Proponent's Environmental Assessment for Southern California Edison Company's Eagle Mountain-Blythe 161 kiloVolt Transmission Line Rating Remediation Project Volume 2

July 31, 2024 (PEA submittal date)

Remove existing subtransmission structures and conductors, install new subtransmission structures and conductors on existing distribution and subtransmission circuits.

The Eagle Mountain-Blythe 161 kiloVolt Transmission Line Rating Remediation Project would be located in Riverside County and the City of Blythe within the State of California.

Application A.24-XX-XX to the California Public Utilities Commission

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Volume 2 - Table of Contents

Volume 2 - List of Tables

Volume 2 - List of Figures

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Chapter 4 Description of Alternatives

The CPUC's PEA Guidelines (*Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments*, dated November 2019; page 40) states, "All Applicants will assume that alternatives will be required for the environmental analysis and that an EIR will be prepared unless otherwise instructed by CPUC CEQA Unit Staff in writing prior to application filing." As discussed, the Eagle Mountain-Blythe 161 kiloVolt Transmission Line Rating Remediation Project (EM-B Project) involves remediation of clearance discrepancies on existing subtransmission infrastructure within an established EM-B Project alignment. Based upon SCE's analysis, no potentially significant impacts were identified and, following consultation with CPUC Energy Division, SCE is not proposing alternatives at this time. In addition, because the EM-B Project involves reconductoring portions of existing subtransmission lines rather than the construction of new subtransmission lines, alternatives that would substantially deviate from the existing alignment (i.e. alternative routes or locations) were not considered. Moreover, SCE received written instruction on September 29, 2023, from CPUC that an alternatives analysis is not required for this PEA; therefore, this PEA does not include any descriptions of alternatives. In order to comply with CEQA requirements, SCE has included a description of the No Project Alternative below.

4.1 No Project Alternative

CEQA requires an evaluation of the No Project Alternative so that decision makers can compare the impacts of approving the EM-B Project with the impacts of not approving the Project (CEQA Guidelines, Section 15126.6(e)). Under the No Project Alternative, no construction or modification of the existing electrical system would occur. Therefore, the No Project Alternative would not meet the EM-B Project's primary objective because it would not remediate any identified discrepancies, and therefore the subtransmission lines would remain in violation of GO 95 standards. Further, under the No Project Alternative, SCE would be in violation of the mitigation plan agreed to with WECC and the CPUC as described in Chapters 1 and 2. Because the No Project Alternative would not meet the EM-B Project's objectives and if implemented SCE would not comply with the mitigation plan agreed to with WECC and the CPUC, this alternative is infeasible. Under the No Project Alternative, the identified discrepancies would remain unaddressed, and SCE has not, at this time, developed a plan of action to address the identified discrepancies if the EM-B Project is not approved. The No Project Alternative would not meet the EM-B Project objectives.

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Chapter 5 Environmental Analysis

This chapter examines the potential environmental impacts of the Eagle Mountain-Blythe 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project). The organization of Chapter 5 is described, along with a brief description of the major components included for each resource area.

Organization of Resource Area Sections

Environmental analysis of the Project by resource area is provided in Sections 5.1 through 5.20 of Chapter 5 of this Proponent's Environmental Assessment (PEA). These sections present the environmental and regulatory setting, impact questions, methodology, impact analysis, applicable California Public Utilities Commission (CPUC) Draft Environmental Measures, and applicant proposed measures (APMs). Tables and figures are included within the text of each section. The sections are organized as follows:

- Section 5.1, Aesthetics
- Section 5.2, Agriculture and Forestry Resources
- Section 5.3, Air Quality
- Section 5.4, Biological Resources
- Section 5.5, Cultural Resources
- Section 5.6, Energy
- Section 5.7, Geology, Soils, and Paleontological Resources
- Section 5.8, Greenhouse Gas Emissions
- Section 5.9, Hazards, Hazardous Materials, and Public Safety
- Section 5.10, Hydrology and Water Quality
- Section 5.11, Land Use and Planning
- Section 5.12, Mineral Resources
- Section 5.13, Noise
- Section 5.14, Population and Housing
- Section 5.15, Public Services
- Section 5.16, Recreation
- Section 5.17, Transportation
- Section 5.18, Tribal Cultural Resources
- Section 5.19, Utilities and Service Systems
- Section 5.20, Wildfire

Mandatory findings of significance are presented in Section 5.21, Mandatory Findings of Significance. Chapter 6, Comparison of Alternatives includes a discussion of Project alternatives. Chapter 7, Cumulative Impacts and Other CEQA Considerations presents a discussion of cumulative impacts and other California Environmental Quality Act (CEQA) considerations, including growth-inducing impacts. Chapter 8, List of Preparers presents the PEA preparers and contributors. Finally, references for each environmental resource evaluated are presented in Chapter 9, References.

1. Environmental Setting

The analysis of each resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to section 15125(a) of the CEQA Guidelines) that may be impacted by the Project.

2. Regulatory Setting

The regulatory setting provides a discussion of federal, State, and local regulations, plans, policies, and/or laws that are directly relevant to the environmental resource area being analyzed.

3. Impact Questions

This section identifies the criteria used to determine when physical changes to the environment created as a result of the Project would be considered significant. The significance criteria serve as a benchmark for determining if a project would result in a significant adverse environmental impact when evaluated against the baseline. According to the CEQA Guidelines section 15382, a significant effect on the environment means "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area" affected by the Project. The significance determination under each impact analysis is made by comparing the construction and operation impacts of the Project with the conditions in the environmental setting and comparing the difference to the significance criteria.

4. Impact Analysis

This section identifies the methodology used to analyze potential environmental impacts for each resource area. Some evaluations may be quantitative, while others are qualitative.

This section also includes the analysis of potential impacts associated with each resource area. The impacts are compared to the significance criteria to determine the level of significance.

The impact sections focus on those impacts that are considered potentially significant per the requirements of CEQA. An impact is considered significant if it leads to a "substantial, or potentially substantial, adverse change in the environment." Impacts from the Project fall within one of the following categories:

- **No Impact**: There would be no impact to the identified resource as a result of the Project.
- **Less than Significant Impact**: Some impacts may result from the Project; however, they are judged to be less than significant. Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource. A "less-than-significant impact" applies where the environmental impact does not exceed the significance threshold.
- **Less than Significant Impact with Mitigation**: Significant adverse impacts may occur; however, with proper applicant proposed measures, the impacts can be reduced to less than significant.
- **Significant Impacts** (also referred to as **Significant and Unavoidable**): Adverse impacts may occur that would be significant even after applicant proposed measures have been applied to minimize their severity. A "significant impact" applies where the environmental impact exceeds the significance threshold, or information was lacking to make a finding of less than significant.

5. CPUC Draft Environmental Measures

Attachment 4 of the CPUC's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and PEAs* provides Draft Environmental Measures for consideration during PEA development. These Draft Environmental Measures are considered for each resource area analyzed in Chapter 5 of this PEA. Potentially significant impacts associated with the Project have been reduced to a less than significant level with incorporation of APMs. Therefore, no CPUC Draft Environmental Measures have been included for any resource areas at this time.

6. Applicant Proposed Measures

CEQA Guidelines section 15126.4(a)(3) states that mitigation measures are not required for effects which are not found to be significant. Therefore, where an impact is found to be less than significant, no APMs may be proposed. Where there is the potential for the Project to result in a significant impact, APMs have been identified. For the purposes of CEQA, APMs are treated as mitigation measures that could minimize potentially significant or significant impacts that may result from the Project. Compliance with laws, regulations, ordinances, and standards designed to reduce impacts to less-than-significant levels are not considered mitigation measures under CEQA. CEQA Guidelines section 15370 defines mitigation to include:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments

A complete list of APMs is provided in Table 3-9 in Chapter 3, Proposed Project Description.

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5.1 Aesthetics

This section examines visual resources in the vicinity of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt Transmission Line Rating Remediation Project (Project), as well as the potential impacts to the aesthetic character of the landscape that may result from construction and operation of the Project.

Visual resources are generally defined as the natural and built features of the landscape that can be viewed. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character, whereas buildings, roads and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual resources that contribute to the public's experience and appreciation of the environment.

The visual analysis is based on a review of technical data, including Southern California Edison Company (SCE) Project maps and drawings, and aerial and ground-level photographs of the existing facilities and Project vicinity. Additionally, planning policy documents, regional atlases, and geographic information system (GIS) data were reviewed. Field observations were conducted in March 2023 to document existing visual conditions in the Project Area, as well as to photograph representative views toward the Project from a range of viewpoint locations (Figure 5.1-1: Viewpoint Locations Map). Twenty representative photographs (Figure 5.1-2: Existing Condition from Project Viewpoints) document existing visual conditions in the Project Area. Examples of existing structures and their proposed replacements are shown in Figure 5.1-3.

5.1.1 Environmental Setting

The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management (BLM) and the Metropolitan Water District (MWD) (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas. The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe.

The Project Area is in the *Victory Pass*, *East of Victory Pass*, *Corn Spring*, *Sidewinder Well*, *Aztec Mines*, *East of Aztec Mines*, *Hopkins Well*, *Roosevelt Mine*, and *Ripley* 7.5-minute United States Geological Survey (USGS) topographic quadrangles. Most of the Project Site gently slopes and ranges between approximately 1,000 feet (near Eagle Mountain Substation) and 110 feet (along I-10 near Ford Dry Lake) above mean sea level (amsl). The Project Site is located completely within the Northern and Eastern Colorado Desert Coordinated Management Plan area and the Desert Renewable Energy Conservation Plan land use plan amendment area of the California Desert Conservation Area.

Figure 5.1-1 Viewpoint Locations Map - Overview

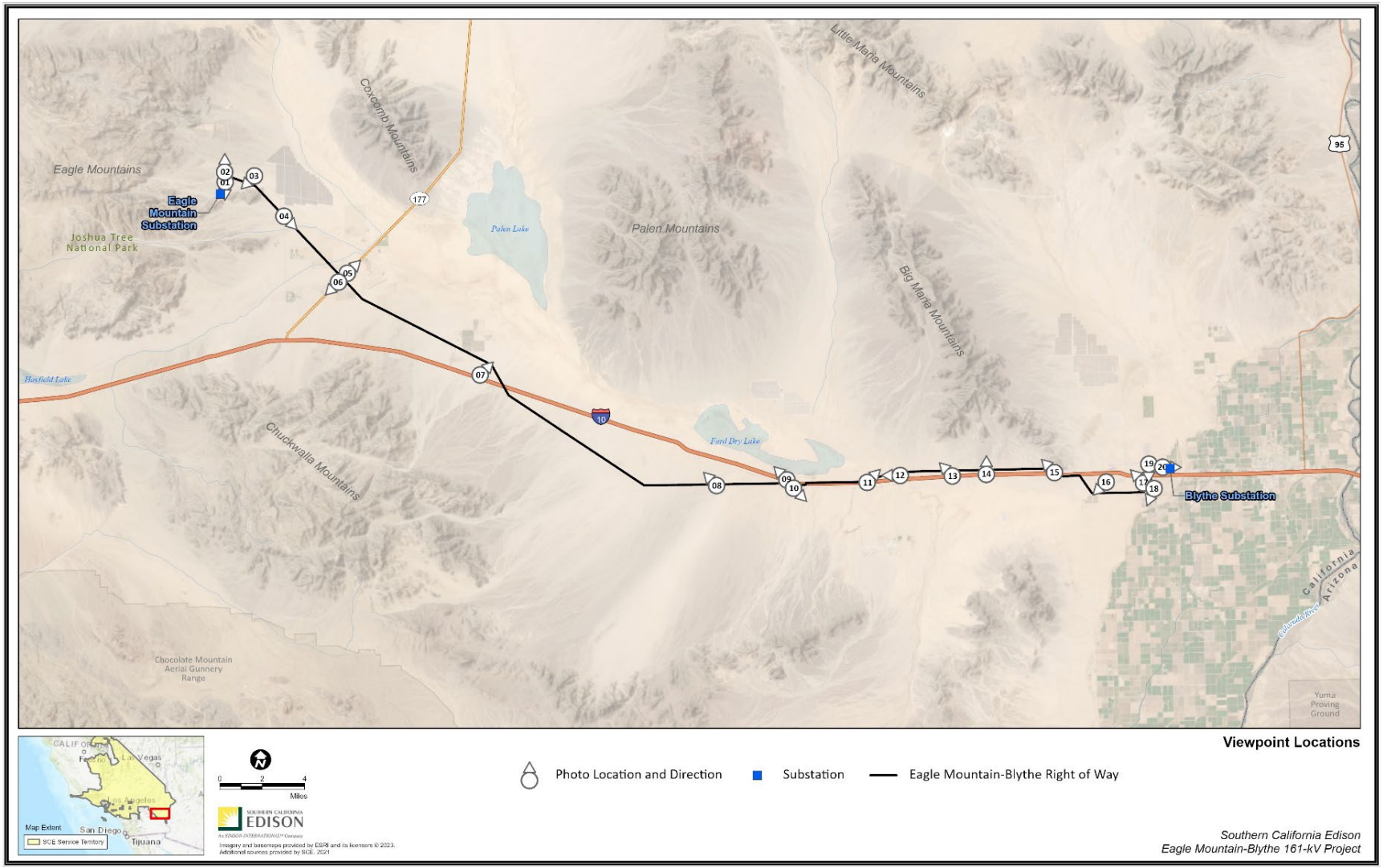


Figure 5.1-1a Viewpoint Locations Map – West

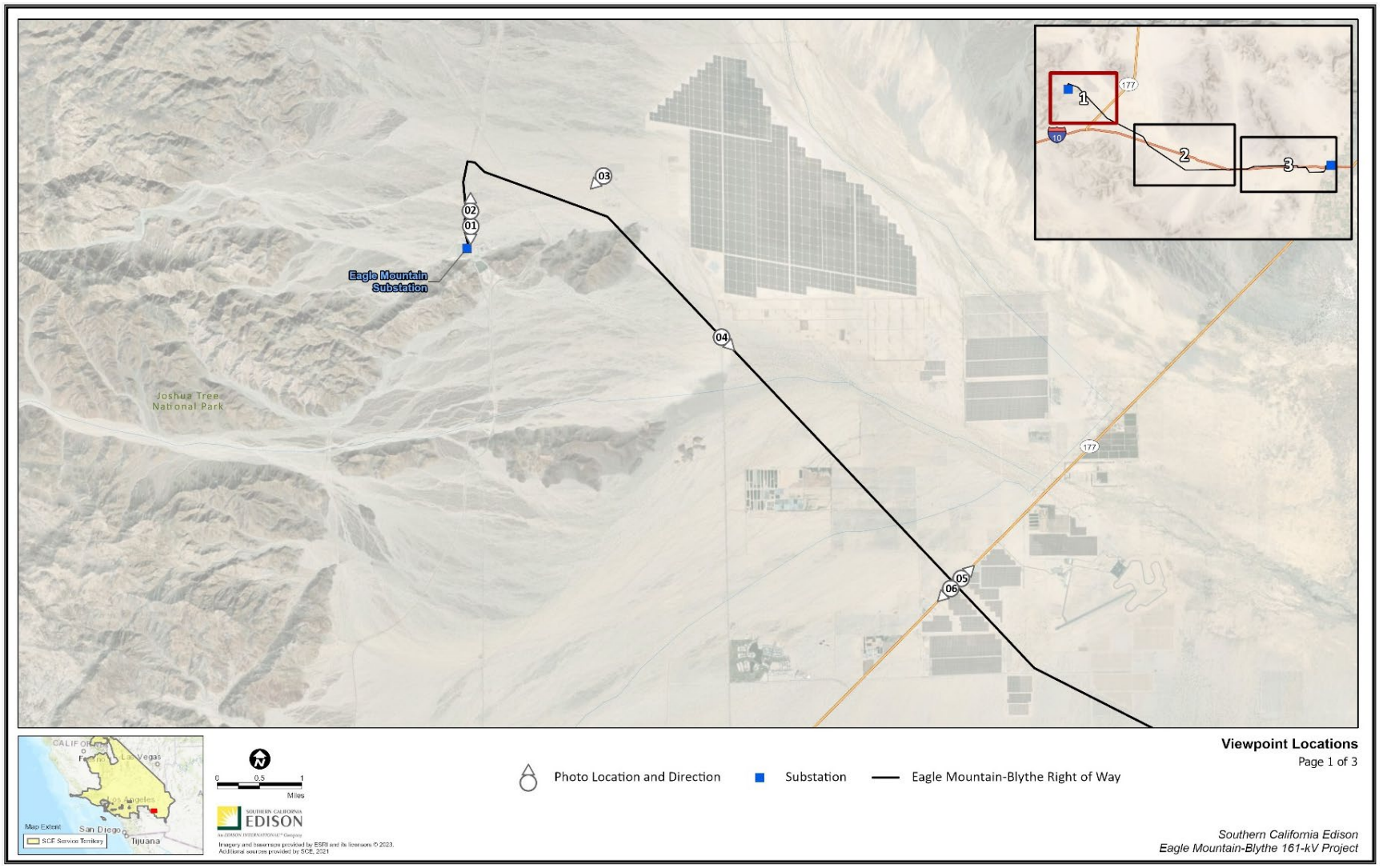


Figure 5.1-1b Viewpoint Locations Map – Central

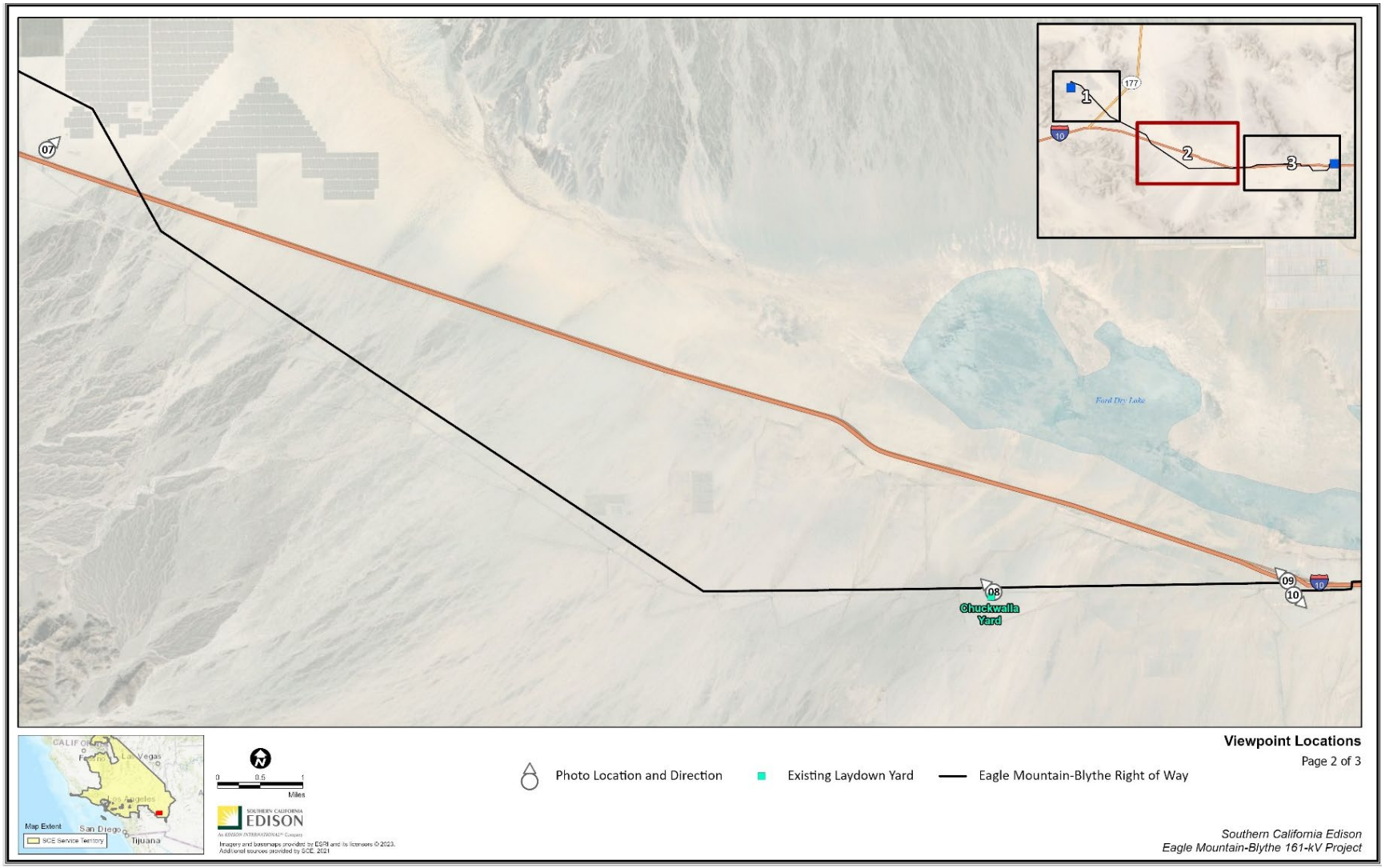


Figure 5.1-1c Viewpoint Locations Map – East

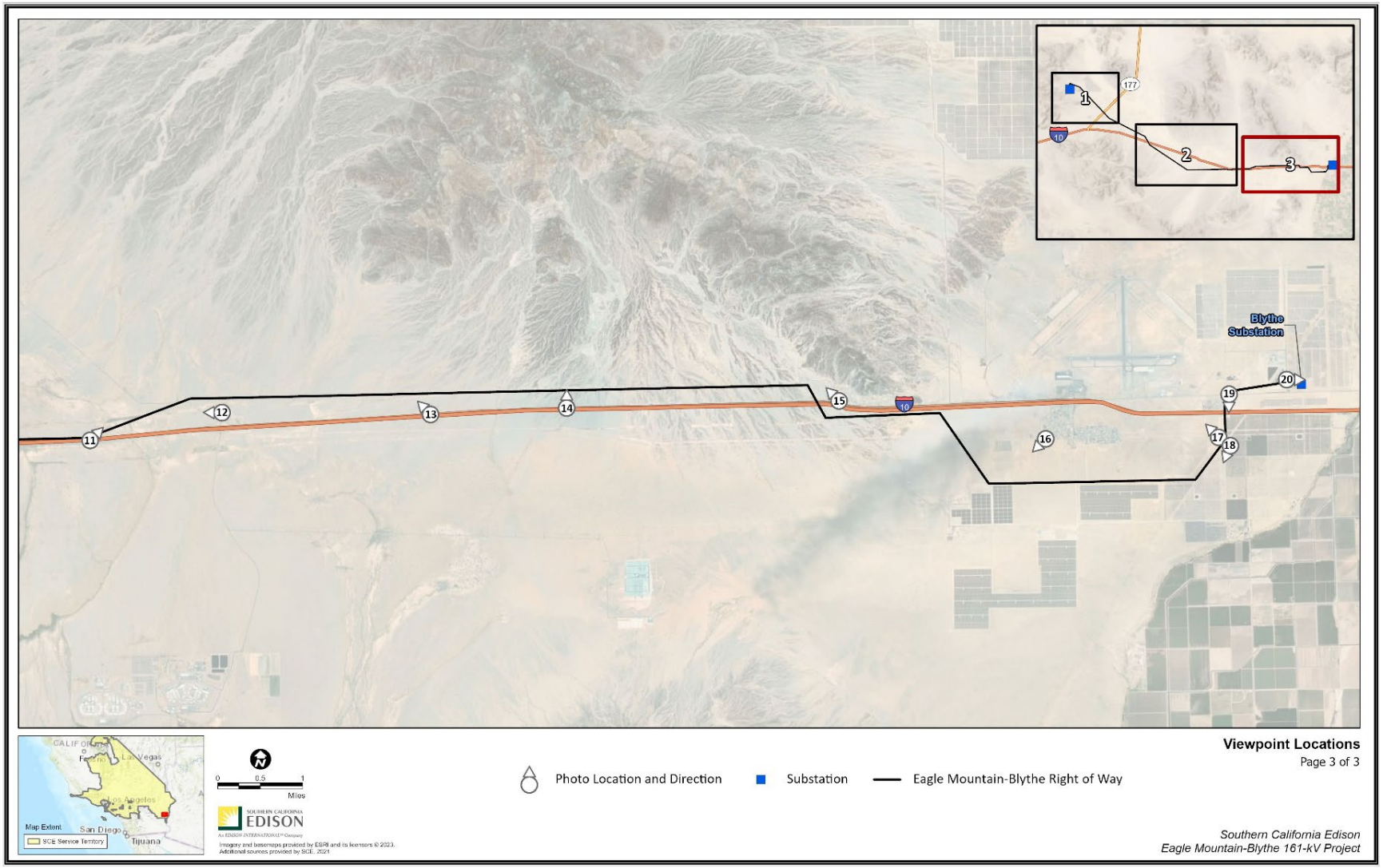


Figure 5.1-2 Existing Condition from Project Viewpoints

Viewpoint 1: Phone Line Road looking south toward Eagle Mountain Substation.

Viewpoint 2: Phone Line Road near Eagle Mountain Substation, looking North toward Eagle Mountain Mine.

Viewpoint 3: Kaiser Road near Power Line Road intersection, looking Southwest.

Viewpoint 4: Project crossing at Kaiser Road, looking Southeast.

Viewpoint 5: Project crossing at State Route 177, looking Northwest.

Viewpoint 6: Representative view of open space near State Route 177 with no overhead infrastructure, looking Southwest toward Athos I & II Solar.

Viewpoint 7: Corn Springs Road, looking Northeast toward Maverick Solar facility and the Palen Mountains.

Viewpoint 8: Chuckwalla Valley Road, looking Northwest toward the Chuckwalla Mountains.

Viewpoint 9: Ford Dry Lake Road, looking Northwest toward I-10 and the Palen Mountains.

Viewpoint 10: Ford Dry Lake Road, looking Southeast toward the Mule Mountains.

Viewpoint 11: Westbound I-10, looking Northeast.

