa Solar Project, which determined that there would be no significant and unavoidable impacts, the Proposed Project would have a significant and unavoidable impact to aesthetics associated with construction and operation of the Project with the incorporation of Applicant Proposed Measures (APMs) into the Project design and feasible Mitigation Measures (MMs) that reduce impacts. Note that these conclusions apply to the Project (described in Chapter 2, Description of the Project) even after consideration of alternatives, with exception of the No Project Alternative (described in Chapter 4, Alternatives), either because the alternative is infeasible or it worsens impacts to other sensitive resources.

#### Aesthetics

***Threshold b: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?***

*LESS THAN SIGNIFICANT (CONSTRUCTION AND DECOMMISSIONING); SIGNIFICANT AND UNAVOIDABLE (OPERATIONS).*

Regarding existing visual character and quality of public views, the Project would have a less than significant impact during construction and decommissioning, but a significant and unavoidable impact during operations. In addition to AM-VR-1 Lighting Control and AM-VR-2 Surface Treatment of Project Structures/Buildings, MM VIS-1 would reduce visual contrast of the Project as experienced from KOPs 3 and 5 during construction, operation, and decommissioning; however, these measures would not fully mitigate the significant visual impact of the Project. As such, operation impacts to existing visual character and quality would remain significant and unavoidable. Whereas the Palo Verde Mesa Solar Project concluded that development of the site would not substantially degrade its scenic value (and impacts to visual character would be less than significant), a conclusion of significant and unavoidable impacts is appropriate given the horizontal footprint of the project, characteristics of visible project components, and degree of change to the existing landscape. See Section 5.2, Aesthetics for further information.

### 5.1.2 Significant Cumulative Effects

According to Section 15355 of the CEQA Guidelines, the term cumulative impacts "refers to two or more individual effects which, when considered together, are considerable or which compound or increase

other environmental impacts." Individual effects that may contribute to a cumulative impact may be from a single project or several separate projects. Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including newly proposed projects, the effects could be cumulatively considerable.

The cumulative scenario and analysis methodology is included within each resource section in Chapter 3, Environmental Analysis of this SEIR. Project impacts are cumulative when they are combined with impacts from past, present, and reasonable future projects. Impacts would be considered cumulatively significant for the following issue area:

**Aesthetics:**

*SIGNIFICANT*

The Project in combination with the several surrounding energy projects would result in significant cumulative visual impacts when viewed by sensitive viewing populations along I-10, from nearby residences, and in the surrounding mountains and wilderness. Although the Project would implement **APM-VR-1** and **APM-VR-2** and **MM- VIS-1**, which would reduce the severity of the Project's impacts to visual resources, the Project's contribution to the significant cumulative impact would remain cumulatively considerable. This is different from the Palo Verde Mesa Solar Project, which determined there would be no adverse cumulative impacts and no mitigation would be required. Whereas the Palo Verde Mesa Solar Project concluded that the incremental effects of the project in combination with impacts of other cumulative projects would not have an adverse impact on visual resources due to the topography, public views, and visibility, the updated analysis for the Proposed Project determined that impacts would be cumulatively considerable given the of visible project components and degree of change to the existing landscape. See Section 5.2, Aesthetics for further information.

## 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 "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely." Both primary and secondary impacts of a project generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. Therefore, the purpose of this discussion is to identify any significant irreversible environmental changes brought about by the Project.

Resources irreversibly or irretrievably committed to by a proposed project are those used on a long-term or permanent basis. This includes the use of nonrenewable resources such as petroleum fossil fuel resources, petrochemical products, metals such as raw material for steel, aggregate minerals including sand and gravel, and other natural resources. These resources are considered irretrievable in that they would be used for a proposed action when they could have been conserved or used for other purposes. Another irreversible or irretrievable commitment of resources is the unavoidable destruction of natural resources that could limit the range of potential uses of that environment.

Construction of the Project or alternatives would commit nonrenewable resources during construction and ongoing utility services during operation. The Applicant anticipates that construction waste would be recycled, reused, composted, and/or salvaged to the extent feasible. The Project would install battery energy storage system (BESS) units and solar photovoltaic panels manufactured from metals, such as thin-

film panels (including crystalline silicon panels or bifacial panels). During operation, oil, gas, and other nonrenewable resources would be consumed for maintenance purposes, although on a limited basis. See Section 3.7, Energy, for more information.

Project operation would generate up to 500 megawatts (MW) of electricity from solar photovoltaic panels to be transmitted to the state's electrical grid. Operation activities would employ up to six people to manage ongoing operation, maintenance, and repairs that would require a negligible consumption of nonrenewable resources (e.g., gas, diesel).

At the end of the operational life of the Project, typically in 40 years, the Applicant would decommission the Project and remove the systems and their components. All decommissioning and restoration activities would adhere to the requirements of the Closure, Decommissioning, and Reclamation Plan, as well as the appropriate governing authorities and in accordance with all applicable federal, state, and County regulations in place at that time. Because the photovoltaic arrays' supporting equipment would sit on the surface of the land, the land would be largely unaltered from its natural state when the arrays are removed after the Project's lifetime. Upon ultimate decommissioning, most components would be suitable for recycling or reuse.

The Project is a renewable energy project intended to generate solar energy to reduce reliance on fossil fuels. Over the life of the Project, this renewable energy project would contribute incrementally to the reduction in demand for fossil fuel used to generate electricity, thereby resulting in a positive effect counteracting the commitment of nonrenewable resources to the Project. This is consistent with the conclusions of the Palo Verde Mesa Solar Project.

## 5.3 Growth-Inducing Impacts

CEQA Guidelines Section 15126.2(d) requires analysis of the growth-inducing impacts 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 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)
- 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. The Proposed Project would not meet any of the listed criteria as detailed below. Consistent with the Palo Verde Mesa Project, the Proposed Project would not induce substantial population growth.

**Removal of an Obstacle to Growth.** The Project would result in the conversion of land areas that formerly supported agricultural practices or are undeveloped. The Project site does not currently support active irrigated crop production and is not located on lands subject to active Williamson Act contracts or County Agricultural Preserves.

The Project would be constructed within the Palo Verde Valley Area Plan Boundary of the Riverside County General Plan. The private lands associated with the Project are designated as Open Space-Rural and Agriculture, per the Riverside County General Plan and zoned as A-1-10 Light Agriculture, N-A Natural Assets, and W-2-10 Controlled Development Areas. In accordance with Riverside County Ordinance No. 348, solar power plants on lots 10 acres or larger are permitted through a Conditional Use Permit within the A-1-10 Light Agricultural, N-A Natural Assets, and W-2-10 Controlled Development Areas zoning designations. The Applicant is seeking a minimum 40-year Conditional Use Permit and Public Use Permit for the construction, operation, and decommissioning of the proposed solar facility and related infrastructure.

The Phase 2 transmission line would be developed on federal land in an area identified for transmission and renewable energy in the Bureau of Land Management Western Solar Plan, specifically in an area designated as a solar energy zone (SEZ) in the Desert Renewable Energy Conservation Plan (DRECP). The Project would not result in the establishment of an essential public service and would not provide new access to a previously inaccessible area. 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 future decommissioning periods because the Project and the construction schedules of other overlapping projects could create a demand for workers that may not be met by the local labor force, thereby inducing temporary in-migration of non-local labor and their households from the broader region. Given the number of solar projects proposed in the Blythe area, workers may stay on and continue to work in the area following construction of the Project if jobs on other solar projects are available. Construction of the Project alone, or of any of the proposed nearby projects, which are also primarily solar projects, would create few long-term jobs. Following construction, up to six full-time staff would be employed to manage ongoing operation, maintenance, and repairs to the solar facilities, transmission line and access roads. The Project's workforce could contribute to an increase in tax revenues for the State of California and the County; however, the limited number of permanent employees would not result in the need for new or physically altered community-serving facilities. As a result, the Project would not be growth inducing for its effects on economic expansion or growth under this criterion.

**Establishment of a Precedent-Setting Action.** The Project would result in a conditionally permitted use, resulting in the development of a solar facility and related infrastructure in the vicinity of other existing and approved solar projects and in an area identified by adopted 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 utility-scale renewable energy facilities. The Project is not requesting a General Plan Amendment or rezone; therefore, would not establish a precedent-setting action. Instead, the Project follows precedents set by renewable energy planning policies and by other utility-scale solar projects permitted and built nearby. Therefore, the Project would not be growth inducing under this criterion.

**Development or Encroachment into an Isolated Area or Open Space.** The Project would result in a change to former agricultural land and undeveloped land in an area surrounded by existing, planned, or under construction solar projects in an area that was designated as appropriate for renewable development by the state, County, and Bureau of Land Management. The Project would not involve the development of a residential component that would directly facilitate population growth in the area. Additionally, the

Project would not involve the development of new water system or sewer system. Infrastructure improvements to serve the Project would be limited and would not be available to serve surrounding areas. Therefore, the Project would not result in growth inducement through development or encroachment into an isolated area or open space under this criterion.