Viewpoint 12: Wiley's Well Rest Stop, looking West.

Viewpoint 13: Westbound I-10, looking Northwest toward the Palen and McCoy Mountains.

Viewpoint 14: Westbound I-10, looking North toward the McCoy Mountains.

Viewpoint 15: Westbound I-10, looking Northwest toward the McCoy Mountains.

Viewpoint 16: Blythe Way, looking Southwest toward Palo Verde Mesa and the Mule Mountains.

Viewpoint 17: Butch Boulevard, looking North-Northeast.

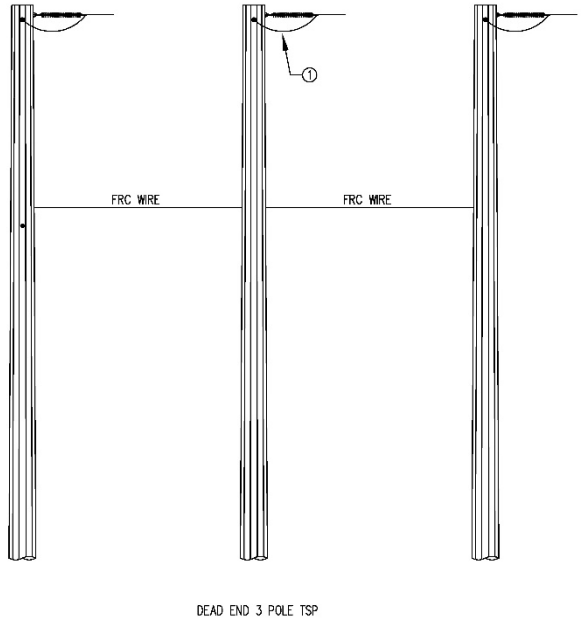
Viewpoint 18: Butch Boulevard, looking South-Southwest toward the Mule Mountains and Palo Verde Mesa.

Viewpoint 19: Intersection of 14th Avenue and West Hobsonway, looking South toward I-10.

Viewpoint 20: Blythe Substation, looking East.

Figure 5.1-3a Examples of Proposed Replacement Structures

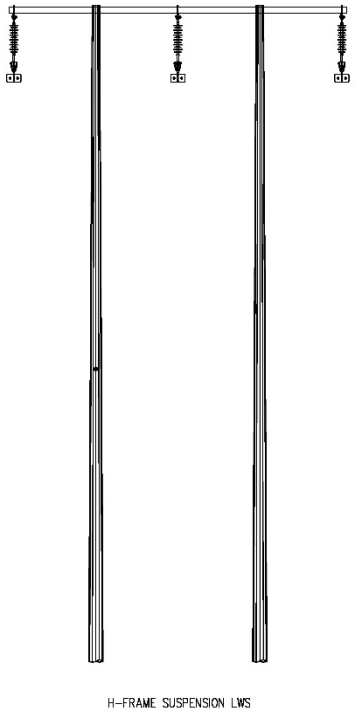
Photograph 1. Existing wooden three-pole structure (56 to 80 feet tall)



Photograph 2. Proposed three-pole tubular steel pole (64 to 83 feet tall)

Figure 5.1-3b Examples of Proposed Replacement Structures

Photograph 3. Existing wooden H-frame (56 to 74 feet tall)



Photograph 4. Proposed lightweight steel H-frame (64 to 83 feet tall)

5.1.1.1 Landscape Setting

Most of the Project is located in the existing ROW for the EM-B subtransmission line that extends approximately 53 miles between Eagle Mountain Substation and Blythe Substation. Typically, wire setup sites would be located within existing ROW; however, for safety and construction feasibility reasons, six wire setup sites would be located outside of the ROW. All Project laydown yards would be located outside of the ROW. The Project is located on a combination of BLM-administered lands and private land. The subtransmission line crosses Interstate 10 (I-10) four times.

The Project primarily traverses non-urbanized areas in unincorporated Riverside County. The natural scenic resources of eastern Riverside County include the mountain and valley landscapes of the Colorado Desert, desert vegetation, rock formations, and sand dunes. The landscape surrounding the Project is characterized by broad expanses of flat to gently sloping desert valley terrain and rough, rocky, mountains formed by northwesterly to southeasterly trending faults. For example, the rocky and rugged Chuckwalla Mountains mark the I-10 corridor to the south of Desert Center, and alluvial plains and valleys run north from the foothills towards I-10. Mountainous terrain is generally located to the north and south of the Project and is more prominent in the western half of the Project. Mountain ranges in the Project viewshed include the Chuckwalla Mountains, Coxcomb Mountains, Eagle Mountains, McCoy Mountains, and Palen Mountains. Eagle Mountain Substation is located approximately one mile from the mountainous eastern border of Joshua Tree National Park.

Vegetation varies depending on landforms and typically consists of low and sparse to regular shrubs, including creosote, ranging from one to five feet in height. Denser and taller vegetation typically occurs along drainages or seasonal watercourses. Views from travel routes through the area, such as I-10, generally consist of broad and sweeping tracts of low desert terrain bordered by rugged mountainous terrain. The eastern portion of the Project Area generally consists of sparsely developed desert land that is traversed by high-voltage electrical transmission lines, solar development, scattered rural residential development, interstate rest stops, the Chuckwalla Valley State Prison, and adjacent Ironwood State Prison. Near the eastern end of the Project, the Project circuit passes to the south of Blythe Airport before terminating at Blythe Substation, located in a rural area at the far western edge of the incorporated city of Blythe.

5.1.1.2 Scenic Resources

Scenic resources are defined as landscape patterns and features that are considered visually or aesthetically pleasing, and therefore contribute positively to the definition of a distinct community or region. Natural and built features that comprise landscape patterns are visual resources that can be viewed by the general public, thus contributing to the public's experience and appreciation of the environment. Scenic resources may include trees or important vegetation; landform elements (e.g., hills, ridgelines, or rock outcroppings); water features (e.g., rivers, bays, or reservoirs); and landmarks, important buildings, or historic structures.

Scenic resources identified in the vicinity of the Project are discussed in the subsections that follow.

5.1.1.2.1 Scenic Vistas

For the purposes of this evaluation, a scenic vista is defined as a public view that is identified in a planning document as valued for its scenic quality. The County of Riverside has defined scenic vistas as points accessible to the general public that provide a view of the countryside. In addition, scenic backdrops are defined as hillsides and ridges that rise above urban or rural areas or highways, and scenic resources are defined as areas that are visible to the general public and considered visually attractive, including natural

landmarks, prominent or unusual features of the landscape, low-lying valleys, mountain ranges, rock formations, rivers, and lakes (County of Riverside 2015a and 2021a). The primary scenic vistas along the Project Alignment include mountain ranges, such as the Chuckwalla Mountains, Coxcomb Mountains, Eagle Mountains, McCoy Mountains, and Palen Mountains; mountain and valley landscapes of the Colorado Desert; rock formations; and sand dunes as they are viewed from public roadways including I-10, Kaiser Truck Road, Eagle Mountain Road, Rice Road (SR 177), and Chuckwalla Valley Road.

5.1.1.2.2 Scenic Highways

The County of Riverside has identified I-10, from its junction with State Route (SR) 62 to the Colorado River, as eligible for designation as a County Scenic Highway. As such, it is protected by policies outlined in the General Plan. These policies include ensuring design and appearance of new landscaping, structures, equipment, signs, and grading within Designated and Eligible State and County scenic highway corridors is compatible with the surrounding scenic setting (Policy LU 14.3); maintenance of appropriate setbacks for development adjacent to Designated and Eligible State and County Scenic Highways (Policy LU 14.4); placement of underground distribution lines if they would be visible from Designated and Eligible State and County Scenic Highways (Policy LU 14.5); and sign design requirements, should they be visible from Designated and Eligible State and County Scenic Highways (Policy LU 14.7) (County of Riverside 2020a). However, no designated State Scenic Highways are located in the vicinity of the Project (Caltrans 2024).

5.1.1.3 Viewshed Analysis

5.1.1.3.1 Project Visibility and Viewshed

The Project viewshed is defined as the general area from which the Project would be visible. For the purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be divided into distance zones of foreground, middle ground, and background views. The foreground is defined as the distance between the viewer and 0.25 to 0.5 mile. Landscape detail is most noticeable, and objects generally appear most prominent when seen in the foreground. The middle ground is 0.5 to 3 miles from the viewer, and the background extends beyond 3 to 5 miles from the viewer.

In the analysis of the Project, emphasis is placed on the potential effects on foreground viewshed conditions, although consideration is also given to the potential effects on the more distant views. Project visibility includes locations along nearby roads and highways, as well as more distant locations. Existing visual conditions are described in the following sections.

5.1.1.3.2 Light and Glare

Existing sources of light and glare within the Project Area include nighttime highway traffic along I-10, SR-177, and other roadways, as well as localized lighting associated with residential and commercial development. Various solar farms and energy centers including but not limited to Desert Sunlight, Maverick, Athos I & II, and Blythe Mesa Solar contribute to light and glare in the vicinity of the Project. Another potential source of light and glare within the Project Area is from the existing Eagle Mountain and Blythe Substations, including interior and exterior lighting from buildings, lighting from switchracks, and sensor lights.

5.1.1.4 Landscape Units

The following subsections describe the visual character found within the Project Area and include references to a set of 20 photographs that document representative views of the Project. The viewpoint locations are shown in Figure 5.1-1 and the accompanying photographs are included in Figure 5.1-2. As a result of the preliminary field investigation, one landscape unit[1] for the Project was identified. This landscape unit covers the entirety of the Project Area, and is primarily desert and open-space focused, even when the Project components are proximate to developed areas such as residential or commercial development in the City of Blythe or the communities of Lake Tamarisk, Desert Center, Mesa Verde, and Eagle Mountain.

5.1.1.5 Viewers and Viewer Sensitivity

The primary potentially affected viewer groups within the Project Area are motorists and residents located within viewing distance of the Project. These viewers experience the Project Area within the context of a setting that includes existing substations, energy and transmission facilities, and other surrounding development and facilities.

5.1.1.5.1 Motorists

Motorists constitute the most substantial viewer group and include both local and regional travelers who are familiar with the visual setting, as well as those using the roads on a less regular basis. Motorists traveling on I-10 would experience four locations where the Project Alignment would cross over the roadway: once where the Project Alignment crosses I-10 northwest-southeast, approximately 1.15 miles east of Corn Springs Road; once where the Project Alignment crosses I-10 north-south, approximately 0.7 mile east of Ford Dry Lake Road; once where the Project Alignment crosses I-10 north-south, approximately 3 miles west of the Mesa Verde community; and once where the Project Alignment crosses I-10 north-south following 14th Avenue in Blythe. Between the I-10 crossing near Ford Dry Lake Road and the community of Mesa Verde, the Project Alignment roughly parallels I-10 at a distance of 0.35 mile (or less). Additionally, motorists on SR-177 and Kaiser Road would each experience one location where the Project Alignment would cross over the roadway. Viewer sensitivity for motorists would range from low when views are at highway speed and brief (proposed subtransmission line crossings of SR-177 and I-10) to moderately high when views are for a longer duration or a lower speed (proposed subtransmission line crossing of Kaiser Road and paralleling I-10).

5.1.1.5.2 Residents

There are approximately 27 residences within 1,000 feet of the Project. Nearby residents are located in the City of Blythe and the communities of Lake Tamarisk, Desert Center, Mesa Verde, and Eagle Mountain, or in the sparsely settled, rural, residential properties dispersed along the Project Alignment. On the edge of the Mesa Verde community, the nearest residence to construction activities would be located on Citrus Drive approximately 580 feet north of the proposed subtransmission line. A small group of residences are located approximately 900 feet north of the Project Alignment along Kaiser Road; however, during the Aesthetics field survey they were determined to be abandoned. A small residential community is located along Phone Line Road/Kaiser Truck Road, with the nearest residence located approximately 330 feet east of Eagle Mountain Substation.

[1] A "landscape unit" is an area of land that has similar existing landscape character attributes - landform, rockform, waterform, and/or vegetative communities patterns, and describes a geographic area that is useful for inventorying and analyzing scenery. (BLM 2022b)

Existing facilities and overhead infrastructure are visible from the residences, and views of the Project would be seen within the context of existing substations and overhead transmission lines. Depending on the proximity to the Project, residential viewers tend to have high viewer exposure and awareness; therefore, the potential sensitivity of this viewer group is considered high.

5.1.1.6 Representative Views

The viewpoint locations are shown in Figure 5.1-1 and the accompanying photographs are included in Figure 5.1-2.

5.1.1.6.1 Viewpoint 1: Eagle Mountain Substation, Looking South

As seen in Figure 5.1-2, Viewpoint 1 shows the existing view looking south toward Eagle Mountain Substation and is representative of motorist views along Phone Line Road. The Eagle Mountain Substation, approximately 0.3 mile distant, presents as a cluster of vertical, grey and metallic features that faintly blend into the irregular, rocky hill in the background. The Eagle Mountain Pump Plant is prominent in the background.

5.1.1.6.2 Viewpoint 2: Phone Line Road, Looking North

As seen in Figure 5.1-2, Viewpoint 2 shows the existing view looking north toward Eagle Mountain Mine and is representative of motorist views along Phone Line Road. Scrubby brown-green and tan shrubs are scattered across the pale, rocky soil. Multiple existing subtransmission lines mounted on steel poles run generally north-south from the substation toward the proximate roadways. Existing distribution lines mounted on wooden poles running parallel to the subtransmission lines are visible in the middleground. Eagle Mountain Mine, approximately 2.5 miles distant, partially blocks the contrasting brown mountains in the background.

5.1.1.6.3 Viewpoint 3: Kaiser Road, Looking Southwest

As seen in Figure 5.1-2, Viewpoint 3 shows the existing view looking southwest towards the Eagle Mountain Substation and is representative of motorist views along Kaiser Road. Most of this view consists of desert scrub scattered across sandy soils with existing structures and utility poles in the middleground. In the background, the mountains are visible and rise above the utility poles.

5.1.1.6.4 Viewpoint 4: Kaiser Road, Looking Southeast

As seen in Figure 5.1-2, Viewpoint 4 shows the existing view from Kaiser Road looking southeast and is representative of motorist views along Kaiser Road. Scrubby brown-green and tan shrubs are visible in the foreground, with subtransmission lines mounted on steel poles and distribution lines mounted on wooden poles in the middleground. In the background, mountains are faintly visible.

5.1.1.6.5 Viewpoint 5: SR 177, Looking Northwest

As seen in Figure 5.1-2, Viewpoint 5 shows the existing view from SR-177 looking northeast and is representative of motorist views along SR-177. Most of this landscape consists of desert scrub scattered across sandy soils, with wooden utility poles in the foreground and middle ground. In the background, expansive views of the distant mountains are visible across the horizon.

5.1.1.6.6 Viewpoint 6: Open Space near SR 177, Looking Southwest

As seen in Figure 5.1-2, Viewpoint 6 shows the existing view from SR-177 looking southwest and is representative of motorist views along SR-177. Desert scrub and sandy soil occupy the foreground, with Athos I and II Solar visible in the background. In the distance, jagged mountains occupy the horizon.

5.1.1.6.7 Viewpoint 7: Corn Springs Road, Looking Northeast

As seen in Figure 5.1-2, Viewpoint 7 shows the existing view from Corn Springs Road looking northeast toward the Maverick Solar Facility and the Palen Mountains and is representative of motorist views along Corn Springs Road. Wooden utility poles are barely visible in the middleground with the Palen Mountains rising above the utility infrastructure and dominating the landscape.

5.1.1.6.8 Viewpoint 8: Chuckwalla Valley Road, Looking Northwest

As seen in Figure 5.1-2, Viewpoint 8 shows existing views from Chuckwalla Valley Road, looking northwest toward the Chuckwalla Mountains, and is representative of motorist views along Chuckwalla Valley Road. Sandy soil and desert scrub vegetation occupy most of the landscape, with wooden utility poles traveling from east to west, receding in the distance toward the Chuckwalla Mountains.

5.1.1.6.9 Viewpoint 9: Ford Dry Lake Road, Looking Northwest

As seen in Figure 5.1-2, Viewpoint 9 shows existing views from Ford Dry Lake Road, looking northwest toward I-10 and the Palen Mountains, and is representative of motorist views along Ford Dry Lake Road. Wooden utility poles occupy the foreground, surrounded by desert scrub and sandy soils, with the Palen Mountains in the background.

5.1.1.6.10 Viewpoint 10: Ford Dry Lake Road, Looking Southeast

As seen in Figure 5.1-2, Viewpoint 10 shows existing views from Ford Dry Lake Road, looking southeast toward the Mule Mountains, and is representative of motorist views along Ford Dry Lake Road. Distribution lines mounted on wooden poles occupy the foreground, with subtransmission lines mounted on steel poles visible in the background. In the distance, the Mule Mountains remain visible atop the desert scrub landscape.

5.1.1.6.11 Viewpoint 11: Westbound I-10, Looking Northeast

As seen in Figure 5.1-2, Viewpoint 11 shows existing views from I-10, looking northeast, and is representative of motorist views along westbound I-10. The roadway is visible in the foreground, with desert scrub located along the roadway to the east. Wooden poles are located parallel to the highway, receding into the distance towards the mountains.

5.1.1.6.12 Viewpoint 12: Wiley's Well Rest Stop, Looking West

As seen in Figure 5.1-2, Viewpoint 12 shows existing views from Wiley's Well Rest Stop, looking west, and is representative of visitors at Wiley's Well Rest Stop. Floral vegetation and desert scrub are scattered across sandy soil, with utility lines mounted atop wooden and steel poles visible in the middleground. In the background the mountains are more prominent to the west and north, but still visible to the northwest.

5.1.1.6.13 Viewpoint 13: Westbound I-10, Looking Northwest

As seen in Figure 5.1-2, Viewpoint 13 shows existing views from I-10, looking northwest toward the Palen and McCoy Mountains, and is representative of motorist views along westbound I-10. Green shrubs, tan grasses, and sandy soil are visible across the landscape with the Palen and McCoy Mountains rising above utility infrastructure to stretch across the horizon.

5.1.1.6.14 Viewpoint 14: Westbound I-10, Looking North

As seen in Figure 5.1-2, Viewpoint 14 shows existing views from I-10, looking north toward the McCoy Mountains, and is representative of motorist views along westbound I-10. Green shrubs and sandy soil occupy the foreground and middleground with wooden poles blending into the landscape of the McCoy Mountains in the background.

5.1.1.6.15 Viewpoint 15: Westbound I-10, Looking Northwest

As seen in Figure 5.1-2, Viewpoint 15 shows existing views from I-10, looking northwest toward the McCoy Mountains, and is representative of motorist views along westbound I-10. The roadway is visible in the foreground, with desert scrub located along the roadway to the north. Wooden poles rise above the landscape in the middleground and run parallel to the roadway, but do not obscure views of the McCoy Mountains, visible to the northwest.

5.1.1.6.16 Viewpoint 16: Blythe Way, Looking Southwest

As seen in Figure 5.1-2, Viewpoint 16 shows existing views from Blythe Way, looking southwest toward the Palo Verde Mesa and Mule Mountains, and is representative of residential views in the Mesa Verde neighborhood west of Blythe. Sandy soil with sparse desert scrub occupies the foreground, with utility infrastructure barely visible in the distance. In the background, the Palo Verde Mesa and Mule Mountains rise prominently.

5.1.1.6.17 Viewpoint 17: Butch Boulevard, Looking North-Northwest

As seen in Figure 5.1-2, Viewpoint 17 shows existing views from Butch Boulevard, looking north to northeast, and is representative of motorist views along Butch Boulevard. Green-brown trees run parallel to the dirt road, with wooden utility poles rising above the trees and following the course of the roadway.

5.1.1.6.18 Viewpoint 18: Butch Boulevard, Looking South-Southwest

As seen in Figure 5.1-2, Viewpoint 18 shows existing views from Butch Boulevard, looking south to southwest toward the Mule Mountains and Palo Verde Mesa, and is representative of motorist and scattered local residents' views along Butch Boulevard. Sandy soil and small desert scrub and grasses occupy the landscape, with wooden and steel poles running parallel to Butch Boulevard. The mountains are visible in the background through the existing utility infrastructure.

5.1.1.6.19 Viewpoint 19: Intersection of 14th Avenue and West Hobsonway, Looking South

As seen in Figure 5.1-2, Viewpoint 19 shows existing views from the intersection of 14th Avenue and West Hobsonway, looking south towards I-10, and is representative of motorist views along 14th Avenue and West Hobsonway. Across the roadway, desert scrub, with wooden and steel utility poles, as well as existing development and I-10 visible in the foreground. Existing above-ground utility structures continue into the middleground of the view.

5.1.1.6.20 Viewpoint 20: Blythe Substation, Looking East

As seen in Figure 5.1-2, Viewpoint 20 shows the existing Blythe Substation, looking east from North Buck Boulevard, and is representative of motorist views of Blythe Substation. Sandy soil and tan grasses spread across the landscape, sharing the foreground with the substation. Given the orientation of the view, the middleground is not visible, and the substation blocks much of the distant mountains in the background.

5.1.1.7 Representative Photographs

Project viewpoint locations are shown in Figure 5.1-1 and the accompanying photographs are included in Figure 5.1-2.

5.1.1.8 Visual Resource Management Areas

Visual Resource Management areas within and around the Project Area are detailed below in Section 5.1.2.1.2.

5.1.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Project and are described below.

5.1.2.1 Federal

5.1.2.1.1 Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act of 1976 (FLPMA) (43 United States Code [U.S.C.] 1701) and the U.S. Department of the Interior's (DOI) BLM Land Use Planning Handbook (BLM 2005) both emphasize the importance of protecting the quality of scenic resources on public lands. FLPMA sections relevant to the Project are:

- Section 102(a): "The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values."
- Section 103(c): Identifies "scenic values" as resources for public management.
- Section 201(a): "The Secretary shall prepare and maintain on a continuing basis and inventory of all public lands and their resources and other values (including...scenic values)."
- Section 505(a): "Each right-of-way shall contain terms and conditions which will...minimize damage to the scenic and esthetic values."

FLPMA's legal mandate to protect the quality of scenic resources on public lands is carried out by BLM and detailed in BLM's Visual Resource Management (VRM) system, described below.

5.1.2.1.2 BLM Visual Resource Management System

The BLM has developed the VRM system for visual resource inventory, management, and impact assessment. VRM class objectives are designated to establish the desired future condition of the visual resource. Class designations are derived from an analysis of scenic quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of viewer sensitivity levels (sensitivity of people to changes in the landscape), and distance zones. Allowable uses and management actions must be planned in accordance with these desired future conditions. The VRM

classes set VRM objectives for lands in each class and describe the limits of allowable visual change in the landscape character with which proposed management activities must comply. Management Classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, texture). Management classes and their corresponding goals are defined in Table 5.1-1 and discussed below. A map showing the Project Alignment with VRM classes on BLM-administered land is included as Figure 5.1-4.

Table 5.1-1 BLM Visual Management Classes and Goals

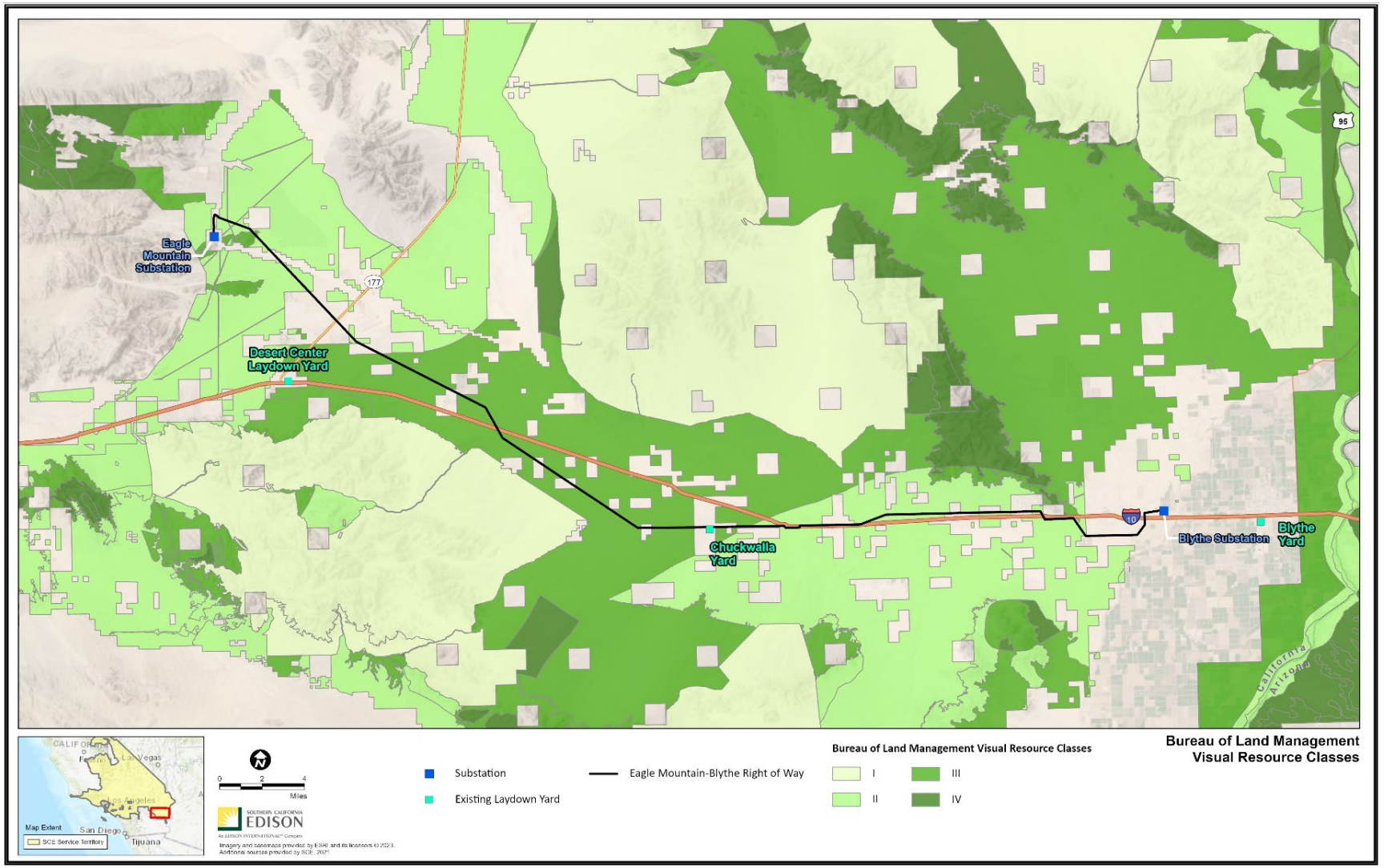
VRM Class	Goal	Allowed Level of Change
Class I	To preserve the existing character of the landscape	This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	To retain the existing character of the landscape	The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
Class III	To partially retain the existing character of the landscape	The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.
Class IV	To provide for management activities which require major modification of the existing character of the landscape	The level of change to the characteristic landscape can be high. Management activities may dominate the view and may be the major focus of viewer attention. However, the impact of these activities should be minimized through careful siting, minimal disturbance, and repeating the basic elements of form, line, color, and texture within the existing setting.

Source: BLM 2022a

5.1.2.1.3 Best Management Practices (BMPs) for Reducing Visual Impact of Renewable Energy Facilities on BLM-Administered Lands

In the *Best Management Practices (BMPs) for Reducing Visual Impact of Renewable Energy Facilities on BLM-Administered Lands* (BLM 2013), the BLM presents 122 BMP recommendations and guidance to avoid or reduce potential visual impacts associated with the siting, design, construction, operation, and decommissioning of utility-scale renewable energy generation facilities, including wind, solar, and geothermal facilities as well as ancillary components, such as electric transmission structures and access. Selection of structure types and selection of appropriate materials surface treatments are among the pertinent BMPs outlined in this document to minimize potential visual effects and contrast associated with transmission facilities.

Figure 5.1-4 BLM VRM Classes in Project Area



5.1.2.1.4 BLM Desert Renewable Energy Conservation Plan (DRECP) Record of Decision

Covering more than 20 million acres in seven California counties including Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego County, the Desert Renewable Energy Conservation Plan (DRECP) was developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and California Department of Fish and Wildlife (CDFW). The BLM manages approximately 10 million acres of the 22.5 million acres covered in the overall DRECP area.

The DRECP landscape-scale planning effort was undertaken to achieve two sets of overarching goals. The first is Renewable Energy. To address these goals, the plan identifies specific development focus areas with high-quality renewable energy potential and access to transmission in areas where environmental impacts can be managed and mitigated. The second overarching goal concerns conservation. The plan specifies species, ecosystem and climate adaptation requirements for desert wildlife, as well as the protection of recreation, cultural, visual, and other desert resources. Through the DRECP Record of Decision (ROD) an approved Land Use Plan Amendment (LUPA) establishes a policy framework for BLM-managed land, including management and conservation of visual resources. All BLM-administered land crossed by the Project is within the area governed by the DRECP ROD.

As detailed in Section 5.11, Land Use, although the Project Area includes lands managed by the BLM, county, city, and private parties, the entirety of the Project is located within the Northern and Eastern Colorado Desert Coordinated Management Plan area and the DRECP land use plan amendment area of the California Desert Conservation Area.

5.1.2.2 State

5.1.2.2.1 California Department of Transportation: Scenic Highway Program

The State Scenic Highway Program—a provision of Sections 260 through 263 of the Streets and Highways Code—was established by the Legislature in 1963 to preserve and enhance the natural beauty of California through special conservation treatment. The State Scenic Highway System includes both designated scenic highways and "eligible" scenic highways. The status of a State Scenic Highway changes from "eligible" to "officially designated" when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, State legislation is required. No State-designated or State-eligible scenic highways are located in the vicinity of the Project Alignment (Caltrans 2024).

5.1.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and city's regulations are not applicable as the counties and city do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.1.2.3.1 County of Riverside, Desert Center Area Plan

The Desert Center Area Plan (County of Riverside 2015c) encompasses a major portion of the Chuckwalla Valley, including the communities of Eagle Mountain, Chuckwalla Valley, Lake Tamarisk, and Desert Center, and is surrounded by the Eagle, Coxcomb, and Chuckwalla Mountains and Joshua Tree National Park. The Desert Center Area Plan includes the following policies related to aesthetics, visual resources, and light and glare:

Policy DCAP 2.3 Assure that the design of new land uses subject to discretionary review visually enhances, and does not degrade, the character of the Desert Center region.

Policy DCAP 4.1 When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.

Policy DCAP 8.1 Protect the scenic highways within the Desert Center Area Plan from change that would diminish the aesthetic value of adjacent properties through adherence to the policies found in the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

Policy DCAP 8.2 Support the designation of Interstate 10 as an eligible, and subsequently, official, scenic highway in accordance with the California State Scenic Highway Program.

Policy DCAP 12.1 Protect life and property, and maintain the character of Desert Center, through adherence to the Hillside Development and Slope section of the General Plan Land Use Element, the Rural Mountainous and Open Space land use designations within the General Plan Land Use Element, and the Slope and Soil Instability Hazards section of the General Plan Safety Element.

5.1.2.3.2 County of Riverside, Palo Verde Valley Area Plan

The Palo Verde Valley Area Plan (County of Riverside 2021c) encompasses a large valley that is situated between the Palo Verde Mesa to the west and the Colorado River to the east and is surrounded by the Big Maria, Mule, and McCoy Mountains. The Palo Verde Valley Area Plan includes the City of Blythe and the communities of Palo Verde, Ripley, Wiley's Well, Nicholls Warm Springs/Mesa Verde, Chuckwalla Valley, as well as Blythe Airport and Chuckwalla Valley and Ironwood State Prisons. The Palo Verde Valley Area Plan includes the following policies related to aesthetics, visual resources, and light and glare:

Policy PVVAP 10.1 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.

Policy PVVAP 10.2 Encourage the designation of Interstate 10 and US Highway 95 as eligible and subsequently Official Scenic Highways in accordance with the California State Scenic Highway Program.

Policy PVVAP 16.1 Protect ridgelines and slopes that provide a significant visual resource for the Palo Verde Valley area through adherence to the Hillside Development and Slope section of the General Plan Land Use Element.

5.1.2.3.3 County of Riverside, General Plan

The County of Riverside General Plan includes policies related to aesthetics in the Land Use Element (County of Riverside 2021b), Circulation Element (County of Riverside 2020a), Multipurpose Open Space Element (County of Riverside 2015b), and Healthy Communities Element (County of Riverside 2021d)

Land Use Element

Policy LU 3.3 Promote the development and preservation of unique communities in which each community exhibits a special sense of place and quality of design. (AI 14, 30)

Policy LU 3.5 Prepare a community separators map or overlay that will illustrate the intent of the County of Riverside and its residents that Riverside County's distinctive community identities be maintained. The map should be a bubble diagram rather than attempting to delineate policy boundaries. Topographical and geographical features such as mountains, hills, rivers, and floodplains should constitute the community separators in most cases. The map should be used as a tool for Riverside County's use in inter-governmental matters, such as commenting on proposals submitted to or by LAFCO, cities, or tribal authorities. (AI 4)

Policy LU 4.1 (a) through (v) 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: (AI 1, 3, 6, 14, 23, 24, 41, 62)

Policy LU 4.3 Create programs to ensure historic preservation. (AI 1)

Policy LU 7.3 Consider the positive characteristics and unique features of the project site and surrounding community during the design and development process. (AI 3)

Policy LU 9.1 Provide for permanent preservation of open space lands that contain important natural resources, cultural resources, hazards, water features, watercourses including arroyos and canyons, and scenic and recreational values. (AI 10)

Policy LU 9.3 Incorporate open space, community greenbelt separators, and recreational amenities into Community Development areas in order to enhance

recreational opportunities and community aesthetics, and improve the quality of life. (AI 9, 28)

Policy LU 12.1 Apply the following policies to areas where development is allowed and that contain natural slopes, canyons, or other significant elevation changes, regardless of land use designation: (AI 1, 23, 24):
(d) Restrict development on visually significant ridgelines, canyon edges and hilltops through sensitive siting and appropriate landscaping to ensure development is visually unobtrusive.

Policy LU 14.1 Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public. (AI 32, 79)

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. (AI 3, 32, 39)

Policy LU 14.4 Maintain an appropriate setback from the edge of the right-of-way for new development adjacent to Designated and Eligible State and County Scenic Highways based on local surrounding development, topography, and other conditions. (AI 3)

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. (AI 3, 32)

Policy LU 14.6 Prohibit offsite outdoor advertising displays that are visible from Designated and Eligible State and County Scenic Highways. (AI 3,79)

Policy LU 14.7 Require that the size, height, and type of on-premises signs visible from Designated and Eligible State and County Scenic Highways be the minimum necessary for identification. The design, materials, color, and location of the signs shall blend with the environment, utilizing natural materials where possible. (AI 3)

Policy LU 14.8 Avoid the blocking of public views by solid walls. (AI 3)

Policy LU 21.3 Ensure that development does not adversely impact the open space and rural character of the surrounding area. (AI 3)

Policy LU 21.6 and LU 22.6 Provide programs and incentives that allow rural areas to maintain and enhance their existing and desired character. (AI 9, 30)

Policy LU 23.2 Require that structures be designed to maintain the environmental character in which they are located. (AI 3)

Policy LU 36.1 Preserve the character of the Eastern Riverside County Desert Areas through application of those land use designations reflected on Figure LU-6, Eastern Riverside County Desert Areas Land Use Plan.

Circulation Element

Policy C 19.1 Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan. (AI 79)

Multipurpose Open Space Element

Policy OS 21.1 Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County. (AI 79)

Policy OS 22.1 Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses. (AI 3)

Policy OS 22.2 Study potential scenic highway corridors for possible inclusion in the Caltrans Scenic Highways Plan.

Policy OS 22.3 Encourage joint efforts among federal, state, and county agencies, and citizen groups to ensure compatible development within scenic corridors.

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. (AI 3)

Policy OS 22.5 Utilize contour grading and slope rounding to gradually transition graded road slopes into a natural configuration consistent with the topography of the areas within scenic highway corridors.

Healthy Communities

Policy HC 4.1 Promote healthy land use patterns by doing each of the following to the extent feasible: (AI 137)

(a) Preserving rural open space areas, and scenic resources.

Policy HC 10.5 Incorporate design features in the multi-use open space network that reflect the sense of place and unique characteristics of the community.

Policy HC 18.9 (a) through (v) Encourage the location and design of new developments to visually enhance and not degrade the character of the surrounding area through consideration of the following concepts.

5.1.2.3.4 City of Blythe General Plan

The City of Blythe General Plan includes design standards, policies, and implementation recommendations related to aesthetics in the Community Design Element, Land Use Element, Open Space and Conservation Element, and Safety Element. The following policies are related to aesthetics:

Community Design Element

Policy 3: Minimize the intrusion of Interstate Highway 10 and its interchanges on the visual character and form of the city.

Policy 10	Reinforce the individual character of existing residential neighborhoods and districts.
Policy 12	Protect and enhance the urban forest that reinforces the impact and identity of the community and its older neighborhoods.
Policy 13	Encourage positive transitions in scale and character where new development and extensive expansions of existing buildings are proposed.

Land Use Element

Policy 1	Preserve the scale and character of established neighborhoods.
Policy 18	Achieve compatibility between industrial development and surrounding neighborhoods through buffering requirements and standards intended to minimize harmful effects of excessive noise, light, and glare and other adverse environmental impacts.

Open Space and Conservation Element

Policy 1	Maintain hillsides and viable agricultural lands as open space for resource conservation and preservation of views.
Policy 3	Maintain existing view of the Mesa and Colorado River from roadways and public uses and other rights-of-way on the valley floor whenever feasible.
Policy 25	Protect archaeologic, historic, and paleontologic resources for their aesthetic, scientific, educational, and cultural value.

Safety Element

Policy 27	Minimize the risks associated with visual hazards including distracting lights, glare, and sources of smoke.

5.1.3 Impact Questions

5.1.3.1 Aesthetics Impact Questions

The significant criteria for assessing the impacts to aesthetics come from the California Environmental Quality Act (CEQA) Environmental Checklist. For aesthetics, the CEQA Checklist asks, would the project:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- In 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?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

5.1.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.1.4 Impact Analysis

5.1.4.1 Visual Impact Analysis

5.1.4.1.1 Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. The Project involves reconductoring an existing subtransmission line and underbuilt circuits and installing approximately one mile of overhead ground wire along the existing subtransmission line and underbuilt circuit alignment. Additionally, the Project involves removing 25 steel poles and 1 single wood pole and replacing them with 17 TSPs (9 of the steel poles would be removed would be not replaced), replacing 16 wood three-pole dead-end structures with 16 three-pole TSPs, and replacing 11 wood H-frame structures with 11 LWS H-frame structures (see Figure 5.1-3 for example structures).

As shown in Figure 5.1-2, views throughout the Project Area are interrupted by horizontal and vertical features related to existing solar and other utility infrastructure. Although the Project would increase the height of existing infrastructure, increase the spacing between poles, increase the diameter of some poles, and convert some pole material from wood to steel, it would not introduce new vertical features where none currently exist. In addition, immediately north of the Eagle Mountain Substation, the Project includes removal of nine structures which would not be replaced. Therefore, construction impacts to scenic vistas would be less than significant. No mitigation would be required.

Implementation of the Project would not change the requirement for existing operation and maintenance (O&M) activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.1.4.1.2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The County of Riverside has identified I-10, from its junction with SR 62 to the Colorado River, as eligible for designation as a County Scenic Highway. As such, it is protected by policies outlined in the General Plan (County of Riverside 2020a). However, no designated State Scenic Highways are located in the vicinity of the Project (Caltrans 2024).

Motorists traveling on I-10 would experience four locations where the Project would cross over the roadway. From west to east, these include:

- Approximately 1.15 miles east of Corn Springs Road
- Approximately 0.7 mile east of Ford Dry Lake Road (Figure 5.1-2, Photograph 15)
- Approximately 3 miles west of the Mesa Verde community
- Immediately east of 14th Avenue in Blythe

Between the I-10 crossing near Ford Dry Lake Road and the community of Mesa Verde, the Project roughly parallels I-10 at a distance of 0.35 mile (or less). Additionally, motorists on SR-177 and Kaiser Road would

each experience one location where the Project would cross over the roadway (Figure 5.1-2, Photographs 4 and 5).

The Project involves reconductoring an existing subtransmission line and underbuilt circuits and installing approximately one mile of overhead ground wire along the existing subtransmission line and underbuilt circuit alignment. Additionally, the Project involves removing 25 steel poles and 1 single wood pole and replacing them with 17 TSPs (9 of the steel poles would be removed would be not replaced), replacing 16 wood three-pole dead-end structures with 16 three-pole TSPs, and replacing 11 wood H-frame structures with 11 LWS H-frame structures; examples of the existing structures and the proposed replacements can be seen in Figure 5.1-3. Minimal ground disturbance would be required to complete Project activities, and the disturbance areas for each type of construction work area have been optimized to keep land disturbance at a minimum and avoid resource impacts. Views from I-10 during construction may include the staging of equipment at laydown yards, equipment, vehicles, and crews along the Project corridor. A few of the proposed work areas are located off existing access roads, in which cases overland travel would be used to access the sites. However, the proposed overland travel would not require damage to scenic resources, such as trees, visible from I-10. In addition, all temporary grading would be restored, and the site would be returned to its natural condition once structure installation is complete. Laydown yards would be used for staging equipment and materials and as a place for personnel to meet. These laydown yards are already established, with fencing, and would be used as they currently exist for the Project.

Construction impacts would be temporary and would occur in the landscape that already features views of transmission facilities and related infrastructure. Similarly, the replacement of existing components would not introduce new visual elements or intensify the land use associated with existing facilities, which are already present in the I-10 viewshed. Therefore, construction of the Project would not substantially damage a scenic resource, including but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway. No impact would occur, and no mitigation would be required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.1.4.1.3 Would the project, 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?

Less than Significant Impact with Mitigation. The Project is located in a non-urbanized area. Public views of the Project occur from I-10; paved roads in the area including Kaiser Truck Road, Eagle Mountain Road, Rice Road (SR-177), Chuckwalla Valley Road, and Hobson Way; and unpaved roads.

Temporary construction-related visual impacts could result from the presence of heavy equipment, materials, and work crews along the Project and traveling to and from the laydown yards. Vegetation removal and access road rehabilitation may be required, but no new access roads would be installed. Construction of the Project is expected to take approximately eight months to complete in total; however, the duration of construction activities at any one location along the Project would be considerably shorter. Because construction-related visual impacts would be temporary and of short duration in any one location and would occur along an existing utility subtransmission line corridor, the Project would not substantially

degrade the existing visual character or quality of public views of the site and its surroundings. Construction impacts would be less than significant.

Permanent changes to visual character and quality that would result from Project implementation would be related to removal of existing subtransmission structures, removal, and replacement of existing subtransmission structures, and re-conductoring the existing EM-B circuit. Along the approximately one-mile segment of the EM-B line north of Eagle Mountain Substation, 25 steel poles and 1 single wood pole would be replaced with 17 TSPs (9 of the steel poles would be removed would be not replaced), thereby reducing the overall number of poles required in this segment and increasing the spacing between poles. The existing steel poles range in height from 64 to 83 feet, and their TSP replacement structures would range in height from 81 to 107 feet. In addition, the diameter of each TSP pole would be approximately six inches larger than the existing steel poles they would replace. This activity would have a beneficial impact on the visual quality of the area by removing several human made elements from the desert landscape. Although the new TSPs would be taller and wider than the existing steel poles, and therefore would increase the visibility of the subtransmission line, the viewshed where these changes would be potentially visible is constrained by surrounding mountainous topography. Few public roads traverse the area, and two other large energy resource developments are located nearby – the Eagle Mountain iron mine located approximately three miles to the northwest and the Desert Sunlight solar farm located approximately three miles to the east. The eastern boundary of Joshua Tree National Park is approximately one mile from Eagle Mountain Substation. However, due to the rugged terrain in the area, views of the Project would be screened from all but the extreme eastern edge of the park, which is an area that is considerably removed from the heavily visited portions of the park.

Changes to the remaining 27 structures would be spread across the rest of the 53-mile Project, typically with a replacement occurring every one to two miles. The existing structures are made of wood and would be replaced by steel structures (either TSP or LWS) of a similar design. Typically, dull-galvanized steel would be used. The new metal structures would introduce a more industrial element to a natural setting than currently present with the existing wood pole structures that would be replaced; therefore, this Project activity would result in a minor impact to the existing desert landscape character. A viewer may detect the change in surface material or texture, but the visual effect of this change would diminish the further the viewer is located from a structure. The existing structures range in height from 56 to 80.5 feet, and their replacement structures would range in height from 57 to 82 feet. In addition, each existing pole is approximately 1.5 feet in diameter, and the replacement poles would range in diameter from approximately 1.4 to six feet in diameter. Although the replacement structures would be taller and wider than the existing structures and would therefore increase the visibility of the subtransmission line, no new vertical features would be introduced where none currently exist and the increase in pole width would also represent a minor impact on the intactness of the existing desert landscape character given the substantial spacing in between structures. Furthermore, SCE would implement APM AES-1, which would entail the use of non-reflective finishes on all new subtransmission structures, non-specular and non-reflective subtransmission conductors, and non-reflective and non-refractive insulators, which would reduce glare and minimize contrast with the surrounding environment. Due to the relatively minor nature of these changes, the substantial distance between each structure proposed for replacement, and implementation of APM AES-1, the impact to visual character and quality would be less than significant with mitigation.

Nineteen structure replacements would occur on portions of the ROW on BLM lands. As shown in Figure 5.1-4, the Project crosses BLM lands identified as Management Class II, for approximately 18.5 miles, and Class III for approximately 15.9 miles. The applicable VRM Management Classes are defined as follows:

- Class II: The level of change to the characteristic landscape should be low. Management activities may be seen but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
- Class III: The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Project would be consistent with VRM Class II and III. Project re-conductoring and underbuilt circuits would have a negligible impact on existing visual character and quality because it would simply replace the existing subtransmission line and underbuilt circuits with a new transmission line and underbuilt circuits. In addition, pursuant to APM AES-1, the replacement conductor would be non-specular and non-reflective and replacement insulators would be nonreflective and non-refractive. The proposed new steel structures (either TSP or LWS) would replace existing wooden structures of a similar design. While the structures would be taller and wider, the steel surface treatment helps the structures to disappear into the background from a distance. Furthermore, APM AES-1 includes the use of non-reflective finishes on all new structures. With implementation of APM AES-1, these changes would slightly increase the visibility of the subtransmission line but not to the point that it would become a dominant element of the landscape; which would be in line with the Class II and III guidelines.

With implementation of APM AES-1, construction of the Project would not substantially degrade the existing visual character or quality of the Project Site and its surroundings, and impacts would be less than significant with mitigation.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.1.4.1.4 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 Impact with Mitigation. Existing sources of light and glare within the Project Area include nighttime highway traffic along I-10, SR-177, and other roadways, as well as localized lighting associated with residential and commercial development. Various solar farms and energy centers including, but not limited to, Desert Sunlight, Maverick, Athos I & II, and Blythe Mesa Solar contribute to light and glare in the vicinity of the Project. The existing Eagle Mountain and Blythe Substations provide another source of light and glare within the Project Area from interior and exterior lighting from buildings, lighting from switch racks, and sensor lights.

Construction equipment and activities are not sources of permanent light and glare. Glare generated during daytime hours would be temporary and dependent upon the location of the sun and orientation of the construction equipment. No construction activities would occur at night; however, lighting may be used periodically near the end of a workday as the sun sets. In the event that lighting is required at a construction area or laydown yard, SCE would use the minimum lighting necessary, orient lighting downwards, and shield lighting to eliminate off-site light spill, consistent with APM AES-2. In addition, the Project does not include any new permanent sources of light. Furthermore, SCE would implement APM AES-1, which would entail the use of non-reflective finishes on all new subtransmission structures, non-specular and non-reflective subtransmission conductors, and non-reflective and non-refractive insulators, which would reduce the potential for glare to be produced by these Project components.

With implementation of APMs AES-1 and AES-2, construction of the Project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area, and impacts would be less than significant with mitigation.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.1.4.2 Analysis of Selected Viewpoints

5.1.4.2.1 Photograph Methodology

Photographs used to assess existing conditions were taken using a digital single-lens reflex camera with standard 50-millimeter lens equivalent, which represents an approximately 40-degree horizontal view angle. For each viewpoint, viewer location was input from global positioning system data using 5 feet as the assumed eye level.

5.1.4.2.2 Bureau of Land Management Methodology

To evaluate visual changes associated with the Project, the BLM's VRM program was used to assess change in the landscape. The VRM classification system is a "systematic process used to analyze potential visual impacts of proposed projects and activities." BLM-managed property has been inventoried and assigned one of four classes based on the BLM's evaluation of the form, line, color, and texture of the existing landform/water, vegetation, and structures. The classes, associated goals and allowed levels of change are presented in Table 5.1-1.

The assigned VRM class is used to determine the potential impact resulting from the Project. The classification system was developed to "provide the basis for the consideration of visual resources in the BLM's resource management planning process." The VRM class assigned to the area is compared to the Project to determine what, if any, mitigation is required to meet the VRM class objectives.

As shown in Figure 5.1-4, the VRM classes for BLM-managed land within the area of the Project are Class II and III. While the VRM program does not apply to non-federal lands, the VRM methodology was used because 19 structure replacements would occur on portions of the ROW on BLM lands.

To evaluate the changes resulting from the Project, site reconnaissance was conducted to view the site and surrounding area, identify potential viewpoints, and take representative photographs of existing visual conditions, according to the methodology described in Section 5.1.4.1.1. The contrast associated with each viewpoint is considered for the following elements:

- Form – Contrast in form results from changes in the shape and mass of landforms or structures. The degree of change depends on how dissimilar the introduced forms are to those continuing to exist in the landscape.
- Line – Contrast in line results from changes in edge types and interruption or introduction of edges, bands, and silhouette lines. New lines may differ in their sub-elements (e.g., boldness, complexity, and orientation) from existing lines.
- Color – Changes in value and hue tend to create the greatest contrast. Other factors (e.g., chroma, reflectivity, and color temperature) also increase the contrast.

- Texture – Noticeable contrast in texture usually stems from differences in the grain, density, and internal contrast. Other factors (e.g., irregularity and directional patterns of texture) may affect the rating.

The extent or degree of contrast is evaluated based on the following criteria:

- None – The element contrast is not visible or perceived
- Weak – The element contrast can be seen, but does not attract attention
- Moderate – The element contrast begins to attract attention and begins to dominate the characteristic landscape
- Strong – The element contrast demands attention, would not be overlooked, and is dominant in the landscape

Finally, the Project was assessed for compatibility with the VRM objectives for its respective VRM class.

The Project would introduce little visual change to the existing environment. The Project would replace existing utility poles and construct new ground-level and subsurface infrastructure, and changes to the form, line, color and texture of the current landscape would be minimal and visually similar to the existing infrastructure.

5.1.4.3 Visual Simulation

As discussed throughout Section 5.1, the reconductored line would be strung across either existing structures or replacement structures, resulting in a similar level of visual contrast to existing conditions. Post-Project conditions would not differ substantially from the existing visual conditions and impacts to the visual character of the area are not anticipated; therefore, visual simulations were not prepared.

5.1.4.4 Analysis of Visual Change

The methodology and assumptions for analyzing visual change are found in Sections 5.1.4.2.1 and 5.1.4.2.2.