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# 6 List of Preparers and Organizations Consulted

A Supplemental Environmental Impact Report (SEIR) is an interdisciplinary team effort. In addition, internal review of the document occurs throughout preparation at multiple levels. The County of Riverside (County) is the California Environmental Quality Act (CEQA) lead agency supported by the environmental contractor, Dudek, during the CEQA review process. Dudek prepared the ~~Administrative Draft~~ Final SEIR for the County's review and provided technical assistance in the preparation of this document. The preparers and technical reviewers of this document are presented below, along with a list of organizations consulted.

**Table 6-1. List of Preparers and Reviewers**

| Name | Position | Primary Responsibility |
|---|---|---|
| **Riverside County – CEQA Lead Agency** | | |
| Dat Tran | Project Planner | CEQA Lead Agency |
| Jose Merlan | Principal Planner | CEQA Lead Agency |
| **Applicant Team** | | |
| Craig Lawrence | Environmental Project Manager | Applicant Team |
| Brendan Lewis | Development Lead | Applicant Team |
| Kenzie Woods | Environmental Project Manager | Applicant Team |
| **Dudek – Environmental Contractor** | | |
| Jennifer Sucha | Project Manager | Quality Assurance/Quality Control |
| Christine Kronenberg | Environmental Planner | Quality Assurance/Quality Control |
| Elysa Briens | Environmental Planner | Various Sections |
| Celeste Sainz | Environmental Planner | Utilities and Service Systems, Mineral Resources |
| Claire Alfano | Environmental Planner | Agricultural Resources, Public Resources |
| Paul Caligiuri | 3D Production Manager | Aesthetics |
| Josh Saunders | Environmental Planner | Aesthetics |
| Ian McIntire | Air Resource Specialist | Air Quality, Greenhouse Gas Emissions, and Energy |
| Megan Enright | Biologist | Biological Resources |
| Mike Howard | Biologist | Biological Resources |
| Patricia Schuyler | Biologist | Biological Resources |
| Sarah Greely | Biologist | Biological Resources |
| Zarina Pringle | Biologist | Biological Resources |
| Chelsea Ohanesian | Environmental Planner | Cultural Resources |
| Adam Giacinto | Archaeologist | Cultural Resources, Tribal Cultural Resources |
| Keshia Montifolca | Archaeologist | Cultural Resources, Tribal Cultural Resources |
| Eric Schniewind | Environmental Geologist | Hazards and Hazardous Material, Geology, Hydrology and Water Quality |
| Devin Pritchard-Peterson | Hydrogeologist | Hydrology and Water Quality |
| Clarissa Smith | Hydrogeologist | Hydrology and Water Quality |
| Sarah Siren | Paleontologist | Paleontological Resources |
| Dana Lodico | Acoustician | Noise |
| Andrew Schad | Acoustician | Noise |
| Lisa Valdez | Transportation Specialist | Transportation |
| Tyler Mathews | Transportation Specialist | Transportation |
| Susan Smith | Geologist | Phase I Environmental Site Assessment |
| Michelle Huang | Environmental Engineer | Phase I Environmental Site Assessment |
| Austin Ott | Fire Project Manager | Fire Protection and Safety Plan |
| Anne McDonnell | Technical Editor | Editing |
| Carrie Kubacki | GIS Specialist | Figures and Data Support |
| Curtis Battle | GIS Specialist | Figures and Data Support |

**Table 6-1. List of Preparers and Reviewers**

| Name | Position | Primary Responsibility |
|---|---|---|
| Chelsea Ringenback | Formatting Specialists | Formatting |
| **Other Environmental Contractors** | | |
| **Capital Airspace Group** | | |
| Dan Underwood | Director | Glare Analysis |
| Priya Gunduboina | Project Manager | Glare Analysis |
| **JE Fuller** | | |
| Mary Evans | Project Engineer | Hydrologic/Hydraulic Analysis |
| **Terracon** | | |
| Sadra Javadi | Senior Staff Engineer | Geotechnical Report |
| Joshua Morgan | Regional Geotechnical Manager | Geotechnical Report |
| Victor Nguyen | Project Engineer | Geotechnical Report |
| Toni Aguilar | Field Engineer | Geotechnical Report |
| **CBRE** | | |
| Frans Lowman | Director | Phase II Environmental Site Assessment |
| David Hunter | Senior Managing Director | Phase II Environmental Site Assessment |

## 6.1 Agencies Consulted during Preparation of the SEIR

The following is a list of organizations consulted during preparation of the SEIR:

Bureau of Land Management, Palm Springs Field Office: Victoria Slaughter, Carlos Blandon, Brandon Anderson, Dan Kasang, Rachel Guinea, Bryce Danner