5.1.4.5 Lighting and Marking

Section 5.1.4.1.4 describes the potential lighting and marking impacts of the Project.

5.1.5 CPUC Draft Environmental Measures

There is one CPUC Draft Environmental Measure related to aesthetics: "Aesthetic Impact Reduction During Construction." As described in 5.1.4.1, impacts related to aesthetics during construction would be less than significant. Therefore, this CPUC Draft Environmental Measure is not required.

5.1.5.1 Applicant Proposed Measures

The following APMs would be implemented to reduce aesthetics impacts associated with the Project:

AES-1: Glare and Color Contrast Reduction for Subtransmission Structures and Conductors. To reduce potential significant impacts associated with glare and color contrast for components of the Project, the finish on all new subtransmission structures will be non-reflective, such as steel that has been galvanized and treated to create a dulled finish or color treated or other functionally equivalent product/process. These types of finishes are designed to reduce light reflection and color contrast and help blend the structures into the landscape setting. All new subtransmission conductors shall be non-specular and non-reflective and the

insulators shall be non-reflective and non-refractive to help reduce glare and minimize contrast with the surrounding environment.

AES-2: Night Lighting During Construction of Facilities. Night lighting for construction activities, staging areas, and other areas used for construction shall be the minimum necessary to ensure safety and security for nighttime activities. All night lighting used for construction shall orient lights downward and be shielded to eliminate off-site light spill at times when the lighting is in use.

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5.2 Agriculture and Forestry Resources

This section describes the agriculture and forestry resources in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt Transmission Line Rating Remediation (TLRR) Project (Project), as well as the potential impacts to agriculture and forestry resources from construction and operation of the Project.

5.2.1 Environmental Setting

The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas.[1] The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe. This section describes the existing agricultural and forestry resources in the Project Area.

5.2.1.1 Agricultural Resources and GIS

5.2.1.1.1 Areas Designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

Agricultural land is designated by the California Department of Conservation (DOC) and identified in the 2016 Farmland Mapping & Monitoring Program (FMMP) and defined by the California Environmental Quality Act (CEQA). The goal of the FMMP is to provide consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP produces Important Farmland Maps, which combine soil quality, available irrigation, and land use information. Farmland is defined in CEQA as land that qualifies as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance:

- **Prime Farmland** has the best combination of physical and chemical characteristics 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** is similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland** consists of lesser-quality soils and produces the state's leading agricultural crops. This land is usually irrigated, but includes 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.

[1] The terms "laydown yard", "staging yard", and "staging area" may be used interchangeably throughout the document.

Additional categories, including Farmland of Local Importance, Grazing Land, Confined Animal Agriculture, Nonagricultural and Natural Vegetation, Semi-agricultural and Rural Commercial Land, Vacant or Disturbed Land, Rural Residential Land, Urban and Built-up Land, and Water, are identified within Important Farmland Maps, but are not considered Important Farmland for agricultural impact assessment purposes (DOC 2021).

The Project includes components located on agricultural land, including Prime Farmland, Farmland of Statewide Importance and Farmland of Local Importance, as designated by the State of California's Farmland Mapping and Monitoring Program (DOC 2021). The areas designated as Prime Farmland and Farmland of Statewide Importance are located on the eastern extent of the Project in unincorporated Riverside County and the City of Blythe, as shown in Figure 5.2-1. The Project construction work areas, including laydown yards, contain approximately 0.25 acre of Prime Farmland, none within Farmland of Statewide Importance, and 2.6 acres of Farmland of Local Importance.

5.2.1.1.2 Areas Under Williamson Act Contract

On the western extent of the alignment, immediately west of State Route 177, the Project ROW traverses two County-designated Agricultural Preserves (Chuckwalla No. 2 Agricultural Preserve, Chuckwalla No. 3 Agricultural Preserve), as shown in Figure 5.2-1. These County Agricultural Preserve areas are Williamson Act contract areas (Riverside County 2021).

5.2.1.1.3 Agricultural Use Zoning

Portions of the Project Site are within areas zoned by the City of Blythe as Agricultural (City of Blythe 2007) and within land zoned by the County as Light Agricultural (A-1). Figure 5.2-2 illustrates the agricultural zoning within 1 mile of the Project.

5.2.1.1.4 Areas Subject to Active Agricultural Use

Based on a review of aerial photography, approximately 1,000 feet of the Project Alignment crosses an existing palm tree nursery located approximately 1.5 miles northwest of the Corn Springs Road exit from Interstate (I-) 10. In addition, approximately 1,500 feet of the Project Alignment is adjacent to an existing palm tree nursery located approximately 1.8 miles east of the Mesa Drive exit from I-10.

5.2.1.1.5 GIS Data

GIS data for agricultural resources within the Project Area are provided under separate electronic cover.

5.2.1.2 Forestry Resources and GIS

5.2.1.2.1 Forest Land

The Project is not located on land zoned for forest land (as defined in Public Resources Code Section 12220[g]). The Project is located in a desert area and does not contain any forest land.

5.2.1.2.2 Timberland

The Project is not located on land zoned timberland (as defined by Public Resources Code Section 4526). The Project is located in a desert area and does not contain any timber land.

Figure 5.2-1 Agricultural Resources

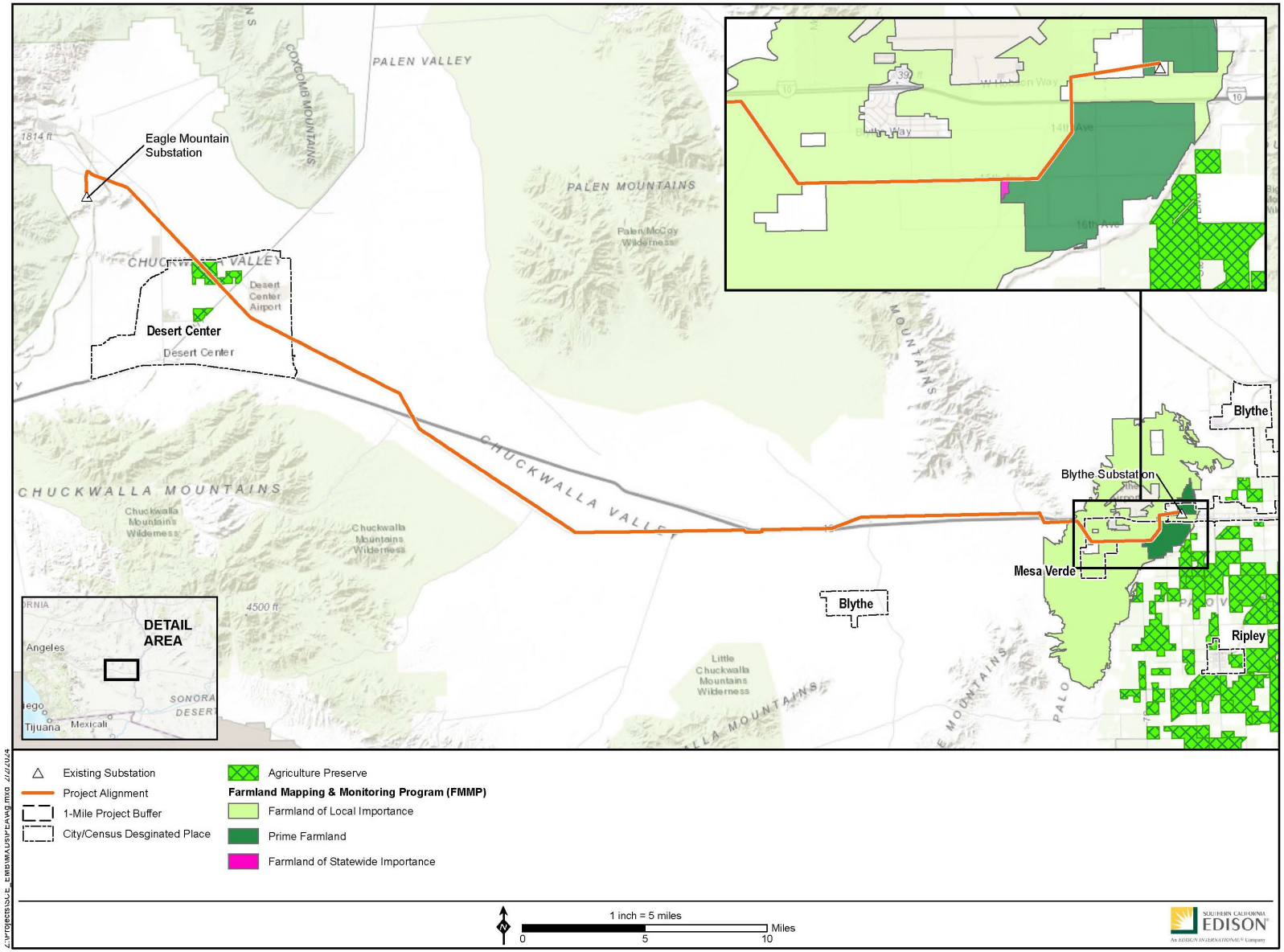
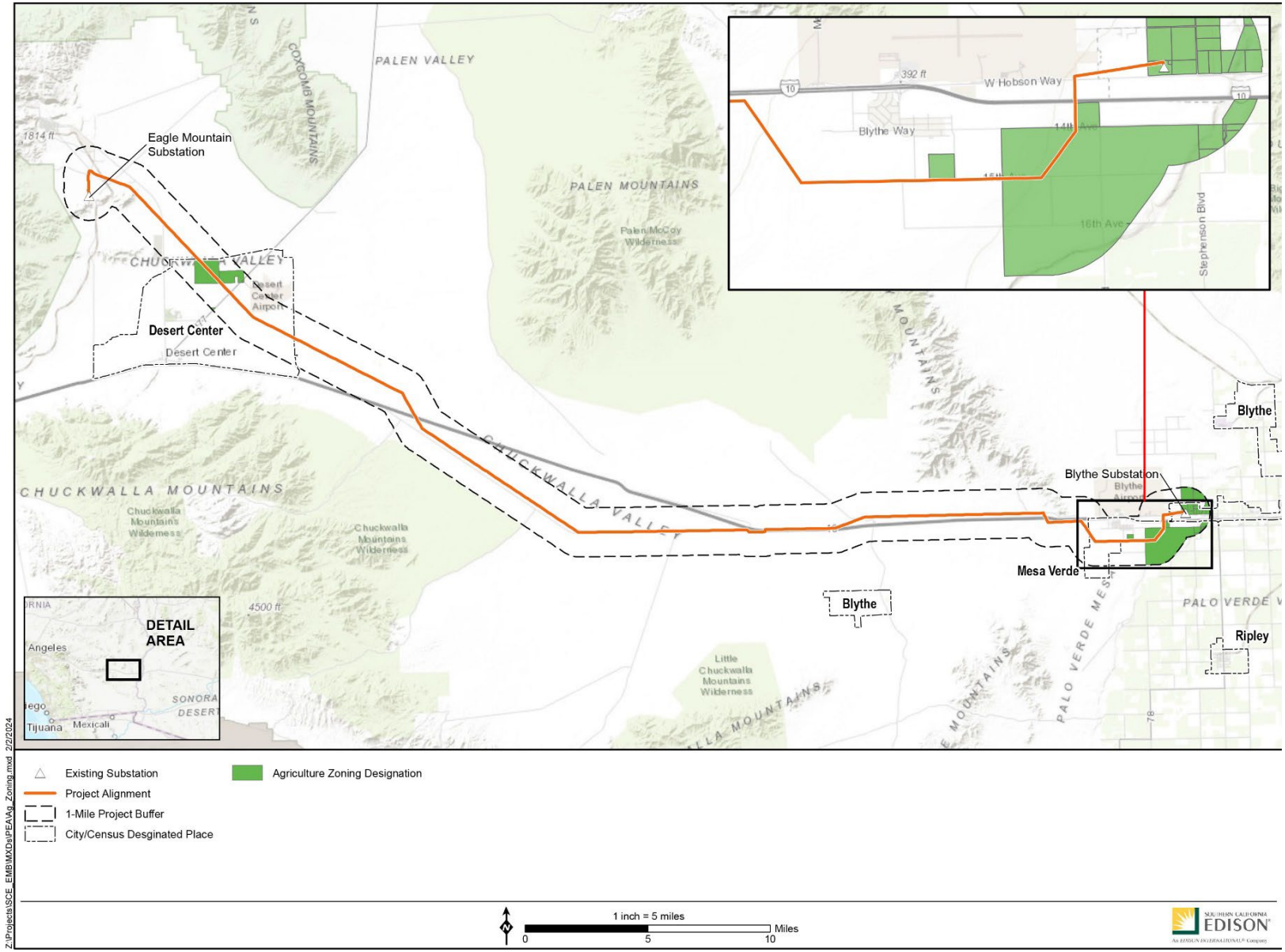


Figure 5.2-2 Agricultural Zoning within 1 Mile of the Project



5.2.1.2.3 Timberland Production Zones

The Project is not located on land zoned Timberland Production (as defined by Government Code Section 51104(g)). The Project is located in a desert area and does not contain any timber land.

5.2.1.2.4 GIS Data

As described previously, the Project Area does not contain any forestry resources; therefore, no GIS data has been provided.

5.2.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the Project and are described below.

5.2.2.1 Federal

The National Agricultural Land Study of 1980-1981 found that millions of acres of farmland were being converted out of agricultural production in the United States each year. The 1981 Congressional report, "Compact Cities: Energy-Saving Strategies for the Eighties" (Compact Cities report), identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.

The Compact Cities report indicated that much of the sprawl was the result of programs funded by the federal government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1995. The FPPA and its implementing rules and regulations set forth provisions intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses.

5.2.2.2 State

5.2.2.2.1 Williamson Act

The California Land Conservation Act of 1965 (Williamson Act) (California Government Code [CGC] section 51200 *et seq*.) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value. The Williamson Act also allows local governments to establish agricultural preserves, which are parcels of land set aside for agricultural uses (CGC section 51230). They must include a minimum of 100 acres, and they typically avoid areas where public utility improvements and associated land acquisitions may be necessary. Although the Williamson Act does not specify compatible land uses for property located adjacent to contract lands or agricultural preserves, it does state that cities and counties must determine compatible land use types while recognizing that temporary or permanent population increases frequently impair or hamper agricultural operations (CGC section 51220.5).

5.2.2.2.2 California Government Code Section 51238

CGC section 51238 includes the provisions related to the Williamson Act that state, "notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council

after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve."

5.2.2.2.3 California Government Code Sections 51100 to 51155

Chapter 6.7 of the CGC (sections 51100 to 51155) regulates timberlands within the State of California. According to the code, examples of compatible uses are watershed management; grazing; and the erection, construction, alteration, or maintenance of electric transmission facilities.

5.2.2.2.4 Forest Taxation Reform Act

Commercial timberlands are afforded protection through the State's Forest Taxation Reform Act of 1976, which mandates the creation of Timberland Production Zones to restrict and protect commercial timber resources.

5.2.2.2.5 California Public Resources Code Section 12220(g)

The Public Resources Code (PRC) governs forestry, forests, and forest resources, as well as range and forage lands within the State of California.

5.2.2.2.6 California Public Resources Code Section 4526

PRC section 4526 defines "Timberland" as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."

5.2.2.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order (GO) 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and city's regulations are not applicable as the counties and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.2.2.3.1 County of Riverside

Land use designations for the Project Alignment are discussed in greater detail in Section 5.11, Land Use and Planning, and are illustrated in Figure 5.11-2. The Land Use Element of the County of Riverside General Plan contains the following policies related to agriculture and forestry resources:

Agriculture Land Use Designation

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

Policy LU 20.7 Adhere to Riverside County's Right-to-Farm Ordinance.

5.2.2.3.2 County of Riverside Zoning Ordinance

The County of Riverside's Zoning Ordinance contains the following related to agriculture:

- **Zone A-1 Light Agriculture Zone.** Section 17.120.010 of the County of Riverside Zoning Ordinance lists public utility facilities as a permitted use within the A-1 Light Agriculture Zone.

5.2.2.3.3 City of Blythe

The City of Blythe 2025 General Plan lists the following policies related to open space and agriculture:

Policy 6.2.9 Promote continued agricultural use of important farmland outside the urban area.

Policy 6.2.10 Minimize conflicts between agricultural and urban uses by requiring buffers or use restrictions or using roads or canals to separate these uses.

5.2.3 Impact Questions

5.2.3.1 Agriculture and Forestry Impact Questions

The thresholds of significance for assessing impacts come from the CEQA Environmental Checklist. For agriculture and forestry resources, the CEQA Checklist asks, would the project:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- Conflict with existing zoning for agricultural use or a Williamson Act contract?
- Conflict with existing zoning for, or cause rezoning of, 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))?

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

5.2.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.2.4 Impact Analyses

5.2.4.1 Agriculture and Forestry Impact Analysis

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

No Impact. The Project ROW traverses Prime Farmland and Farmland of Statewide Importance. However, not all of the ROW located within these areas is currently used for agriculture. The operation and maintenance (O&M) of the EM-B circuit in the ROW is an ongoing existing activity in these farmland areas and would not be modified by the Project. During construction, some activities may need to occur within an active agricultural use area, for example where a structure is located in an area surrounded by crops. Project construction activities at these locations may temporarily affect agricultural activity at the work area. However, Southern California Edison (SCE) would coordinate with agricultural landowners to avoid or minimize impacts to agricultural operations. In addition, construction activities at any given location along the Project Alignment would be temporary and short-term (i.e., less than 8 months) and the Project would not permanently convert any Farmland to non-agricultural use. Therefore, no impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.2.4.1.2 Would the Project conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. Portions of the Project Alignment are located within land zoned by the County as Light Agricultural (A-1), and the Project traverses lands designated by the County as agricultural preserves, which are lands under Williamson Act contracts. Within agricultural preserves, uses are restricted to agricultural and other compatible uses specified in Riverside County Ordinance No. 509, which allows for electrical utility infrastructure. Additionally, the Project involves work on existing electrical infrastructure that is currently located within these areas. As noted under Section 5.2.4.1.1 above, some construction activities may need to occur within an active agricultural use area, for example where a structure is located in an area surrounded by crops and may temporarily affect agricultural activity at the work area. However, SCE would coordinate with agricultural landowners to avoid or minimize impacts to agricultural operations, and construction activities at any given location along the Project Alignment would be temporary and short-term (i.e., less than 8 months). Therefore, the Project would not conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.2.4.1.3 Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The Project is not located on land zoned as 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 conflict with forest land or timber land zoning. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.2.4.1.4 Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project is not located on forest land and the Project Area does not contain any forest land. Therefore, the Project would not result in the loss of forest land or conversion of forest land to non-forest uses. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.2.4.1.5 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 or conversion of forest land to non-forest use?

No Impact. The Project would not change the land use or the O&M of the existing EM-B circuit. In addition, the Project is part of SCE's TLRR Program, the purpose of which is to ensure circuits meet or exceed the requirements of CPUC GO 95. As such, the Project would not provide additional electrical transmission capacity that could promote growth or other changes to the environment that could result in conversion of Farmland or forest land. Therefore, the Project would not involve changes in the existing environment that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, and no impact would occur. No mitigation would be required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.2.4.2 Prime Farmland Soil Impacts

As described previously, Project construction work areas, including laydown yards, would be located on approximately 0.25 acre of Prime Farmland.

5.2.4.3 Williamson Act Impacts

The approach to resolve any potential conflicts with lands under a Williamson Act contract are described in Section 5.2.4.1.2.

5.2.5 CPUC Draft Environmental Measures

No CPUC Draft Environmental Measures have been identified for agriculture and forestry resources.

5.2.5.1 Applicant Proposed Measures

No impacts to agriculture and forestry resources would occur as a result of the Project. As such, there are no applicant proposed measures.

5.3 Air Quality

This section describes the air quality in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project), as well as the potential impacts to air quality from construction and operation of the Project. Research for this analysis involved a review of the following resources:

- National Ambient Air Quality Standards (NAAQS) and California Air Quality Standards (CAAQS) established by the United States (U.S.) Environmental Protection Agency (USEPA) and California Air Resources Board (CARB), respectively;
- local air quality emissions from CARB's iADAM system; and
- local agency planning documents.

5.3.1 Environmental Setting

The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management (BLM) or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas.[1] The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe.

5.3.1.1 Air Quality Plans

The Project Area is located entirely within the Mojave Desert Air Basin (MDAB). The MDAB covers approximately 27,300 square miles and includes eastern Kern County, northeast Los Angeles County, eastern Riverside County, and most of San Bernardino County. The MDAB is bounded by the Colorado River Valley to the south and east, and by mountains on its remaining sides. The MDAB covers most of California's high desert and is California's largest air basin. Within the MDAB, the Project is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the Mojave Desert Air Quality Management District (MDAQMD).

The SCAQMD encompasses approximately 11,000 square miles and is located in the southwestern portion of the MDAB. The SCAQMD has jurisdiction over large areas of Los Angeles, Riverside, and San Bernardino counties. The MDAQMD encompasses approximately 20,000 square miles and covers the majority of the MDAB. The MDAQMD has jurisdiction over San Bernardino County's high desert and portions of Riverside County.

It is the responsibility of the SCAQMD and MDAQMD to ensure that State and federal ambient air quality standards are achieved and maintained in their geographical jurisdictions. Health-based air quality standards have been established by California (i.e., CAAQS) and by the federal government (i.e., NAAQS) for the following criteria air pollutants (CAPs): ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2),

[1] The terms "laydown yard", "staging yard", and "staging area" may be used interchangeably throughout the document.

particulate matter with a mean diameter of less than 10 microns (PM_{10}), particulate matter with a mean diameter of less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Furthermore, California has set additional standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. Attainment of the CAAQS and NAAQS protects sensitive receptors and the public from CAPs that are known to have adverse human health effects. Each district's attainment status is provided in Table 5.3-1. As described in Section 5.3.2.1.3, the SCAQMD and MDAQMD have prepared attainment plans to address O_3 within its jurisdiction.

Approximately 60 percent of the existing subtransmission line alignment is located within the jurisdiction of the SCAQMD. The remaining portion of the subtransmission line alignment is located within the jurisdiction of the MDAQMD.

5.3.1.2 Air Quality

The USEPA compares ambient air criteria pollutant measurements with NAAQS to assess the status of air quality of regions within the states. Similarly, the CARB compares air pollutant measurements in California to CAAQS. Based on these comparisons, regions within the states and California are designated as one of the following categories:

- Attainment. A region is designated as attainment if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as "maintenance areas" for a 10-year period to ensure that the air quality improvements are sustained.
- Nonattainment. If the NAAQS or CAAQS is exceeded for a pollutant, then the region is designated as nonattainment for that pollutant.
- Unclassifiable. An area is designated as unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Presently, the ambient air in the Project Area is classified by the CARB as nonattainment for O_3 and PM_{10}. The ambient air in the Project Area is either unclassified or classified as attainment for all other state-regulated air pollutants. The attainment status of each CAAQS and NAAQS pollutant is shown in Table 5.3-1.

The SCAQMD and MDAQMD monitor levels of various pollutants by using a network of monitoring stations throughout the MDAB. The closest ambient air quality monitoring station to the Project Alignment that monitors for O_3 is Blythe-445 West Murphy Street, which is located approximately 5 miles east of Blythe Substation. No exceedances of the NAAQS or CAAQS were measured at this station during 2020, 2021, or 2022 (CARB 2023c).

The closest ambient air quality monitoring station to the Project Alignment that monitors for PM_{10} is Mecca-65705 Johnson Street, located approximately 40 miles southwest of Eagle Mountain Substation. The following exceedances of the NAAQS and CAAQS were measured at this station during 2020, 2021, and 2022 (CARB 2023c):

- The daily PM_{10} NAAQS was exceeded 10 times during 2020 and three times in 2021; insufficient data from 2022.
- The daily PM_{10} CAAQS was not exceeded during 2020 or 2021; insufficient data from 2022.

Table 5.3-1 Air Quality Standards and Attainment Status

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Status	Concentration	Status
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Nonattainment	—	—
	8 Hours	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm	Nonattainment (SCAQMD) and Unclassified/ Attainment
Respirable Particulate Matter (PM_{10})	24 Hours	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
	AAM	20 µg/m^3	Nonattainment	—	—
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	—	—	35 µg/m^3	Attainment/ Unclassified
	AAM	12 µg/m^3	Attainment	9.0 µg/m^3	Attainment/ Unclassified
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Unclassified	9 ppm (10 mg/m^3)	Attainment/ Unclassified
	1 Hour	20 ppm (23 mg/m^3)	Unclassified	35 ppm (40 mg/m^3)	Attainment/ Unclassified
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment/ Unclassified
	1 Hour	0.18 ppm (339 µg/m^3)	Attainment	0.100 ppm (188 µg/m^3)	Attainment/ Unclassified
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment/ Unclassified
	1 Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Attainment/ Unclassified
	AAM	—	—	0.030 ppm (80 µg/m^3)	Attainment/ Unclassified
Lead (Pb)	30-Day Average	1.5 µg/m^3	Attainment	—	—
	Calendar Quarter	—	—	1.5 µg/m^3	Attainment/ Unclassified
	Rolling 3-Month Average	—	—	0.15 µg/m^3	Attainment/ Unclassified
Visibility-Reducing Particles	8 Hours	Extinction of 0.23 per km	Unclassified	No national standards	
Sulfates	24 Hours	25 µg/m^3	Attainment		
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24 Hours	0.010 ppm (26 µg/m^3)	No information available		

Note: Some jurisdictions may have multiple attainment statuses for each pollutant. In these instances, the attainment status that represents the location of the Project has been reported.
Acronyms: ppm = parts per million; mg/m^3 = milligrams per cubic meter; ppm = parts per million; µg/m^3 = micrograms per cubic meter; AAM = Annual Arithmetic Mean; km = kilometer
Source: CARB 2023a

5.3.1.3 Sensitive Receptor Locations

Some exposed population groups—including children and people who are elderly or ill—can be especially vulnerable to airborne chemicals and irritants and are termed "sensitive receptors." In addition, due to sustained exposure durations, all persons located within residential areas are considered sensitive receptors. In general, sensitive receptor locations include, but are not limited to, schools, hospitals, day care centers, convalescent homes, residential uses, places of worship, libraries, and outdoor recreational areas.

Section 5.13, Noise, Section 5.15, Public Services, and Section 5.16, Recreation provide additional descriptions of the locations of residential areas and other sensitive receptors in the vicinity of the Project Alignment. The majority of the Project Site is located in a remote area surrounded by undeveloped mountains and deserts with very few sensitive receptors within 1,000 feet. The closest residential community to the subtransmission line alignment is the unincorporated Mesa Verde Nicholls Warm Springs community located south of Interstate 10 at Mesa Drive. It is more than 2,000 feet from the Project ROW to the closest residence on Mesa Drive. A few isolated residential structures not associated with neighborhoods are also located near the Project ROW. Table 5.3-2 provides a list of sensitive receptors that are located within 1,000 feet of the Project.

Table 5.3-2 Sensitive Receptors within 1,000 feet of Project Components

Sensitive Receptor Type/Name	Receptor Type	Approximate Distance to Nearest Project Component	Nearest Project Component
Various Residences	Residential	330 feet	Subtransmission Line Wire Setup Site
Various Residences	Residential	720 feet	Mirage Laydown Yard
Desert Center Trailer Park	Residential	390 feet	Desert Center Laydown Yard

5.3.2 Regulatory Setting

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

5.3.2.1 Regulatory Setting

5.3.2.1.1 Federal

Clean Air Act

The 1970 Clean Air Act (CAA) established ambient air quality standards for six pollutants—O_3, PM_{10}, CO, NO_2, SO_2, and Pb—that are known to have adverse impacts on human health and the environment. To protect human health and the environment, the USEPA set primary and secondary maximum ambient thresholds for CAPs. The primary thresholds were set to protect human health, particularly for children and the elderly, as well as for individuals who suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further adverse effects on animals, crops, vegetation, and buildings. NAAQS are the combined primary and secondary standards set by the USEPA. The 1977 CAA Amendments required each state to develop and maintain a State Implementation Plan (SIP) for each CAP that exceeds the NAAQS for that pollutant. The SIP serves as a tool to reduce levels of pollutants known to cause impacts if they exceed ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was further amended to strengthen regulation of both stationary and mobile emission sources for the CAPs.

In 2001, the USEPA implemented new health-based NAAQS for O_3 and PM_{10}. A new federal O_3 standard of 0.080 ppm, established in 1997 and was based on a longer averaging period (8 hours versus 1 hour), recognizing that prolonged exposure to O_3 is more damaging. In March 2008, the USEPA further lowered the 8-hour O_3 standard from 0.080 ppm to 0.075 ppm. In February 2024, the USEPA strengthened the NAAQS for fine particulate matter ($PM_{2.5}$). The USEPA is also revising the Air Quality Index to improve public communications about the risks of $PM_{2.5}$ exposure. In February 2007, the NAAQS for NO_2 was amended to lower the existing not to exceed 1-hour standard of 0.25 ppm to 0.18 ppm and established a new annual standard of 0.030 ppm. In October 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 ppm to 0.070 ppm. In February 2024, the USEPA lowered the federal primary $PM_{2.5}$ annual standard to 9.0 $\mu g/m^3$ from the 12.0 $\mu g/m^3$ standard set in 2012. The secondary annual standard remains at 15.0 $\mu g/m^3$. Table 5.3-1 contains a list of the NAAQS and CAAQS.

5.3.2.1.2 State

California Clean Air Act

The California Clean Air Act of 1988 (CCAA) provided the framework for the management of air quality throughout the state. The CCAA requires local air quality management districts to develop and implement strategies to attain the CAAQS. For some pollutants, the CAAQS are more stringent than the NAAQS, and the CCAA mandated that the air quality management districts prepare air quality management plans (AQMPs) specifying how both the federal and State standards would be met. The CAAQS are listed in Table 5.3-1.

The CARB enforces the CAAQS and works with the State's Office of Environmental Health Hazard Assessment in identifying toxic air contaminants (TACs) and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987. Enacted to identify TAC hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, this law requires that a business or other establishment identified as a significant source of toxic emissions must provide the affected population with information about health risks posed by those emissions.

5.3.2.1.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and city regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

South Coast Air Quality Management District

The SCAQMD seeks to attain and maintain NAAQS and CAAQS and to ensure air pollutants do not pose a nuisance or significant health threat. The SCAQMD has adopted the 2022 AQMP, which builds upon its 2016 AQMP, to address the district's NAAQS nonattainment status for O_3.

The SCAQMD established the following rules to regulate air quality that are applicable to the Project:

- Rule 401 – Visible Emissions. This rule prohibits the discharge of visible emissions into the atmosphere from any single source of emission whatsoever for a period or periods aggregating more than 3 minutes at defined opacity levels.
- Rule 402 – Nuisance. This rule prohibits the discharge from any source whatsoever air contaminants or other material which may cause a nuisance.
- Rule 403 – Fugitive Dust. This rule reduces ambient concentrations of anthropogenic fugitive dust emissions.
- Rule 404.1 – Particulate Matter Concentration. This rule regulates the allowable concentration of particulate matter discharged.

Mojave Desert Air Quality Management District

The MDAQMD stipulates rules and regulations with which all projects within its jurisdiction must comply and provides methodologies for analyzing a project's impacts under the California Environmental Quality Act (CEQA). The MDAQMD established the following rules to regulate air quality that are applicable to the Project:

- Rule 401 – Visible Emissions. This rule provides limits for the visible emissions from sources within the MDAQMD.
- Rule 402 – Nuisance. This rule prohibits the discharge of air contaminants, from any source, or other materials that cause injury, detriment, nuisance, or annoyance to the public.
- Rule 403 – Fugitive Dust Control. This rule requires actions to prevent, reduce, and mitigate fugitive dust to reduce the amount of PM_{10} entrained in the ambient air from anthropogenic sources within the district.
- Rule 404 – Particulate Matter Concentration. This rule regulates the allowable concentration of particulate matter discharged per standard cubic foot of gas at standard conditions.

Federal 75 ppb Ozone Attainment Plan (Western Mojave Desert Non-attainment Area)

The MDAQMD is required to prepare an Air Quality Attainment Plan that outlines measures to achieve attainment levels for CAPs and avoid future levels that exceed applicable standards. The MDAQMD has developed the Federal 75 ppb Ozone Attainment Plan (MDAQMD 2017), which aims to achieve and maintain the NAAQS for O_3 by July 2027. This plan includes the latest planning assumptions regarding population vehicle activity, and industrial activity and provides an update of previously submitted plans and summaries of progress.

Reasonable Further Progress/Rate-of-Progress Plan

The MDAQMD adopted the Reasonable Further Progress/Rate-of-Progress Plan (MDAQMD 1994) to present milestone dates beginning in 1996 and continuing every 3 years thereafter by demonstrating Reasonable Further Progress (RFP) and attainment of the O_3 NAAQS by milestone dates. These emissions are verified at each milestone date to determine RFP until the O_3 NAAQS is attained.

5.3.2.2 Air Permits

SCE has not identified the need to apply for or receive any air quality-related permits from the SCAQMD or MDAQMD; SCE would comply with applicable rules and would develop and implement required plans.

5.3.3 Impact Questions

5.3.3.1 Air Quality Impact Questions

The significant criteria for assessing the impacts to air quality come from the CEQA Environmental Checklist. For air quality, the CEQA Checklist asks, would the Project:

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

5.3.3.1.1 Emissions Thresholds

The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* as a replacement for the *CEQA Air Quality Handbook* that was approved in 1993. The SCAQMD updated its significance thresholds for construction and operation of a project in March 2023 (SCAQMD 2023). In addition, the SCAQMD has developed Localized Significance Threshold lookup tables that utilize the allowable concentrations of pollutants combined with distances from the construction or operational areas to calculate allowable emission rates. The lookup tables are specific for the source/receptor area in the MDAB because they also include pollutant background and meteorological data specific to the area.

The MDAQMD updated its *CEQA and Federal Conformity Guidelines* in February 2020. The guidelines provide a framework for preparing air quality evaluations for environmental documents. The guidelines recommend specific criteria and threshold levels for determining whether a project may have a significant adverse air quality impact. The MDAQMD CEQA Guidelines direct multi-phased projects (e.g., projects with a construction phase and separate operation phase) with phases shorter than 1 year be compared to the district's daily thresholds. Because the Project's construction phase would last less than 1 year, the MDAQMD's daily thresholds have been utilized for this analysis.

Table 5.3-3 contains the applicable thresholds for both construction and operation and maintenance (O&M) phases of the Project within the SCAQMD and MDAQMD.

Table 5.3-3 Thresholds of Significance

Threshold Type	Pollutant					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
SCAQMD Daily Construction Thresholds (pounds per day)	75	100	550	150	150	55
SCAQMD Daily Operational Thresholds (pounds per day)	55	55	550	150	150	55
MDAQMD Daily Thresholds – Construction and Operation (pounds per day)	137	137	548	137	82	65
MDAQMD Annual Thresholds – Construction and Operation (tons per year)	25	25	100	25	15	12

Note: Thresholds for hydrogen sulfide and lead are not shown because the Project would not result in substantial emissions of either of these pollutants during construction and operation.
Acronyms: SCAQMD = South Coast Air Quality Management District; MDAQMD = Mojave Desert Air Quality Management District; VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 micrometers or less in diameter; $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter
Sources: SCAQMD 2023; MDAQMD 2016

5.3.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.3.4 Impact Analysis

5.3.4.1 Air Quality Impact Analysis

5.3.4.1.1 Air Quality Methodology

Impacts to air quality within the Project Area were determined by comparing the anticipated emissions from the construction phases of the Project to applicable emissions thresholds established by the SCAQMD and MDAQMD. These emissions estimates were generated using the methods established in version 2022.1 of the California Emissions Estimator Model (CalEEMod) and CARB's Emission Factor model. Aerial photographs were also used to identify potential sensitive receptors for their potential exposure to pollutants and odors. Emissions that would occur in the SCAQMD and MDAQMD were calculated separately, depending on the construction activity locations, and compared to the applicable thresholds of significance. Detailed information on construction activities, equipment usage, vehicle trips, and the emission calculations are in Appendix B.

After construction, ongoing maintenance-related activities are not expected to increase above existing conditions. Therefore, operational CAP emissions were not quantified.

5.3.4.1.2 Would the Project conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The SCAQMD (in conjunction with the Southern California Association of Governments [SCAG]) and the MDAQMD have developed AQMPs to meet the requirements of the federal Clean Air Act. The latest iterations of these plans are the SCAQMD (2017) *Final 2016 Air Quality Management Plan* and the MDAQMD (2017) *Federal 75 ppb (parts per billion) Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)*. The MDAQMD has also adopted the 1995 *Final Mojave Desert Planning Area Federal Particulate Matter (PM_{10}) Attainment Plan* to reduce PM_{10} concentrations within its

jurisdiction in an effort to achieve the NAAQS for PM_{10}. These plans address various federal nonattainment and attainment/maintenance planning requirements, are incorporated into the State Implementation Plan by the CARB, and are approved or disapproved by the Environmental Protection Agency (EPA).

The MDAQMD states that a project would be consistent with the AQMPs if it complies with all applicable air district rules and regulations, complies with all proposed control measures not yet adopted from the AQMPs, and is consistent with the growth forecasts used in development of the AQMPs (MDAQMD 2016). The Project would be required to comply with all applicable rules and regulations established by the relevant air quality management authority, including MDAQMD Rule 203 (Permit to Operate), MDAQMD Rule 403 (Fugitive Dust Control), MDAQMD Rule 203 (Permit to Operate), and SCAQMD Rule 403 (Fugitive Dust). In addition, the MDAQMD 2017 AQMP for O_3 does not include additional proposed control measures for direct O_3 precursor reduction purposes, and the proposed control measures in the MDAQMD 1995 AQMP for PM_{10} have either been adopted as part of Rule 403 or are not applicable to the Project. The proposed control measures in the SCAQMD 2016 AQMP are all transportation control measures that would not be applicable to Project activities. Furthermore, the Project would only involve construction-related activities, which are short term and temporary in nature. The Project would not include construction of residences or require additional employees for long-term maintenance activities such that additional population growth in the region would be induced. Furthermore, the Project would not result in changes to land use or zoning designations. Therefore, the Project would be consistent with the growth forecasts used in the development of the AQMPs. Accordingly, the Project would not conflict with or obstruct implementation of the MDAQMD 1995 AQMP for PM_{10}, the MDAQMD 2017 AQMP for O_3, or the SCAQMD 2016 AQMP. No impact would occur, and no mitigation would be required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

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

Less than Significant Impact with Mitigation. As discussed above under *Air Quality Standards and Attainment*, the ambient air in the Project Area is classified by the CARB as in nonattainment for O_3 and PM_{10}. The ambient air in the Project Area is either unclassified or classified as in attainment for all other State-regulated air pollutants.

Active Project construction is expected to occur over approximately two 4-month periods during an up to 18-month construction window and would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles. Emissions of VOCs, NO_X, and CO are primarily associated with mobile equipment exhaust, including off-road construction equipment and on-road motor vehicles. Fugitive particulate matter emissions are primarily associated with site preparation and vehicle travel on unpaved roads and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles. Emissions would vary day to day depending on the level of activity, the specific type of construction activity occurring, and—for fugitive dust—prevailing weather conditions.

Table 5.3-4 presents the estimated uncontrolled construction emissions in the SCAQMD and compares emissions to the applicable thresholds for CAPs. As shown in Table 5.3-4, uncontrolled emissions would

exceed applicable thresholds within the SCAQMD for NO_x during construction in 2025, 2026, and 2027. All other uncontrolled emissions would be below applicable thresholds.

To reduce these construction emissions, SCE would implement applicant proposed measures (APMs) AIR-1 and AIR-2. APM AIR-1 would require all construction equipment with a rating between 100 and 750 horsepower (hp) to comply with USEPA Tier 4 non-road engine standards. APM AIR-2 would control fugitive dust emissions by requiring disturbed areas to be covered, watered, or treated with a dust suppressant; reducing drop heights from excavators and loaders; requiring all haul trucks to maintain a minimum of 6 inches of freeboard or cover all loads; and trucks to maintain a speed limit of 15 miles per hour (mph) on unpaved public roads that do not have a posted speed limit, on Project-specific access routes, and within temporary work areas. As shown in Table 5.3-4, the controlled emissions within the SCAQMD would be below all applicable thresholds with the implementation of these APMs.

Table 5.3-4 SCAQMD Construction Emissions

	Construction Emissions (Pounds per Day)					
Emission Type	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Uncontrolled						
Threshold	75	100	550	150	150	55
2025 Emissions	13.9	117.8	162.6	0.5	128.6	19.2
Exceeded?	No	**Yes**	No	No	No	No
2026 Emissions	14.9	126.1	183.5	0.6	133.8	20.6
Exceeded?	No	**Yes**	No	No	No	No
2027 Emissions	14.9	126.1	183.5	0.6	133.8	20.6
Exceeded?	No	**Yes**	No	No	No	No
Controlled						
Threshold	75	100	550	150	150	55
2025 Emissions	6.9	52.7	216.9	0.5	67.3	10.9
Exceeded?	No	No	No	No	No	No
2026 Emissions	7.9	61.0	237.9	0.6	72.5	12.3
Exceeded?	No	No	No	No	No	No
2027 Emissions	7.9	61.0	237.9	0.6	72.5	12.3
Exceeded?	No	No	No	No	No	No

Note: Exceedances of a threshold are indicated in bold text with a grey background.

Table 5.3-5 presents the estimated uncontrolled construction emissions in the MDAQMD and compares emissions to the applicable thresholds for CAPs. As shown in Table 5.3-5, uncontrolled emissions would be below all applicable thresholds within the MDAQMD, except for NO_x emissions in 2026 and 2027. Controlled emissions that account for the implementation of APMs AIR-1 and AIR-2 have also been presented and all emissions would be below applicable thresholds.

Table 5.3-5 MDAQMD Construction Emissions

Emission Type	Construction Emissions (Pounds per Day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Uncontrolled						
Threshold	137	137	548	137	82	65
2025 Emissions	9.4	77.8	81.3	0.2	60.8	9.0
Exceeded?	No	No	No	No	No	No
2026 Emissions	18.9	155.6	162.6	0.5	121.6	18.0
Exceeded?	No	**Yes**	No	No	No	No
2027 Emissions	18.9	155.6	162.6	0.5	121.6	18.0
Exceeded?	No	**Yes**	No	No	No	No
Controlled						
Threshold	137	137	548	137	82	65
2025 Emissions	3.8	24.7	124.6	0.2	27.5	3.8
Exceeded?	No	No	No	No	No	No
2026 Emissions	7.5	49.3	249.2	0.5	55.1	7.6
Exceeded?	No	No	No	No	No	No
2027 Emissions	7.5	49.3	249.2	0.5	55.1	7.6
Exceeded?	No	No	No	No	No	No

Note: Approximately 4 months of active construction would occur within the MDAQMD in 2026.

As shown in Table 5.3-4 and Table 5.3-5, construction emissions would be below all applicable thresholds with the implementation of APMs AIR-1 and AIR-2. To reduce noise levels during the construction phase of the Project, SCE would also implement APM NOI-1. This measure would require all vehicles to minimize idling time to the extent practical, which would reduce exhaust emissions. While this APM is not required to ensure air quality emissions are below applicable thresholds, it would help to further reduce this impact. Construction of the Project would not result in a cumulatively considerable net increase of criteria pollutants. As a result, impacts would be less than significant with mitigation incorporated.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.3.4.1.4 Would the Project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact with Mitigation. Some exposed population groups—including children and people who are elderly or ill—can be especially vulnerable to airborne chemicals and irritants and are termed "sensitive receptors." In addition, due to sustained exposure durations, all persons located within residential areas are considered sensitive receptors. In general, sensitive receptor locations include, but are not limited to schools, hospitals, day care centers, convalescence homes, residential uses, places of worship, libraries, offices, city and county buildings, and outdoor recreational areas.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

Criteria Air Pollutants

Sensitive receptors in the Project vicinity could be exposed to increases in CAPs as a result of the fugitive dust released during earth-moving activities and vehicle travel on unpaved roads. The majority of the Project Alignment is located in a remote area with very few sensitive receptors within 1,000 feet of planned construction activities. Within the MDAQMD's jurisdiction, the unincorporated Mesa Verde Nicholls Warm Springs community contains the closest sensitive receptors to the Project Alignment. In this area, residences are located approximately 2,000 feet from the existing ROW. As described previously, the Project's emissions would be below all applicable thresholds. Because construction would be completed by multiple construction crews dispersed across the Project, the actual emissions that would be created at a single site, and thus near a single sensitive receptor, would be lower than the overall Project emissions in most cases. In addition, APM AIR-2 would further reduce fugitive dust emissions, and the implementation of APM NOI-1 would further reduce CAP emissions from off-road equipment use. Because all emissions would be well below applicable MDAQMD thresholds and construction activities in these locations would be limited in duration, impacts would be less than significant. The SCAQMD's Localized Significance Threshold methodology was used to analyze localized impacts associated with PM_{10}, $PM_{2.5}$, CO, and NO_x within its jurisdiction during construction. For construction activities, the equipment exhaust and fugitive dust emissions included in the Localized Significance Threshold analysis were limited to those generated on site (i.e., emissions from off-site travel were not included as they occur at a different location), in accordance with methodologies provided by the SCAQMD. The closest sensitive receptors to Project construction within the SCAQMD's jurisdiction are located approximately 330 feet (100 meters) east of Eagle Mountain Substation.

Table 5.3-6 identifies the applicable thresholds for the Project based on the proximity of surrounding receptors and the typical construction area size. Maximum daily emissions from Project activities have been compared to these thresholds and, as shown, all emissions would be below the applicable thresholds. Sensitive receptors within the SCAQMD's jurisdiction would not be exposed to substantial concentrations of CAPs, and impacts would be less than significant.

Table 5.3-6 Localized Significance Threshold Analysis

Construction Activity	Daily Emissions (Pounds)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Uncontrolled				
Threshold (1-acre site at 100 meters)	238	2,565	16	10
Maximum Emissions (Pulling)	29.3	29.7	1.4	1.3
Threshold Exceeded?	No	No	No	No
Controlled				
Threshold (1-acre site at 100 meters)	238	2,565	16	10
Maximum Emissions (Pulling)	8.0	42.6	0.5	0.4
Threshold Exceeded?	No	No	No	No

Notes:
- The nearest sensitive receptors to the Project are located approximately 330 feet (100 meters) east of activities near SCE's Eagle Mountain Substation.
- Thresholds were taken from the SCAQMD's East Riverside County Source Receptor Areas (Zone 31).

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

Valley Fever

San Joaquin Valley Fever (formally known as coccidioidomycosis) is an infectious disease caused by the fungus *Coccidioides immitis*. Valley fever is a disease of concern in arid and semiarid areas of the western U.S., including in the dry, inland regions of Southern California. Infection is caused by inhalation of *Coccidioides immitis* spores that become airborne when dry, dusty soil or dirt is disturbed by natural processes such as wind or earthquakes, or by human-induced, ground-disturbing activities such as construction, farming, or other activities (Ventura County Air Pollution Control District 2003). Inhalation of these spores can cause fever, chest pain, and coughing, among other signs and symptoms (California Department of Public Health 2021). The Project has the potential to result in elevated levels of the incidence of Valley fever cases resulting from uncontrolled fugitive dust during construction activities. However, the Project is not expected to generate a large amount of dust emissions because Project construction contractor(s) would control fugitive dust emissions during construction activities by complying with MDAQMD Rule 403, SCAQMD Rule 403, and implementing APM AIR-2. Regulatory compliance and implementation of APM AIR-2 would minimize the Valley fever-related effects of dust emissions. Therefore, impacts associated with Valley fever would be less than significant with mitigation incorporated.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.3.4.1.5 Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. During construction, odor emissions could be generated by diesel-powered construction equipment and vehicles. Such odors would be short term and limited to the immediate vicinity of the activity. These emissions would be temporary in nature and disperse quickly. Because the Project is located in a remote desert and mountain area with few people residing or working near the majority of the Project, temporary Project construction activities are not expected to result in odorous emissions that would adversely affect a substantial number of people. Additionally, the Project would not include the siting of a new, permanent source of odors. Therefore, the impacts during construction would be less than significant, and no mitigation would be required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.3.4.2 Air Quality Emissions Modeling

Emissions from construction activities were estimated using emission factors and methods from CalEEMod v2022.1, emission factors from the USEPA AP-42, Compilation of Air Pollutant Emission Factors, CARB

vehicle emission models, and California Energy Commission (CEC) and other agency studies (California Air Pollution Control Officers Association [CAPCOA] 2022). Emissions modeling results are presented in Appendix B; all calculations, presented in Microsoft Excel format, are provided to the CPUC under separate cover.

5.3.4.3 Air Quality Emissions Summary

Tables summarizing the anticipated uncontrolled and controlled air quality emissions for the Project and applicable thresholds for each applicable attainment area are presented in Table 5.3-4 and Table 5.3-5, respectively. The assumptions that were applied in the controlled emissions estimates are also provided in Appendix B.

5.3.4.4 Health Risk Assessment

Review of Office of Environmental Health Hazard Assessment (OEHHA) guidance (OEHHA 2015) indicates that a Health Risk Assessment is not required for the Project because it does not include operation of new stationary sources that would result in the emissions of toxic air pollutants. The total duration of construction activities could extend for up to 8 months, but it is unlikely the activities within the vicinity of identified sensitive receptors would occur for longer than 2 months, which has been identified as the minimum time for evaluating cancer risks following OEHHA guidance. Appendix B lists the various activities that generally range from 1 to 20 days. Laydown yards that would be used for a period greater than 6 months would not be located within 1,000 feet of identified sensitive receptors.

5.3.5 CPUC Draft Environmental Measures

The Project would result in less than significant impacts related to air quality with the APMs identified in the subsections that follow; as such, no CPUC Draft Environmental Measures have been identified.

5.3.5.1 Applicant Proposed Measures

5.3.5.1.1 Air Quality APMs

The following APM would be implemented to reduce air quality impacts associated with the Project:

- **AIR-1: Tier 4 Construction Equipment.** All construction equipment with a rating between 100 and 750 hp will be required to use engines compliant with USEPA Tier 4 non-road engine standards. In the event a Tier 4 engine is not available for any off-road construction equipment with rating at or higher than 100 hp, that documentation of the unavailability will be provided.
- **AIR-2: Dust Control.** During construction, fugitive dust be controlled by implementing the following measures:
  - Surfaces disturbed by construction activities will be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
  - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles will be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or will be covered.
  - Drop heights from excavators and loaders will be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material will be covered with tarps or maintain at least 6 inches of freeboard.
  - Vehicles will maintain speeds of 15 mph or less on unpaved roads that do not have a posted speed limit, Proposed Project-specific access routes, and within temporary work areas.

5.3.5.1.2 Cross-Referenced APMs

The following APM relevant to a different impact category would also reduce air quality impacts associated with the Project:

- **NOI-1: Noise Control.** SCE shall employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction:
  - Construction activities shall be confined to daytime, weekday and weekend hours established by Section 9.52.020(h) of the Riverside County Code of Ordinances, which restricts temporary construction noise to between 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. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours.
  - Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
  - Stationary noise sources (e.g., generators, pumps) and staging areas shall be shielded by an enclosure, temporary sound walls, acoustic blankets, or other barrier where noise levels are above 80 A-weighted decibels (dBA) at sensitive receiver locations. Heights and specifications of noise barriers will be designed to reduce construction noise to below 80 dBA (Federal Transit Administration 2018).
  - Construction traffic and helicopter flight shall be routed away from residences and schools.
  - Unnecessary construction vehicle use and idling time shall be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off.

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5.4 Biological Resources

This section describes the biological resources in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project), as well as the potential impacts to biological resources from construction and operation of the Project.

This section is based on information obtained from the *Eagle Mountain-Blythe 161 kV Transmission Line Rating Remediation Project Biological Resources Technical Report* (Rincon 2023) (herein referred to as "Biological Resources Technical Report" [BRTR]) (Appendix C) prepared for the Project.

Research for this analysis involved a review of the following resources:

- Aerial imagery in Google Earth
- 7.5-minute United States Geological Survey (USGS) topographic quadrangle maps including Victory Pass, East of Victory Pass, Corn Spring, Sidewinder Well, Aztec Mines, East of Aztec Mines, Hopkins Well, Roosevelt Mine, and Ripley.
- Aerial imagery of the Project Area (Google Earth Pro 2022)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) RareFind5 (Garcia and Associates [GANDA] 2018)
- Consortium of California Herbaria (CCH 2022)
- United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2021a)
- CDFW Special Plants and Animals Lists. (CDFW 2022b, CDFW 2022c)
- The National Wetlands Inventory Wetlands and Riparian Google Earth file (USFWS 2021b)
- The Watershed Boundary (WBD) Dataset (USGS 2019)
- The web-based Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2019)
- The National List of Hydric Soils (NRCS 2015)
- Reports, Global Information Systems (GIS) data, and data from Southern California Edison's (SCE) Field Reporting Environmental Database for past SCE projects or related renewable energy projects within a 5-mile buffer of the Project.
- Survey data from 2016, 2017, 2021, and 2022 surveys for the Project

5.4.1 Environmental Setting

The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management (BLM) or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas. The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe. The Project is in the Victory Pass, East of Victory Pass, Corn Spring, Sidewinder Well, Aztec Mines, East of Aztec Mines, Hopkins Well,

Roosevelt Mine, and Ripley 7.5-minute USGS topographic quadrangles. This section provides a detailed description of the biological resources found along the Project Alignment.

5.4.1.1 Biological Resources Technical Report

The BRTR summarizes the methodologies used during the vegetation community mapping, habitat assessment, aquatic resources delineation, and rare plant surveys performed for the Project. The BRTR discusses observed natural vegetation communities, potentially jurisdictional aquatic features, observed special-status species, and species with the potential to occur along the Project Alignment. The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **Absent** – The species and/or positive sign were not observed during focused survey(s), and it is reasonable to assume it would have been observed if present. Surveys were conducted during the appropriate blooming/activity period (and, for plants, the species was observed at a reference population).
- **Occurs** – The species and/or positive sign were observed during a site visit or field survey.
- **Does Not Occur** – The species would not occur because the study area is outside the species' known current geographic/elevation range, lacks habitat or suitable conditions, and/or absence can be reasonably assumed based on historical records.
- **Likely** – All site features indicate this species is very likely present and should be expected. Criteria include:
  - Study area is within the species' geographic range.
  - Suitable habitat (e.g., soils, vegetation communities, elevation, roost sites, leaf litter/debris, water, host plants, etc.) is present.
  - Distance to historical record(s) less than 25 years old is less than 1 mile for fish, 2 miles for plants, and 5 miles for mammals, birds, and herptiles.
- **Unlikely** – Species could occur given the presence of habitat, but local records of the species are not known or are greater than 25 years old.

The BRTR is provided in Appendix C to this PEA.

5.4.1.2 Survey Area (Local Setting)

The biological study area (study area) shown in Figures 2 and 3 of the BRTR includes all Project disturbance areas, access roads, and material yards plus an appropriate buffer to account for potential direct and indirect impacts to biological resources.

The initial vegetation mapping, habitat assessment, and focused surveys covered locations subject to ground disturbance (e.g., locations where structures would be replaced, wire setup areas, material staging yards, guard sites), based on the iteration of the Project design available at the time of the surveys, plus a 500-foot buffer. For the existing structure locations where structure replacement would not occur, the existing hardware that holds the conductors in suspension would be replaced. To the extent feasible, equipment would be limited to the operation and maintenance (O&M) work area (e.g., an approximately 80-foot radius around each structure footprint, restricted to the existing ROW) and other disturbed areas (e.g., access roads). Use of the existing O&M work areas will be confined to areas of previous permanent disturbance within the approximate 80-foot radius and will not result in new impacts to vegetation or undisturbed land cover. These existing disturbance areas are considered existing permanent disturbance and if construction

activities require disturbance beyond these existing disturbed areas, those impacts will be tracked and included as part of the Project's restoration requirements. However, for the purpose of assessing the estimated maximum potential impacts, these areas are included in the Project mapping and included in the impact analysis.

Due to new design and safety considerations, work areas were later delineated for all Project Sites where work would occur. As needed, additional surveys were conducted at sites that were excluded from previous surveys. Table 5.4-1 presents the months and years on which surveys along the Project Alignment were conducted. Details on the survey methodology and desktop analysis of data are also provided in the BRTR.

Table 5.4-1 Biological Surveys Conducted within the Project Alignment

Type of Survey	Year	Month(s)
Vegetation Mapping and Habitat Assessment	2016	November
	2021	January and April
Aquatic Resources Delineation	2017	July
	2019	April
	2021	January
Special-Status Plant Surveys	2017	May and August
	2021	September
	2023	March and April
Desert Tortoise Focused Survey	2017	May
Desert Tortoise Habitat Assessment	2017	May
Desert Tortoise Protocol Surveys	2017	May

Source: BRTR (Appendix C)

5.4.1.3 Vegetation Communities and Land Cover

Fifteen vegetation communities and four types of developed/disturbed land cover types were identified in the study area. Characterization of the vegetation communities followed the *Manual for California Vegetation*, 2nd edition (MCVII) (Sawyer et al. 2009), and the communities are categorized by alliance (Sawyer et al. 2009, CNPS 2022a). Developed/disturbed areas were categorized as active agriculture, developed, disturbed, and open water. Vegetation communities and other land cover types are mapped in Figure 2 of the BRTR (Appendix C).

A complete list of plant species observed in the study area during botanical surveys (GANDA 2018, Artemis 2021a) is included in Appendix E of the BRTR (Appendix C). Vegetation communities and land cover types in the study area are summarized in Table 5.4-2, including their global (G) and State (S) conservation status ranking.

Table 5.4-2 Vegetation Communities and Land Cover Types in Study Area

Type of Land Cover	Status[1]
Sensitive Vegetation Communities	
Alkali Weed – Saltgrass Playas and Sinks	G2/S2
Big Galleta Shrub-Steppe	G3/S2
Desert-willow – Smoketree Wash Woodland	G4/S3
Mesquite Thicket	G5/S3
Mojave – Sonoran Desert Dunes	G3/S2
Non-sensitive Vegetation Communities	
Allscale Scrub	G4/S4
Blue Palo Verde – Ironwood Woodland	G4/S4
Cheesebush – Sweetbush Scrub	G4/S4
Creosote Bush Scrub	G5/S5
Creosote Bush – White Bursage Scrub	G5/S5
Red Brome or Mediterranean Grass Grasslands	GNA/SNA
Rigid Spineflower – Hairy Desert Sunflower	G4/S4
Tamarisk Thickets	GNA/SNA
Tournefort's Mustard and Other Ruderal Desert Forb Patches	GNR/SNR
White Bursage Scrub	G5/S5
Non-Sensitive Vegetation Communities	
Active Agriculture	None
Developed	None
Disturbed	None
Open Water	None

[1]Conservation Status Ranking Definitions:

G1 or S1: Critically Imperiled Globally or Subnationally (State)

G2 or S2: Imperiled Globally or Subnationally (State)

G3 or S3: Vulnerable to extirpation or extinction Globally or Subnationally (State)

G4/5 or S4/5: Apparently secure, common and abundant

GNA or SNA: Not applicable; community is not a suitable target for conservation

GNR: Global Rank not assessed

The study area is dominated by barren ground or sparse native vegetation. Creosote Bush Scrub, Creosote Bush – White Bursage Scrub, and Blue Palo Verde – Ironwood Woodland are the dominant natural communities throughout the study area along the Project Alignment. These communities are characterized by generally wide-spaced mature shrubs or trees and a sparse understory composed of emergent shrubs, subshrubs, and annual herbaceous species. Non-native plant species also occur throughout the study area. The dominant non-native species are Mediterranean grass and Saharan mustard.

Other land cover types have little to no vegetation and consist of both anthropogenically disturbed and natural areas. Developed and disturbed lands generally consist of temporarily and permanently anthropogenically influenced areas, including paved and unpaved roadways, substations, buildings, and associated infrastructure.

Complete descriptions of each vegetation community and land cover type are included in the BRTR (Appendix C).

5.4.1.3.1 Sensitive Natural Communities

The sensitivity of vegetation communities is ranked based on the NatureServe Conservation Status Assessments: Methodology for Assigning Ranks (Faber-Langendoen et al. 2012). Vegetation communities are designated as sensitive by CDFW if they have State (S) ranks of S1 (very rare to threatened) to S3 (vulnerable). The rankings are defined as follows:

- S1, Critically Imperiled: Critically imperiled in California because of extreme rarity (often five or fewer occurrences) or because of some factor(s), such as very steep declines, making it especially vulnerable to extirpation from the State
- S2, Imperiled: Imperiled in California because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or State
- S3, Vulnerable: Vulnerable in California due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation
- S4, Apparently Secure: Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors
- S5, Secure: Common, widespread, and abundant in the State

Five CDFW-sensitive communities were mapped in the study area: Alkali Weed – Salt Grass Playas and Sinks, Big Galleta Shrub-Steppe, Desert-Willow – Smoketree Wash Woodland, Mesquite Thickets, and Mojave – Sonoran Desert Dunes.

Five of the non-sensitive communities mapped in the study area have defined associations that are considered sensitive: Cheesebush – Sweetbush Scrub, Creosote Bush Scrub, Creosote Bush – White Bursage Scrub, Desert-Willow – Smoketree Wash Woodland, Rigid Spineflower – Hairy Desert Sunflower, and White Bursage Scrub. The vegetation mapping data does not permit classification of communities at the association level. Therefore, these communities, which are not sensitive at the alliance level, are treated as non-sensitive in the BRTR.

5.4.1.4 Aquatic Features

Table 5.4-3 presents a summary of the type, jurisdiction, and size of waters delineated in the study area. The full methods and results are presented in the *Aquatic Resources Delineation Report* (ARDR) (Artemis 2021b) (Appendix I of the BRTR [Appendix C]).

Table 5.4-3 Aquatic Resources in the Project Area

Waters Type	Amount (acres/linear feet)
Waters of the State (RWQCB/CDFW Jurisdiction)[1]	
Basin	8.44/NA
Ditch/Canal	0.30/1,660
Unvegetated Channel	8.88/42,405
Vegetated Channel	1.39/4,472
Subtotal Waters of the State (RWQCB/CDFW Jurisdiction)	*19.01/48,536*
Waters of the State (CDFW Exclusive Jurisdiction)	
Basin	0.13/NA
Ditch/Canal - Channel Bank[2]	0.21/1,660
Unvegetated Channel - Channel Bank[2]	2.50/42,405
Vegetated Channel - Channel Bank[2]	0.04/4,472
Watercourse[3]	17.03/NA
Subtotal Waters of the State (CDFW Exclusive Jurisdiction)	*19.91/4,472*
Grand Total RWQCB Jurisdiction	**19.01/48,536**
Grand Total CDFW Jurisdiction	**38.92/48,536**

CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board

[1] Defined by ordinary high water mark limits. Includes intrastate isolated waters. Includes stream channels within watercourse polygons.

[2] Includes individual stream channel banks within watercourse polygons.

[3] Defined as a larger channel delineated to encompass multiple smaller channels. Linear distances for watercourses are the same as the linear distances for the vegetated and unvegetated channels located within the watercourse. Does not include acreage and linear distance of individual stream channels and channel banks within watercourse polygons.

NA = Not applicable

Source: Artemis 2021b

No areas potentially meeting the federal or State wetland definition were identified in the jurisdictional survey area. No wetland plant species were observed in the densities or assemblages that would normally indicate the presence of a hydrophytic plant community. Vegetated and unvegetated stream channels possessing an ordinary high water mark (OHWM) that may be Waters of the U.S. were delineated in the jurisdictional survey area. However, all of these features were determined to be isolated State waters that are non-navigable, are not relatively permanent, and that lack a surface water or significant nexus connection with traditional navigable waters or a tributary thereof. All features delineated as ditch/canal, basin, vegetated channel, unvegetated channel, channel bank, and watercourse are non-tributary, ephemeral features classified as intrastate isolated Waters of the State subject to both Regional Water Quality Control Board (RWQCB) and CDFW jurisdiction. The banks of these features are subject to CDFW-exclusive jurisdiction, as are watercourses consisting of floodplains and alluvial terraces.

5.4.1.5 Habitat Assessment

For the purposes of the BRTR, plant and animal taxa were considered to be special-status species if they were classified as one or more of the following:

- Species listed as threatened or endangered under FESA, or candidates for listing under FESA
- Species listed as rare, threatened, or endangered under CESA, or candidates for listing under CESA

- Species designated as Fully Protected, Species of Special Concern (SSC), or Watch List by CDFW
- Species designated as Sensitive by BLM
- Wildlife species identified as protected furbearers by the CFGC
- Plants assigned a CRPR, a ranking system originally developed by the California Native Plant Society (CNPS) (CNPS 2006) to better define and categorize rarity in California's flora
- Species designated as locally important by the local agency and/or otherwise protected through ordinance or local policy

5.4.1.5.1 Special-status Plant Species

A total of 68 special-status plant species were originally evaluated for potential to occur (AECOM 2016). Based on a 2-mile CNDDB radius search parameter and a review of literature, the potential plant list was revised to 30 species (Appendix K of the BRTR [Appendix C]). Ten special-status plant species were identified in the study area during the habitat assessment or botanical surveys:

- Watson's amaranth (*Amaranthus watsonii*)
- Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*)
- Gravel milk-vetch (*Astragalus sabulonum)*
- Emory's crucifixion thorn (*Castela emoryi*)
- foxtail cactus (*Coryphantha alversonii*)
- ribbed cryptantha (*Cryptantha costata*)
- California ditaxis (*Ditaxis serrata* var. *californica*)
- Abram's spurge (Euphorbia abramsiana)
- roughstalk witch grass (Panicum hirticaule ssp. hirticaule)
- desert unicorn plant (Proboscidea althaeifolia)

None of the plant species with potential to occur in the study area are federally or State listed. There are no records of federally or State listed plant species within 2 miles of the Project. Table 5.4-4 evaluates special-status plant species with potential to occur within the vicinity of the Project and indicates whether or not they were observed in the study area.

Table 5.4-4 Special-Status Plant Species in the Regional Vicinity of the Project Area

Scientific Name Common Name	Status	Flowering Period	Growth Form and Habitat Requirements	Potential to Occur[1]
Amaranthus watsonii Watson's amaranth	4.3	Apr–Sep	Annual herb that occurs in Mojavean and Sonoran desert scrub. Elevations between 60 and 5,600 feet.	**Occurs:** A large number of Watson's amaranth were observed in the eastern portion of the plant survey area in 2021.
Astragalus insularis var. *harwoodii* Harwood's milk-vetch	2B.2	Jan–May	Annual herb found on sandy or gravelly soils in desert dunes and Mojavean desert scrub. Elevations between sea level and 2,330 feet.	**Occurs:** One population of this species, consisting of two plants, was observed in the plant survey area in 2017.
Astragalus nutans Providence Mountains milk-vetch	4.3	Mar–Jun (Oct)	Annual herb found on sandy or gravelly soils in Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland, and Sonoran desert scrub. Elevations between 1,475 and 6,400 feet.	**Does not occur:** Although the species has been recorded in a quad that overlaps the Project (CNPS 2022) and suitable habitat is present, no occurrences of the species are documented within 5 miles.
Astragalus sabulonum gravel milk-vetch	2B.2	Feb–Jun	Annual or perennial herb found on flats, washes, and roadsides in desert dunes, Mojavean desert scrub, Sonoran desert scrub on usually sandy and sometimes gravelly soils. Elevations between 195 and 3,050 feet.	**Occurs:** One population of this species, consisting of two plants, was observed in the Study Area during spring 2023 rare plant surveys.
Astragalus tricarinatus triple ribbed milk vetch	1B.2	Feb–May	Perennial herb found in Joshua tree woodland and Sonoran desert scrub on gravelly or sandy soils. Elevations between 1,475 and 3,900 feet.	**Does not occur:** Although the species was recorded within 2 miles of the Project in 2016, the Study Area is outside its elevational range.
Calliandra eriophylla pink fairy duster	2B.3	Jan–Mar	Perennial deciduous shrub found on sandy or rocky soils in Sonoran desert scrub. Elevations between 395 and 4,920 feet.	**Unlikely:** A historical record of the species is located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the record is greater than 25 years old.
Castela emoryi Emory's crucifixion thorn	2B.2	Jun–Jul	Perennial deciduous shrub found on gravelly soils in Mojavean desert scrub, Sonoran desert scrub, and playas. Elevations between 295 and 2,380 feet.	**Occurs:** The species was observed in the plant survey area in 2021 and at several locations in the larger Study Area in 2016.

Scientific Name Common Name	Status	Flowering Period	Growth Form and Habitat Requirements	Potential to Occur[1]
Chaenactis carphoclinia var. *peirsonii* Peirson's pincushion	1B.3	Mar–Apr	Annual herb found on sandy soils in Sonoran desert scrub. Elevations between 10 and 1,640 feet.	**Unlikely:** A historical record of the species is located within 2 miles of the Project (CCH 2022) and suitable habitat is present. However, the record is greater than 25 years old.
Colubrina californica Las Animas colubrina	2B.3	Apr–Jun	Perennial deciduous shrub found in Mojavean desert scrub and Sonoran desert scrub. Elevations between 35 and 3,280 feet.	**Unlikely:** Historical records of the species are located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the records are greater than 25 years old.
Coryphantha alversonii foxtail cactus	4.3	Apr–Jun	Perennial stem-succulent found on sandy or rocky, usually granitic, soils in Mojavean desert scrub and Sonoran desert scrub. Elevations between 245 and 5,005 feet.	**Occurs**: The species was observed at several locations in the Project plant survey area in 2017 and 2021.
Cryptantha costata ribbed cryptantha	4.3	Feb–May	Annual herb found in desert dunes and sandy soils in Mojavean desert scrub and Sonoran desert scrub. Elevations between 195 and 1,640 feet.	**Occurs:** Ten populations were observed in the plant survey area in 2017, some of which contained up to 1,000 individuals.
Cryptantha holoptera winged cryptantha	4.3	Mar–Apr	Annual herb found in Mojavean desert scrub and Sonoran desert scrub. Elevations between 330 and 5,545 feet.	**Does not occur:** Although the species has been recorded in a quad that overlaps the Project (CNPS 2022) and suitable habitat is present, no mapped locations of the species are located within 5 miles of the Project.
Ditaxis claryana glandular ditaxis	2B.2	Oct–Mar	Perennial herb found on sandy soils in Mojavean desert scrub and Sonoran desert scrub. Elevations between sea level and 1,525 feet.	**Unlikely:** A historical record of the species is located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the record is greater than 25 years old.
Ditaxis serrata var. *californica* California ditaxis	3.2	Mar–Dec	Perennial herb found in Sonoran desert scrub. Elevations between 100 and 3,280 feet.	**Occurs:** One individual was observed in the plant survey area in 2017 and 30 individuals were observed in the plant survey area in 2021.

Scientific Name Common Name	Status	Flowering Period	Growth Form and Habitat Requirements	Potential to Occur[1]
Eriastrum harwoodii Harwood's eriastrum	1B.2 S	Mar–Jun	Annual herb found in desert dunes. Elevations between 410 and 3,000 feet.	**Absent:** This species was not observed during spring 2023 rare plant surveys.
Eschscholzia androuxii Joshua Tree poppy	4.3	Feb–May (Jun)	Annual herb found on sandy, gravelly, and/or rocky soils in desert washes, flats, and slopes in Joshua tree woodland and Mojavean desert scrub. Elevations between 1,920 and 5,530 feet.	**Does Not Occur:** There are no historical records of this species within 5 miles of the Project. The Project is outside of this species' typical elevation range.
Euphorbia abramsiana Abram's spurge	2B.2	Sep–Nov	Annual herb found on sandy soils in Mojavean desert scrub and Sonoran desert scrub. Elevations between 15 and 4,300 feet.	**Occurs:** Numerous individuals of Abram's spurge were observed in and adjacent to the plant survey area in 2021.
Funastrum utahense Utah vine milkweed	4.2	Apr–Jun	Perennial herb found on sandy or gravelly soils in Mojavean desert scrub and Sonoran desert scrub. Elevations between 330 and 4,710 feet.	**Unlikely:** Although there are records of the species within 5 miles of the Project (CCH 2022) and suitable habitat is present, the species has not been documented within 2miles of the Project.
Hymenoxys odorata bitter hymenoxys	2B.1	Feb–Nov	Annual herb found in sandy areas in riparian scrub and Sonoran desert scrub. Elevations between 150 and 490 feet.	**Unlikely:** A historical record of the species is located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the record is greater than 25 years old.
Imperata brevifolia California satintail	2B.1	Sep–May	Perennial rhizomatous herb found in chaparral, coastal scrub, Mojavean desert scrub, alkali meadows and seeps, and mesic riparian scrub. Elevations between sea level and 3,985 feet.	**Does not occur:** The species has been recorded in quads within 5 miles of the Project (CNPS 2022) and suitable habitat is present. However, no mapped locations of the species are within 5 miles of the Project.
Jaffueliobryum wrightii Wright's jaffueliobryum moss	2B.3	–	Moss found in dry openings and rock crevices on carbonate substrates in alpine dwarf scrub, Mojavean desert scrub, and pinyon and juniper woodland. Elevations between 525 and 8,200 feet.	**Does not occur:** The species has been recorded in a quad within 5 miles of the Project (CNPS 2022) and suitable habitat is present. However, no mapped locations of the species are within 5 miles of the Project.

Scientific Name Common Name	Status	Flowering Period	Growth Form and Habitat Requirements	Potential to Occur[1]
Koeberlinia spinosa var. *tenuispina* slender-spined all thorn	2B.2	May–Jul	Perennial deciduous shrub found in riparian woodland and Sonoran desert scrub. Elevations between 490 and 1,675 feet.	**Absent:** Species was not detected during spring 2023 rare plant surveys.
Lycium torreyi Torrey's box thorn	4.2	(Jan-Feb), Mar–Jun, (Sep-Nov)	Perennial shrub found on sandy or rocky soils in washes, streambanks, and desert valleys in Mojavean desert scrub and Sonoran desert scrub. Elevations between 165 and 4,005 feet.	**Does not occur:** Historical records of the species are located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the records are greater than 75 years old.
Panicum hirticaule ssp. *hirticaule* roughstalk witch grass	2B.1	Aug–Dec	Annual herb found in sandy or silty depressions in desert dunes, Joshua tree woodland, Mojavean desert scrub, and Sonoran desert scrub. Elevations between 150 and 4,315 feet.	**Occurs:** Numerous individuals of the species were observed in and adjacent to the plant survey area in 2021.
Penstemon pseudospectabilis ssp. *pseudospectabilis* desert beardtongue	2B.2	Jan–May	Perennial herb found most often in sandy washes, and sometimes in rocky washes in Mojavean desert scrub and Sonoran desert scrub. Elevations between 260 and 6,350 feet.	**Unlikely:** Historical records of the species are located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the records are greater than 25 years old.
Proboscidea althaeifolia desert unicorn plant	4.3	May–Sep	Perennial herb found on gently sloping sandy flats and washes and sometimes roadsides in Sonoran desert scrub. 280–3,280 feet.	**Occurs:** Numerous individuals of the species were observed in and adjacent to the plant survey area in 2017.
Tetracoccus hallii Hall's tetracoccus	4.3	Jan–May	Perennial deciduous shrub found in Mojavean desert scrub and Sonoran desert scrub. Elevations between 100 and 3,935 feet.	**Unlikely:** Although there are records of the species within 5 miles of the Project (CCH 2022) and suitable habitat is present, the species has not been documented within 2 miles of the Project.
Teucrium cubense ssp. *depressum* dwarf germander	2B.2	Mar–May	Annual herb found on desert dunes and playa margins in Sonoran desert scrub. Elevations between 150 and 1,310 feet.	**Unlikely:** Historical records of the species are located within 2 miles of the Project (CDFW 2022) and suitable habitat is present. However, the records are greater than 25 years old.

Scientific Name Common Name	Status	Flowering Period	Growth Form and Habitat Requirements	Potential to Occur[1]
Wislizenia refracta ssp. *palmeri* Palmer's jackass clover	2B.2	Jan–Dec	Perennial deciduous shrub found in chenopod scrub, desert dunes, Sonoran desert scrub, and Sonoran thorn woodland. Elevations between sea level and 985 feet.	**Unlikely:** Although there are records of the species within 5 miles of the Project (CCH 2022) and suitable habitat is present, the species has not been documented within 2 miles of the Project.
Yucca brevifolia western Joshua tree	Candidate Threatened	Apr–May	Joshua tree woodland, montane chaparral, pinyon and juniper woodland, Sonoran and Mojavean desert scrub. Elevations between 2,560 and 7,218 feet.	**Does Not Occur:** There are no historical records of this species within 5 miles of the Project. The Project is outside of this species' typical elevation range.

CRPR (CNPS California Rare Plant Rank)

1B = Rare, threatened, or endangered in California and elsewhere

2B = Rare, threatened, or endangered in California, but more common elsewhere

3 = Need more information (Review List)

4 = Limited Distribution (Watch List)

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)

.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Status (Federal)

S = BLM Sensitive Species

[1] **Definitions Regarding Potential for Occurrence**

Occurs	The species and/or positive sign was observed on-site during site visit or field survey.
Absent	The species and/or positive sign were not observed during focused survey(s) and it is reasonable to assume it would have been observed if present. Surveys were conducted during the appropriate blooming/activity period (and, for plants, the species was observed at a reference population).
Likely	All site features indicate this species is very likely present and should be expected. Criteria include: ▪ Project Site within geographic range; ▪ Suitable habitat present (e.g., soils, vegetation communities, elevation, roost sites, leaf litter/debris, water, host plants, etc.); and ▪ Distance to historical record(s) less than 25 years old is less than 1 mile for fish, 2 miles for plants, and 5 miles for mammals, birds, and herptiles.
Unlikely	Species could occur given the presence of habitat, but local records of the species are not known or are greater than 25 years old.
Does Not Occur	The species would not occur because the Project Site is outside known or current geographic/elevation range, lacks habitat or suitable conditions, and/or there is reasonable certainty to assume absence based on historical records.

5.4.1.5.2 Special-status Wildlife Species

Based on the results of a 5-mile radius CNDDB query, 38 special-status wildlife species were evaluated for their potential to occur in the study area (Appendix K of the BRTR [Appendix C]). Five special-status wildlife species were detected in the study area during Project surveys (Figure 3 of the BRTR [Appendix C]): desert tortoise, burrowing owl, loggerhead shrike, black-tailed gnatcatcher, and desert kit fox. Based on the presence of historical occurrences and the results of the habitat assessment and vegetation mapping, it was determined that nine additional species are likely to occur in the study area: Couch's spadefoot, Mojave fringe-toed lizard, prairie falcon, Bendire's thrasher, crissal thrasher, LeConte's thrasher, California leaf-nosed bat, cave myotis, and American badger. The 14 special-status wildlife species that were observed or determined to be likely to occur are described below. Among these, the federally and State threatened desert tortoise is the only species that is covered by FESA or CESA. The remainder are non-listed special-status species. Table 5.4-5 evaluates special-status animal species with potential to occur within the vicinity of the Project and indicates whether or not they were observed in the study area.

Table 5.4-5 Special-Status Animal Species in the Regional Vicinity of the Project Area

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Fish			
Xyrauchen texanus razorback sucker	FE SE FP	Found in the Colorado River bordering California. Adapted for swimming in swift currents but also need quiet waters. Spawns in areas of sand/gravel/rocks in shallow water.	**Does Not Occur:** No aquatic habitat is present in the Study Area. There are historical records of the species in the Colorado River (CDFW 2022), but it has not been observed within five miles of the Project or in the past 25 years.
Amphibians			
Scaphiopus couchii Couch's spadefoot	SSC S	Found in temporary desert rainpools that last at least seven days, with water temperatures greater than 15 °C (59 °F) and with close subterranean refuge sites. Requires loose, sandy well-drained soils within grassland/prairies, creosote and mesquite shrublands, and desert washes. An insect food base, especially termites, must be available.	**Likely:** The species has been documented within five miles of the Project in the past 25 years (record is from 2012). Suitable habitat is present within the Study Area, however the species was not observed during Project surveys.
Reptiles			
Gopherus agassizii desert tortoise	FT ST	Widely distributed in the Mojave, Sonoran, and Colorado Deserts from below sea level to 2,200 m (7,220 ft). Most common in desert scrub, desert wash, and Joshua tree habitats, but occurs in almost every desert habitat except those on the most precipitous slopes.	**Occurs:** Habitat is present and the species was observed in the Project Study Area. One Class 5 carcass, four Class 3 burrows, 19 Class 4 burrows, and six Class 5 burrows were observed in the Study Area during protocol desert tortoise surveys in 2017.
Uma scoparia Mojave fringe-toed lizard	SSC S	Fine, loose, wind-blown sand in sand dunes, dry lakebeds, riverbanks, desert washes, sparse alkali scrub, and desert scrub. Shrubs or annual plants may be necessary for arthropods found in the diet.	**Occurs:** Habitat is present and the species was observed in the Project Study Area in 2010 and 2011 (CDFW 2022).
Birds			
Athene cunicularia burrowing owl	SSC S	A yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Formerly common in appropriate habitats throughout the State, excluding the humid northwest coastal forests and high mountains.	**Occurs**: One active burrowing owl burrow was observed in the Project Study Area during protocol desert tortoise surveys in 2017. Nesting, migration, and wintering habitat is present.

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Buteo swainsoni Swainson's hawk	ST S	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Does Not Occur:** No historical records of the species are located within five miles of the Project (CDFW 2022). Migration habitat is present, but the Project is outside of the species' typical nesting range. The species was not observed during Project surveys.
Charadrius montanus mountain plover	SSC S	Winter resident from September through March. Southern California range includes Imperial Valley, plowed fields of Los Angeles and western San Bernardino counties, and along the central Colorado River valley. Uses open grasslands, plowed fields with little vegetation, and open sagebrush areas.	**Unlikely:** There is a historical record of the species within five miles of the Project, but the record is from 1981, 42 years old (CDFW 2022). Migration and wintering habitat is present, but the Project is outside of the species' typical nesting range. The species was not observed during Project surveys.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT SE S	An uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in California. Densely foliaged, deciduous trees and shrubs, especially willows, required for roosting and nesting sites.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). No riparian habitat is present in the Study Area. The species was not observed during Project surveys.
Empidonax traillii extimus southwestern willow flycatcher	FE SE	Breeding range in southwestern United States. Nests in relatively dense riparian vegetation where surface water is present or soil moisture is high enough to maintain the appropriate vegetation characteristics.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). No riparian habitat is present in the Study Area. The species was not observed during Project surveys.
Falco mexicanus prairie falcon	WL	Uncommon permanent resident that ranges from southeastern deserts, northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada. Distributed from annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Usually nests in a scrape on a sheltered ledge of a cliff overlooking a large, open area.	**Likely:** Numerous observations of the species have been reported in the past 25 years within five miles of the Project (eBird 2022). Nesting habitat is not present within 500 feet of the Study Areas, but is present within one mile. The species was not observed during Project surveys.
Icteria virens yellow-breasted chat	SSC	An uncommon summer resident and migrant in coastal California and in foothills of the Sierra Nevada. Found up to about 1,450 m (4,800 ft) in valley foothill riparian, and up to 2,050 m (6,500 ft) east of the Sierra Nevada in desert riparian habitats. Requires riparian thickets of willow and other brushy tangles near watercourses for nest cover.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). Potentially suitable migration habitat is present in the Study Area but nesting habitat is not present. The species was not observed during Project surveys.

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Lanius ludovicianus loggerhead shrike (nesting)	SSC	A common resident and winter visitor in lowlands and foothills throughout California. Nests in densely-foliaged shrubs or trees.	**Occurs**: One individual was observed during the 2016 wildlife surveys. Nesting habitat is present.
Melanerpes uropygialis Gila woodpecker	SE S	In California, inhabits cottonwoods and other desert riparian trees, shade trees, and date palms. Cavity nester in riparian trees or saguaro cactus.	**Does Not Occur:** Historical records of the species are located within five miles of the Project (CDFW 2022) but are greater than 75 years old. Suitable habitat is not present. The species was not observed during project surveys.
Micrathene whitneyi elf owl	SE S	In California, nesting area limited to cottonwood-willow and mesquite riparian zone along the Colorado River. Nest in deserted woodpecker holes, often in larger trees which offer insulation from high daytime temperatures.	**Does Not Occur:** A historical occurrence of the species is located within five miles of the Project, but suitable riparian habitat is not present in the Study Area. The species was not observed during Project surveys.
Piranga rubra summer tanager (nesting)	SSC	Summer resident of desert riparian habitat along lower Colorado River, and locally elsewhere in California deserts. Requires cottonwood-willow riparian habitat for nesting and foraging; prefers older, dense stands along streams.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). Potentially suitable migration habitat is present in the Study Area but nesting habitat is not present. The species was not observed during Project surveys.
Polioptila melanura black-tailed gnatcatcher	WL	Primarily inhabits wooded desert wash habitats. Also occurs in desert scrub habitat, especially in winter. Nests in desert washes containing mesquite, paloverde, ironwood, or acacia. Absent from areas where salt cedar introduced.	**Occurs**: Three individuals were observed during 2016 wildlife surveys. Nesting habitat is present in the Study Area.
Pyrocephalus rubinus vermilion flycatcher	SSC	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas. Nests in cottonwood, willow, mesquite, and other large desert riparian trees.	**Unlikely:** There are two historical records of the species within five miles of the Project, but they are dated 1919 and 1977, 104 years and 46 years, respectively (CDFW 2022). Potentially suitable migration habitat is present in the Study Area, but nesting habitat is not present. The species was not observed during Project surveys.
Rallus obsoletus yumanensis Yuma Ridgeway's rail (Yuma clapper rail)	FE ST FP	Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea. Prefers stands of cattails and tules dissected by narrow channels of flowing water.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). No beach or marsh habitat suitable for nesting is present in the Study Area. The species was not observed during Project surveys.

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Setophaga petechia sonorana Sonoran yellow warbler (nesting)	SSC	Summer resident of Colorado River Valley, in riparian deciduous habitat. Below 600 ft. elevation. Inhabits cottonwoods and willows, particularly the crown foliage; nests in understory, usually 2–16 ft above ground.	**Does Not Occur:** There are historical records of the species along the Colorado River but none within five miles of the Project (CDFW 2022). No riparian habitat is present in the Study Area. The species was not observed during Project surveys.
Toxostoma bendirei Bendire's thrasher	SSC S	Migratory; local spring/summer resident in flat areas of desert succulent shrub, Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, paloverde, thorny shrub, or small tree, usually 0.5–20 ft above ground.	**Likely:** The species has been documented within five miles of the Project in the past 25 years (CDFW 2022). Nesting habitat is present in the Study Area. The species was not observed during Project surveys.
Toxostoma crissale Crissal thrasher	SSC S	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.	**Likely:** The species has been reported in the past 25 years within five miles of the Project (CDFW 2022). Nesting habitat is present. The species was not observed during Project surveys.
Toxostoma lecontei LeConte's thrasher	SSC S	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually two to eight ft. above ground.	**Likely:** The species has been reported in the past 25 years within five miles of the Project (CDFW 2022). Nesting habitat is present. The species was not observed during Project surveys.
Mammals			
Antrozous pallidus pallid bat	SSC S	Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings. Night roosts may be in more open sites, such as porches and open buildings. A wide variety of habitats is occupied, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests.	**Does Not Occur:** There is a historical record of the species within five miles of the Project, but the record is more than 75 years old (CDFW 2022). Habitats for migration, foraging, and night roosts are present in the Study Area and marginal day roost habitat is present. The species was not observed during Project surveys.
Lasiurus xanthinus western yellow bat	SSC	Uncommon in California, known only in Los Angeles and San Bernardino counties south to the Mexican border. This species has been recorded below 600 m (2,000 ft) in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Breeding biology is not well understood. Roosts in trees, including palm trees.	**Unlikely:** There is a historical record of the species within five miles of the Project, but the record is more than 25 years old (CDFW 2022). Suitable foraging habitat is present in the Study Area. The species was not observed during Project surveys.

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Macrotus californicus California leaf-nosed bat	SSC S	Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.	**Likely:** The species has been reported in the past 25 years within five miles of the Project (CDFW 2022). Habitats for migration, foraging, and night roosts are present in the Study Area, but no day roost habitat is present. The species was not observed during Project surveys.
Myotis occultus Arizona myotis	SSC	Lowlands of the Colorado River and adjacent desert mountain ranges. Roosts in tree hollows, rock crevices, and under bridges.	**Does Not Occur:** There is a historical record of the species within five miles of the Project, but the record is more than 75 years old (CDFW 2022). Habitats for migration, foraging, and day and night roosts are present in the Study Area. The species was not observed during Project surveys.
Myotis velifer cave myotis	SSC S	Lowlands of the Colorado River and adjacent mountain ranges. Roosts in caves or mines.	**Likely:** The species has been reported in the past 25 years within five miles of the Project (CDFW 2022). Habitats for migration, foraging, and night roosts are present in the Study Area, but no day roost habitat is present. The species was not observed during Project surveys.
Myotis thysanodes fringed myotis	S	In a wide variety of habitats. Optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	**Unlikely:** There are no historical records of the species in the region within three miles of the Project or in the past 75 years. Habitat for migration, foraging, and night roosts was present, and marginal day roost habitat was present. The species was not observed.
Myotis yumanensis yuma myotis	S	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	**Unlikely:** There are no historical records of the species in the region within three miles of the Project or in the past 75 years. Habitat for migration, foraging, and night roosts were present, and marginal day roost habitat present. The species was not observed.
Neotoma albigula venusta Colorado Valley woodrat	NECO	Low-lying desert areas in southeastern California. Closely associated with beaver-tail cactus and mesquite. Intolerant of cold temperatures. Eats mainly succulent plants. Distribution influenced by abundance of nest building material.	**Unlikely:** There are no historical records of the species in the region within three miles of the Project or in the past 75 years. Habitat was present, but the species was not observed.

Scientific Name Common Name	Status	Range and Habitat Requirements	Potential to Occur[1]
Nyctinomops femorosaccus pocketed free-tailed bat	SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Roosts in rocky areas with high cliffs.	**Does Not Occur:** No occurrences of the species have been documented within five miles of the Project. Habitats for migration, foraging, and night roosts are present in the Study Area but no day roost habitat is present. The species was not observed during Project surveys.
Ovis canadensis nelson desert bighorn sheep	FP S	Widely distributed from the White Mountains in Mono County to the Chocolate Mountains in Imperial County. Open, rocky, steep areas with available water and herbaceous forage.	**Unlikely:** There is a historical record of the species within five miles of the Project, but the record is more than 25 years old (CDFW 2022). Suitable habitat is present in the Study Area. The species was not observed during Project surveys.
Sigmodon arizonae plenus Colorado River cotton rat	SSC	Colorado River floodplain from the Nevada border to about Bard, California. Distribution is spotty. Isolated sections of alluvial bottom along the Colorado River in areas supporting sedges, rushes, and other marsh plants.	**Does Not Occur:** No occurrences of the species have been documented within five miles of the Project. No habitat is present in the Study Area. The species was not observed during Project surveys.
Taxidea taxus American badger	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	**Likely:** The species has been reported in the past 25 years within five miles of the Project (CDFW 2022). Suitable habitat is present in the Study Area. The species was not observed during Project surveys.
Vulpes macrotis arsipus desert kit fox	CPF	Open, level desert areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance.	**Occurs**: Two active desert kit fox burrow complexes were observed during protocol desert tortoise surveys in 2017.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
SE = State Endangered
ST = State Threatened
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List
CPF = California Protected Furbearer

[1] **Definitions Regarding Potential for Occurrence**

Occurs — The species and/or positive sign was observed on-site during site visit or field survey.

Absent — The species and/or positive sign were not observed during focused survey(s) and it is reasonable to assume it would have been observed if present. Surveys were conducted during the appropriate blooming/activity period (and, for plants, the species was observed at a reference population).

Likely — All site features indicate this species is very likely present and should be expected. Criteria include:

- Project Site within geographic range;
- Suitable habitat present (e.g., soils, vegetation communities, elevation, roost sites, leaf litter/debris, water, host plants, etc.); and
- Distance to historical record(s) less than 25 years old is less than one mile for fish, two miles for plants, and five miles for mammals, birds, and herptiles.

Unlikely — Species could occur given the presence of habitat, but local records of the species are not known or are greater than 25 years old.

Does Not Occur — The species would not occur because the Project Site is outside known or current geographic/elevation range, lacks habitat or suitable conditions, and/or there is reasonable certainty to assume absence based on historical records.

Amphibians

Couch's Spadefoot (Scaphiopus couchii)

Status: CDFW SSC; BLM Sensitive

In California, Couch's spadefoot is endemic to the Sonoran Desert region, with scattered populations east of the Algodones sand dunes in Imperial County and north into San Bernardino County (Nafis 2000-2020). The species occurs in arid and semi-arid habitats including shrublands, short grass plains, mesquite savannah, creosote bush desert, and thorn forest at elevations ranging from 690 to 1,120 feet (CDFW 2000). Couch's spadefoot is absent from former habitat that has been urbanized or converted to agriculture but persists throughout its small range in California likely due to an increased number of temporary pools resulting from road and railroad construction and agricultural irrigation (Nafis 2000-2020). Individuals spend most of their time underground, sometimes in rodent burrows, but emerge to breed following heavy rains in spring or summer (NatureServe 2020).

Suitable habitat for Couch's spadefoot may be present in the study area in streambeds and basins where rainwater may pool. Couch's spadefoot toad was observed near the Colorado River Substation in 2013 (CDFW 2022a), approximately 4.5 miles south of the Project near its eastern end. The species was not observed during Project surveys but is likely to occur due to the presence of suitable habitat in the study area and the proximity of documented occurrences.

Reptiles

Desert Tortoise

Status: Federally Threatened, CDFW Threatened, BLM Sensitive

The desert tortoise was listed as threatened under CESA on June 22, 1989 (California Fish and Game Commission 1989). The desert tortoise was initially listed as threatened under the FESA by emergency rule on August 4, 1989 (USFWS 1989) and by final rule on April 2, 1990 (USFWS 1990). The federal listing status applies to the Mojave population (i.e., the Agassiz's desert tortoise), which includes tortoises occurring north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, southwestern Utah, and in the Sonoran Desert in California (USFWS 2012). On March 30, 1994, USFWS published the *Draft Recovery Plan for the Desert Tortoise (Mojave Population)* which divided the range of the desert tortoise into six recovery units and recommends establishment of 14 Desert Wildlife Management Areas (DWMA) in the recovery units (USFWS 1994a). A revised recovery plan was published in 2011 (USFWS 2011). Critical habitat for the species was designated in 1994 (USFWS 1994b).

Desert tortoise inhabits the Mojave, Colorado, and Sonoran Deserts in the southwestern United States and adjacent parts of Mexico (USFWS 1994a). The Mojave population historically occupied a relatively continuous distribution of habitat but now occurs in portions of Antelope, Indian Wells, and Searles valleys which have not yet been developed for urban uses (USFWS 1994a). Desert tortoise is generally found in gently sloped terrain at elevations between 1,000 and 3,000 feet in habitats with friable sandy-gravel soils suitable for burrows and sparse vegetative cover that is diverse in both perennial and annual plants.

Significant threats to desert tortoise populations have been identified as fragmentation and loss of habitat, off-road vehicle use, illegal dumping, and the introduction of invasive species. Urbanization has resulted in increasing human population in close proximity to desert tortoise habitat, resulting in direct and indirect impacts to the habitat (USFWS 1994a).

During protocol desert tortoise surveys for the Project, four Class 3 burrows (deteriorated condition; definitely belonging to desert tortoise), nineteen Class 4 burrows (deteriorated condition; possibly belonging to desert tortoise), and six Class 5 burrows (good condition; possibly belonging to desert tortoise) were observed in the Action Area (as defined in Section 5.4.1.6) (Jacobs 2017) (Figure 3 of the BRTR [Appendix C], pages 7-14, 43-45, 52, 76, 77, 79, 84-88, 116, 119-122, 124-126). One Class 5 (disarticulated and scattered) desert tortoise carcass was observed (Figure 3 of the BRTR [Appendix C], page 124). No live desert tortoises were observed during the survey. Most of the study area is suitable habitat for desert tortoise. Unsuitable habitat occurs primarily in agricultural fields and developed areas near Desert Center and Blythe.

Mojave Fringe-Toed Lizard (Uma scoparia)

Status: CDFW SSC; BLM Sensitive

Mojave fringe-toed lizard is distributed in the Mohave Desert from the southern end of Death Valley south to the Colorado River around Blythe at elevations from near sea level up to 3,000 feet (Stebbins 1985). In California it is known from Inyo, San Bernadino, Los Angeles, and Riverside counties. Generally occurring in creosote bush scrub desert habitat, the Mojave fringe-toed lizard can be found in aeolian sand deposits including large and small dunes and isolated dune pockets along hillsides (Norris 1958, Stebbins 1985). Fine sand is required for thermoregulatory burrowing; the species avoids extreme temperatures by going underground in November and emerging in February. Since the dune ecosystem is dependent on source sand and sand transport corridors, preservation of these resources is necessary for this species (Barrows 1996). Mojave fringe-toed lizard is highly vulnerable to off-road vehicle activity and the establishment of windbreaks that affect the deposition of windblown sand (Stebbins 2003).

CNDDB reports that 12 Mojave fringe-toed lizards were observed just east of Wiley's Well Road in the study area in 2010 and one was observed in the same area in 2011 (CDFW 2022a). The species was not observed during Project surveys but is likely to occur due to the presence of suitable habitat in the study area and the proximity of documented occurrences.

Birds

Western Burrowing Owl (Athene cunicularia)

Status: CDFW SSC; BLM Sensitive

Western burrowing owl is a yearlong resident of open grasslands, especially prairie, plains, and savanna. It sometimes occurs in open areas near human habitation such as agricultural fields, vacant lots, or airports. The species is dependent on the presence of burrowing mammals. Burrowing owls roost and nests in abandoned burrows such as those dug by ground squirrels, desert kit foxes, and badgers (NatureServe 2020).

Western burrowing owl populations are threatened by habitat loss and degradation due to rapid urbanization of farmland in the Central and Imperial valleys (CDFW 2012). Populations have declined in California according to the Christmas Bird Count (1996-1989) and local surveys have detected declining populations and/or range reductions as well. Other threats to the species include elimination of burrowing mammals through control programs, use of pesticides, and illegal shooting (Klute et al. 2003).

One active burrowing owl burrow was observed in the study area during protocol desert tortoise surveys (Jacobs 2017) (Figure 3 of the BRTR [Appendix C], page 95). Burrowing owls are more common west of

the study area in the Coachella Valley but have been detected throughout the area during historical surveys. The species is more common during the winter when an influx of birds that breed farther north spend the winter in Southern California. Therefore, the potential to encounter burrowing owls using burrows in the study area is greater during the winter months (generally October through March).

Prairie Falcon (Falco mexicanus)

Status: CDFW Watch List

In California, prairie falcon habitat includes mountainous areas, steppes, plains, or prairies. The species typically nests on a rocky cliffs or steep earth embankments and nests may be placed in man-made excavations on otherwise unsuitable cliffs (NatureServe 2020). Foraging areas are large, but individuals only defend a small territory around the nest site. The species is declining in most of Southern California due to habitat loss as a result of urbanization, as well as disease, collisions, pesticides, and other threats. Research in the Mojave Desert suggests that remote nests have a higher productivity than nests closer to human activity (NatureServe 2020).

Prairie falcon has not been observed during Project surveys, but a prairie falcon was observed during the implementation of the SCE Red Bluff Substation Project (AECOM 2016), which overlaps the study area. There are also CNDDB occurrences that overlap the study area (CDFW 2022a). No nesting habitat is present in the study area, but the species is likely to forage there or occur during migration.

Loggerhead Shrike (Lanius ludovicianus)

Status: CDFW SSC

Throughout California, loggerhead shrike is a common resident and winter visitor in lowlands and foothills. Suitable habitat includes open country with scattered trees and shrubs, savannah, desert scrub, and occasionally open woodland. The species nests in shrubs or small trees with dense foliage. Suitable hunting perches are an integral part of the habitat (NatureServe 2020).

A decline in the abundance of loggerhead shrike has been documented throughout its range, even in areas with ample habitat. Pesticides, loss of wintering habitat quality, and/or dependency on roadside habitat with high-predation pressure have been suggested as possible causes. Predation is the leading cause of nest failure, but nest predation does not appear to constitute an important limiting factor. While food shortages may limit nesting success, shrikes are not perturbed by nearby human activity (NatureServe 2020).

One loggerhead shrike was observed in the study area during the 2016 habitat assessment (Figure 3 of the BRTR [Appendix C], pages 14-15). Loggerhead shrikes have been documented within 5 miles of the study area near the Colorado River Substation on multiple occasions, most recently in 2013 (CDFW 2022a). The species is likely to occur in suitable shrub habitat in the study area.

Black-Tailed Gnatcatcher (Polioptila melanura)

Status: CDFW Watch List

In California, black-tailed gnatcatcher occurs in deserts in the southeastern part of the State. It is a common resident and winter visitor in wooded desert washes. Suitable nesting habitat for the species contains mesquite, paloverde, ironwood, or acacia. During the winter it may be found in a variety of desert scrub habitats.

Black-tailed gnatcatcher populations have experienced significant declines where habitat has been lost to agricultural or urban development. Loss of mesquite brushland habitat in the Coachella, Imperial, and Colorado River valleys is the main factor causing the decline (Tinant 2006). Destruction of habitat in desert washes due to off-road vehicle use may also be a factor (Remsen 1978).

Three black-tailed gnatcatchers were observed during the 2016 habitat assessment (Figure 3 of the BRTR [Appendix C], pages 4-5, 113-117). The species is likely to occur in the study area where larger woody vegetation is present in washes.

Bendire's Thrasher (Toxostoma bendirei)

Status: CDFW SSC; BLM Sensitive

Bendire's thrasher occurs in the deserts of southeastern California, primarily as a summer resident. The species nests in desert scrub vegetation with high density of *Yucca* species and cholla cacti and generally avoids steep slopes and rocky terrain. Nests are placed in shrubs, trees, and cacti (Sterling 2008). The population trends of Bendire's thrasher in California are not well understood. A declining trend observed prior to 2001 may be attributed to drought conditions and appears to have reversed. The primary threat to the species is habitat loss resulting from housing and agricultural development.

Two occurrences of the Bendire's thrasher were documented in 2004 approximately 1.5 miles southeast of the Ragsdale laydown yard. The species was not observed during Project surveys but is likely to occur in the study area due to the presence of suitable habitat and the proximity of documented occurrences.

Crissal Thrasher (Toxostoma crissale)

Status: CDFW SSC; BLM Sensitive

Crissal thrasher occurs year-round in the deserts of southeastern California in widely scattered patches of suitable habitat. It primarily occupies riparian scrub and woodland at lower elevations and dense shrub associated with arroyos at higher elevations. Nests are placed in dense shrub vegetation. The species may forage in agricultural areas adjacent to native habitat (Fitton 2008). In California, crissal thrasher is most abundant in the Colorado River valley. Although the species' range in California is stable, in some areas it has become increasingly localized and overall numbers have declined at least moderately (Fitton 2008). The primary threat to Crissal thrasher is loss and degradation of habitat, particularly due to agriculture.

Multiple occurrences of Crissal thrasher were documented in 2012 within 5 miles of the Project near the Colorado River Substation (CDFW 2022a). The species was not observed during Project surveys but is likely to occur in the study area due to the presence of suitable habitat and the proximity of documented occurrences.

LeConte's Thrasher (Toxostoma lecontei)

Status: CDFW SSC; BLM Sensitive

LeConte's thrasher is an uncommon resident of the deserts of the American Southwest (Sheppard 1996). Suitable habitats for the species include open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub. Habitat may also consist of sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having high proportion of one or more species of saltbush or shadescale and/or cylindrical cholla cactus (*Cylindropuntia* spp.) (Sheppard 1996). Nests are typically placed in shaded locations in dense

thorny desert shrubs or small trees or cholla cactus, usually between 2 and 8 feet above the ground (Sheppard 1996).

LeConte's thrasher is uncommon over most of its range (Sheppard 1996). Degradation, fragmentation, and loss of habitat due to urbanization, agriculture, irrigation, oil and gas development, fire, and over-grazing by sheep or cattle are the primary reasons for a declining trend in its population (NatureServe 2020).

Three nesting pairs of LeConte's thrasher were observed in 1977 approximately 1 mile south of the Project and Power Line Road (CDFW 2022a). Several observations of the species occurred three miles south of the Project near the Colorado River Substation between 2011 and 2013 (CDFW 2022a). LeConte's thrasher was not observed during Project surveys but is likely to occur in the study area due to the presence of suitable habitat and the proximity of documented occurrences.

Mammals

California Leaf-Nosed Bat (Macrotus californicus)

Status: CDFW SSC; BLM Sensitive

California leaf-nosed bat inhabits lowland desert scrub with day roosts located in abandoned mine tunnels, caves, or natural rock shelters in canyon walls (NatureServe 2020). Foraging habitats include desert riparian woodland, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats with rocky, rugged terrain. The species roosts singly or in groups of up to several hundred individuals, typically in caves or mines (NatureServe 2020).

California leaf-nosed bat is locally common in parts of its range (NatureServe 2020). Primary threats to the species are human entry into caves or mines where roosts occur, as disturbance may lead to abandonment, and the closure or improper gating of mine entrances for hazard abatement. Loss of desert riparian habitat (such as the development of housing and golf courses in the Coachella Valley) has also likely contributed to population declines (Western Bat Working Group 2005).

California leaf-nosed bat was documented at several locations in the southern McCoy Mountains within 5 miles of the Project in 1993 and in a quad (Roosevelt Mine) that overlaps the Project in 2020 (CDFW 2022a). Night roost habitat suitable for California leaf-nosed bat is potentially present in the study area, consisting of bridges on I-10. Foraging habitat may also be present in agricultural areas. The species was not observed during Project surveys but is likely to occur in the study area due to the presence of suitable habitat and the proximity of documented occurrences.

Cave Myotis (Myotis velifer)

Status: CDFW SSC; BLM Sensitive

Cave myotis is restricted in California to lowlands of the Colorado River valley and adjacent mountain ranges in Imperial, Riverside and San Bernardino counties (CDFW 1999). The species inhabits evergreen or pine-oak forests at middle and high elevations, as well as riparian habitats near desert scrub at lower elevations (Reid 1997). It roosts in tight clusters in caves, mine tunnels, buildings, and under bridges. Once a common species with colonies of over 1,000 individuals, cave myotis has experienced a significant decline due to human disturbance of roosts, loss of riparian vegetation, and use of pesticides (CDFW 1999).

Cave myotis was documented in a quad (Roosevelt Mine) that overlaps the Project in 2020 (CDFW 2022a). Night roost habitat suitable for cave myotis is potentially present in the study area, consisting of bridges on

I-10. Foraging habitat may also be present in agricultural areas. The species was not observed during Project surveys but is likely to occur in the study area due to the presence of suitable habitat and the proximity of documented occurrences.

American Badger (Taxidea taxus)

Status: CDFW SSC

American badger has a large range in the western and central U.S., southern Canada, and northern and central Mexico. The species occurs in desert, grassland, savanna, shrubland/chaparral, and cropland and is most abundant in drier open stages of shrub, forest, and herbaceous habits with friable soils. Since the badger digs burrows and preys on burrowing rodents, open, uncultivated ground is preferred (NatureServe 2020).

American badger is relatively common over much of its range, but has declined substantially in parts of the west, where grassland habitat has been replaced by intensive agriculture and where prey such as prairie dogs and ground squirrels have been reduced or eliminated. The species has also been threatened by collisions with vehicles and by direct persecution (NatureServe 2020).

While American badgers have not been reported in the study area, they are known to occur in the surrounding area (CDFW 2022). American badgers may construct burrows in the study area at any time.

Desert Kit Fox (Vulpes macrotis arsipus)

Status: California Protected Furbearer

Desert kit fox has historically had a broad distribution across the California desert, relying on creosote scrub communities that support abundant rodent populations (Kadaba et al. 2013). The species inhabits open, level desert areas with low levels of human disturbance, sparse shrubby vegetation, and loose-textured soils that are suitable for burrowing. It has been threatened by habitat destruction, particularly due to large scale industrial energy development. Canine distemper, grazing, urbanization, agriculture, and mortality from vehicles are other threats to the population (Kadaba et al. 2013).

Two active kit fox den complexes and one potential kit fox den were observed during protocol desert tortoise surveys in 2017 (Jacobs 2017) (Figure 3 of the BRTR [Appendix C], pages 23, 35, 80-81). Desert kit fox burrows were also observed in the study area during the 2016 habitat assessment (Figure 3 of the BRTR [Appendix C], pages 52, 107-108, 147).

5.4.1.5.3 Nesting Birds

The MBTA and CFGC Section 3513 address the protection of migratory bird species, including species without special status. Suitable nesting habitat, including trees, shrubs, man-made structures, and the ground surface, is present in the study area. Numerous bird species protected by the MBTA and CFGC were observed during project surveys (Appendix D of the BRTR [Appendix C]). Special-status bird species with potential to occur include burrowing owl, prairie falcon, loggerhead shrike, black-tailed gnatcatcher, Bendire's thrasher, Crissal thrasher, and LeConte's thrasher.

5.4.1.6 Critical Habitat

Under the FESA, the USFWS may designate critical habitat for federally listed species. Critical habitat is defined as "the specific areas within the geographic area occupied by a species on which are found those

physical or biological features (PBF) essential to the conservation of the species and which may require special management considerations or protection" as defined in section 3(5)(A) of the FESA.

A desktop review of critical habitat boundaries indicates that USFWS-designated critical habitat for the desert tortoise coincides with the study area (Figure 5 of the BRTR [Appendix C]). The area in which federally listed species may be affected directly or indirectly by the proposed action is termed the Action Area (50 Code of Federal Regulations [CFR] 402.02). The Action Area is synonymous with the Study Area for desert tortoise and is defined as the existing EM-B ROW, which includes approximately 1,336 acres of desert tortoise critical habitat in the Chuckwalla Critical Habitat Unit and the Colorado Desert Recovery Unit (USFWS 2011).

The PBFs for desert tortoise include sufficient space for the growth and normal behavior of individuals and populations, which can range from 100 to 200 acres, food, water, or other nutritional or physiological requirements, cover or shelter; sites for breeding, reproducing, and rearing of offspring, and habitats that are protected from disturbance or representative of the historical geographical and ecological distribution of the species (USFWS 1990). These PBFs are present in and adjacent to the study area, where it coincides with designated critical habitat.

5.4.1.7 Native Wildlife Corridors and Nursery Sites

5.4.1.7.1 Wildlife Corridors

Wildlife movement corridors are linear landscape linkages that connect fragmented patches of suitable habitat. These connections provide safe passage through urban or agricultural landscapes and are essential for population persistence, promoting gene flow between populations, and maintaining high biological diversity. Corridors can be used for movement associated with dispersal, seasonal migration, foraging, finding a mate, or escaping catastrophic events. Types of wildlife corridors include those that exist naturally, such as riparian linkages, mountain ranges, and valleys, and those that are constructed, such as highway overpasses or underpasses. Depending on the landscape features, wildlife corridors can accommodate terrestrial or aquatic species.

In the study area, scrub vegetation communities provide direct connectivity to other larger stretches of similar habitat. These provide potential local migration corridors for birds, mammals, and reptiles. Near the Project Alignment, mountain ranges and underpasses beneath I-10 also provide corridors for wildlife movement. The Pacific Flyway, a major north-south corridor for migratory birds, intersects the study area and Project locations may provide foraging and/or shelter habitats for migrating birds that move through the California desert ecosystem in spring and fall. For example, migratory habitat for special-status species such as prairie falcon has been identified in the study area.

A network of wildlife linkages identified in the DRECP Land Use Planning Amendment (LUPA) cross the Project Alignment (BLM 2016). In addition, the Project is in or near several designated conservation areas. The Chuckwalla DWMA and the Palen-Ford Multi-Species Wildlife Habitat Management Areas (WHMA), which encompass portions of the Project, provide large areas of high-quality habitat for several special-status wildlife species and thus serve as local migration corridors. The Chuckwalla DWMA also contains USFWS-designated critical habitat for the desert tortoise and provides excellent habitat for several migratory bird species. Both the Mule-McCoy Linkage Area of Critical Environmental Concern (ACEC) and the Palen-Ford Dunes ACEC, which also encompass portions of the Project, were specifically established to create and protect wildlife movement linkages to other conservation and wilderness areas (BLM 2016) (Figure 4 of the BRTR [Appendix C]).

The Project is located adjacent to the Colorado Desert ecoregion subarea of the California Desert National Conservation Lands (CDNCL). The CDNCL were identified in the DRECP LUPA for inclusion in the National Landscape Conservation System under Public Law 111-11. This subarea provides habitat for multiple special-status plant and wildlife species and creates linkages to various conservation and wilderness areas. The eastern end of the Project overlaps the Lower Colorado River Valley, an Audubon Important Bird Area and a DRECP Focus and BLM Special-Status Bird Area. This area provides important riparian bird habitat and serves as a migration corridor and crucial stopover location for many birds. Approximately 35 miles southeast of the Project is the Salton Sea, which is also identified as an Audubon Important Bird Area and a DRECP Focus and BLM Special-Status Bird Area. Migratory birds are likely to pass through the Project Alignment as they migrate between the Lower Colorado River Valley and the Salton Sea. However, no parts of the study area have been identified as crucial stopover locations that attract large numbers of migratory birds (BLM 2016).

5.4.1.7.2 Nursery Sites

No regional or local native wildlife nursery sites are known to exist within 5 miles of the study area.

5.4.1.8 Biological Resource Management Areas

There is no adopted habitat conservation plan (HCP) or natural community conservation plan (NCCP) within the Project Alignment, and no known approved local, regional, or State habitat conservation plans covering the Project Alignment.

5.4.2 Regulatory Setting

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

5.4.2.1 Regulatory Setting

5.4.2.1.1 Federal

National Environmental Policy Act

Title I of National Environmental Policy Act (NEPA) (42 United States Code [USC] Section 4321) requires federal agencies to incorporate environmental considerations in their planning and decision-making processes. Federal agencies are to prepare Environmental Impact Statements and Environmental Assessments evaluating the environmental impact of and alternatives to federal actions with potential to significantly affect the environment. Title II of NEPA established the Council on Environmental Quality (40 CFR Parts 1500-1508) to oversee NEPA implementation by ensuring that federal agencies meet their obligations under NEPA, overseeing implementation by federal agencies of the environmental impact assessment process, and issuing regulations and other guidance to federal agencies regarding NEPA compliance.

Federal Endangered Species Act

The FESA regulates actions that may result in the take of species federally listed as threatened or endangered. The FESA defines "take" as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS lists threatened or endangered species that are at risk of extinction and may also designate areas of Critical Habitat that are essential to the conservation of listed species. Section 9 of the FESA prohibits the take of listed animal species without

authorization, which may be obtained either through Section 7 consultations (Biological Opinion [BO]), or through a Section 10(a) permit in conjunction with an approved Habitat Conservation Plan (HCP). Under provisions of Section 7(a)(2) of the FESA, a federal agency that permits, licenses, funds, or otherwise authorizes a project activity must consult with the USFWS to ensure that its actions would not jeopardize the continued existence of any listed species or destroy or adversely modify designated Critical Habitat.

Clean Water Act

The federal Clean Water Act (CWA) and subsequent amendments establish the basic structure for regulating discharges of pollutants into "waters of the United States" (33 CFR Part 328) and regulating water quality standards for surface waters including lakes, rivers, and wetlands. The boundaries of waters not subject to the ebb and flow of the tide are defined by the Ordinary High Water Mark (OHWM). "Wetlands" are defined in 33 CFR 328.3(b) as areas inundated or saturated by surface or ground water for a frequency and/or duration sufficient to support a prevalence of vegetation adapted to saturated soil conditions.

Section 404 – Wetlands and Waters of the U.S.

Under Section 404 of the Clean Water Act, the USACE regulates the discharge of dredged or fill material into jurisdictional Waters of the U.S., which include those waters listed in 33 CFR 328.3 (Definitions). During the period in which the BRTR was prepared and the Project jurisdictional delineation surveys were performed, the Clean Water Rule: Definition of Waters of the U.S. (2015 Clean Water Rule) was in effect. The 2015 Clean Water Rule was published in the Federal Register (FR) at 80 FR 37054 and became effective August 28, 2015. On July 27, 2017, the U.S. Environmental Protection Agency (EPA) and USACE published a proposed rule to rescind the 2015 Clean Water Rule and re-codify definitions of Waters of the U.S. (82 FR 34899). The U.S. EPA and USACE then issued a final rule on February 6, 2018 designating an applicability date to the 2015 Clean Water Rule of February 6, 2020 while the agencies worked on revising the definitions of waters of the U.S. However, on May 11, 2018, the U.S. District Court for the District of South Carolina issued a ruling in South Carolina Coastal Conservation League, et al. v. Pruitt enjoining the U.S. EPA and USACE from issuing the final rule. Consequently, the 2015 Clean Water Rule remained in effect in 22 states, including California, until February 6, 2020. The U.S. EPA and USACE repealed the 2015 Clean Water Rule on October 22, 2019 (effective December 23, 2019) and issued the Navigable Waters Protection Rule (NWPR) on April 21, 2020 (85 FR 22250). The NWPR became effective on June 22, 2020. USACE is authorized, as delegated by the U.S. EPA, to regulate any activity that would result in the discharge of dredged or fill material into Waters of the U.S. The USACE must determine that no discharge of dredged or fill material should be permitted if there is a practicable alternative that would be less damaging to aquatic resources or if significant degradation would occur to Waters of the U.S. or wetlands. The Project is subject to USACE South Pacific Division (Los Angeles District) jurisdiction.

Section 401 – Water Quality Certification

For discharges to Waters of the U.S., the State Water Resources Control Board (SWRCB) or applicable Regional Water Quality Control Board (RWQCB) must certify that the discharge would comply with State water quality standards, including beneficial uses (23 California Code of Regulations 3830, et seq.). Dredge and fill activities in wetlands and waterways that impact waters of the U.S. require a federal Section 404 permit from the USACE. Before a Section 404 permit can be issued, a Section 401 certification must first be obtained from the RWQCB. The Project is subject to RWQCB Region 7 (Colorado River Basin) jurisdiction.

Executive Order 11990 – Wetlands

On May 24, 1977, President Carter signed Executive Order (EO) 11990, requiring federal agencies to avoid adverse impacts (both long and short term) to wetlands whenever there is a practicable alternative available. The order defines wetlands as areas that are inundated by surface or ground water with a frequency to support a prevalence of vegetative or aquatic life that require saturation or seasonally saturated soil conditions for growth and reproduction.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA, 16 United States Code [U.S.C.] 703–712, as amended) governs take, possession, import, export, transport, selling, purchasing, or bartering of migratory birds, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). The take of migratory birds is governed by the MBTA through regulation of take for educational, scientific, and recreational purposes, and a requirement that harvests be limited to levels that prevent over-utilization. Section 704 of the MBTA authorizes the Secretary of the Interior to determine if, and by what means, the take of migratory birds should be allowed and to adopt suitable regulations permitting and governing take but ensuring that take is compatible with the protection of the species.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (U.S.C. Title 16, Chapter 5A, Subchapter II, Section 668 a d), as subsequently amended, provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. The 1972 amendments increased penalties for violating provisions of the Act or regulations issued pursuant thereto and strengthened other enforcement measures. Rewards are provided for information leading to arrest and conviction for violation of the Act. The 1978 amendment authorizes the Secretary of the Interior to permit the taking of golden eagle nests that interfere with resource development or recovery operations. (See also the MBTA and FESA) A 1994 Memorandum (59 FR 22953, April 29, 1994) from President Clinton to the heads of Executive Agencies and Departments sets out the policy concerning collection and distribution of eagle feathers for Native American religious purposes.

Invasive Species – Executive Order 13112

On February 3, 1999, President Clinton signed EO 13112, requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to a given ecosystem and whose introduction would cause or is likely to cause economic or environmental harm, or harm to human, animal, or plant health. Invasive plants and noxious weeds are managed on public lands by the BLM under the direction of the multi-agency National Invasive Species Council (NISC) established in 1999. Under this EO, federal agencies whose actions may affect the status of invasive species shall: (1) identify such actions, (2) use relevant programs and authorities to prevent, control, monitor, and research such species, and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere. Additionally, federal agencies shall pursue these duties in consultation with the NISC, consistent with the Invasive Species Management Plan.

Bureau of Land Management Special-Status Species Management Manual

The BLM's Special-Status Species Management Manual 6840 (BLM 2008) identifies BLM special-status species as species designated by the BLM as Sensitive, species listed or proposed for listing under the FESA, and species recognized as requiring special management consideration to lessen the likelihood for future listing. According to Manual 6840, the BLM shall retain in federal ownership habitats that are essential for the conservation of any listed species, particularly those that are part of a broader, logical public land ownership management unit. If a BLM special-status species or any federal candidate or proposed species is delisted, it will be monitored for the five years following its delisting as a BLM Sensitive species.

Federal Land Policy Management Act of 1976

In 1976, Congress passed the Federal Land Policy Management Act (FLPMA), which governs the manner by which public lands administered by the BLM are managed. The FLPMA requires BLM to develop land use plans, also known as Resource Management Plans, to guide BLM's management of public land. Figure 3 of the BRTR (Appendix C) displays areas covered by land management plans in the vicinity of the Project.

California Desert Conservation Area Plan

Under the FLPMA, the California Desert Conservation Area (CDCA) was established with 12,000,000 acres of public lands administered by the BLM (DOI and BLM 1980). The CDCA plan consists of five recovery units: Upper Virgin River, Eastern Mojave, Northwestern Mojave, Western Mojave, and Colorado Desert. The CDCA gives preservation of endangered species the highest priority, and one of its goals is to provide a system of desert wildlife management areas within the recovery units. In 1994, the CDCA plan established strategies for recovering the desert tortoise: maintain high survivorship of adult desert tortoises; protect existing populations and habitat; institute habitat restoration where necessary; and implement a formal adaptive management program. It provides developers of public and private projects with a streamlined program for compliance with the California Endangered Species Act (CESA) and FESA, reduces delays and expenses, eliminates uncertainty, and applies the costs of compensation and mitigation equitably to all agencies and parties. The Project lies entirely within the CDCA area (Figure 3 of the BRTR [Appendix C]).

Northern and Eastern Colorado Desert Coordinated Management Plan

The NECO is a landscape-scale, multi-agency plan developed to protect and conserve natural resources while simultaneously balancing human uses of the California portion of the Sonoran Desert ecosystem (DOI and BLM 2001). NECO provides for the conservation and management of habitat for the desert tortoise, integrated ecosystem management for special-status species and natural communities for all federal lands, and regional standards and guidelines for public land health on BLM lands. The planning area encompasses over 5 million acres in the larger CDCA and includes 60 sensitive plant and animal species. NECO amends the 1980 CDCA Plan (DOI and BLM 2001). The Project lies entirely within the NECO area (Figure 3 of the BRTR [Appendix C]).

One component of the CDCA Plan was the establishment of Areas of Critical Environmental Concern (ACECs) as required under the FLPMA. An ACEC is a special management area designated by BLM to protect significant historical, cultural, and scenic values, or fish and wildlife or other natural resources. ACECs can also be designated to protect human life and safety from natural hazards. In the NECO area, the BLM designated new ACECs known as Desert Wildlife Management Areas (DWMA) for the federally

threatened desert tortoise that overlap USFWS-designated desert tortoise critical habitat. BLM also established Wildlife Habitat Management Areas (WHMA), a system of large management areas described by the NECO that provide habitat connectivity and cover 80 percent of known or predicted occurrences of special-status species and natural communities. Two types of WHMAs have been established within the larger NECO area: one for desert bighorn sheep and one for all other special-status species and habitats referred to as multi-species WHMAs. Multi-species WHMAs are complementary to existing ACECs and DWMAs. Portions of the Project fall within the Chuckwalla DWMA and the Palen-Ford Multi-species WHMA (Figure 3 of the BRTR [Appendix C]). These areas are described below.

Chuckwalla DWMA

The Chuckwalla DWMA consists of 648,951 acres located in southeastern Riverside County and northeastern Imperial County, California, and encompasses the Orocopia, Chuckwalla, Little Chuckwalla, and Palo Verde Mountains and the intervening alluvial fans, washes, and valleys. The area contains the Chuckwalla Bench, an elevated area of coalescing alluvial fans between the Chuckwalla and Chocolate Mountains, and the extensive Milpitas Wash in Imperial County. The Chuckwalla DWMA contains areas of cultural, scenic, vegetative, and wildlife value. This region historically contained one of the highest-density populations of desert tortoise in either California or the Sonoran Desert. The entire DWMA consists of USFWS-designated critical habitat for the species. The Chuckwalla DWMA is also excellent habitat for burro deer (*Odocoileus hemionus eremicus*) and desert bighorn sheep (*Ovis canadensis*). The extensive microphyll washes serve as excellent habitat for multiple migratory bird species. The Chuckwalla DWMA is home to several endemic plant species.

Goals for the Chuckwalla DWMA are to protect and enhance habitat for sensitive animal and plant species and rare vegetation community alliances while reducing hazards to public safety and providing for compatible public uses. Priority wildlife species include desert tortoise, desert bighorn sheep, and burro deer. Priority plant species include three endemic plant species: Mecca aster (*Xylorhiza cognata*), Orocopia sage (*Salvia greatae*), and Munz's cholla (*Cylindropuntia munzii*). Priority sensitive vegetation community alliances include Blue Palo Verde-Desert Ironwood Woodland and Smoke Tree Woodland. Project overlap with this DWMA occurs both at the western end of the alignment (including Eagle Mountain Substation) and along the central portion (Figure 3 of the BRTR [Appendix C]).

Palen-Ford Multi-species WHMA

The Palen-Ford Multi-Species WHMA consists of 102,847 acres and encompasses the smaller Palen-Ford Playa Dunes ACEC (established under DRECP; see below). This WHMA was specifically established to protect both sand dune and playa habitat and the Mojave fringe-toed lizard but has relatively fewer restrictions and mitigation requirements. Instead, management emphasis is placed on active management, mitigation, and restoration from authorized allowable uses. Project overlap with this WHMA occurs along the central portion of the alignment (Figure 3 of the BRTR [Appendix C]).

Desert Renewable Energy Conservation Plan

The DRECP is a collaborative effort between the California Energy Commission, CDFW, BLM, and USFWS to help provide effective protection and conservation of desert ecosystems while allowing for the appropriate development of renewable energy projects (BLM et al. 2015). The DRECP is focused on 22.5 million acres of public and private lands across Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego Counties. The DRECP amends the 1980 CDCA Plan and serves as an HCP

under section 10(a)(1)(B) of the FESA. The Project lies entirely within the DRECP area (Figure 3 of the BRTR [Appendix C]).

As part of the DRECP effort, BLM prepared a Land Use P@Llanning Amendment (LUPA) that amends the CDCA Plan applicable to BLM-managed public lands (BLM 2016). This LUPA identified and mapped areas for renewable energy development and areas for long-term natural resource conservation, consistent with the FLPMA multiple-use and sustained yield requirements. Conservation areas in BLM land under the LUPA for the DRECP include existing, modified, and new ACECs. Portions of the Project fall within the Mule-McCoy Linkage ACEC and the Palen-Ford Playa Dunes ACEC (Figure 3 of the BRTR [Appendix C]). These areas are described below.

Mule-McCoy Linkage ACEC

The Mule-McCoy Linkage ACEC consists of 60,263 acres located in eastern Riverside County and is bordered on the west by the Chuckwalla DWMA, on the south by the Palo-Verde Wilderness Area, and on the north by the Palen-McCoy Wilderness Area. This ACEC protects wildlife linkage habitat between the Chuckwalla DWMA and the two neighboring wilderness areas. This area has been identified as critical for burro deer connectivity in eastern Riverside County. The surrounding Mule, McCoy, and Palo Verde Mountains are designated bighorn sheep WHMAs and are currently identified as unoccupied ranges. Southern portions of the ACEC contain extensive microphyll woodland, which is a NECO sensitive plant community and known habitat for several sensitive wildlife species, including the Gila woodpecker (*Melanerpes uropygialis*). A corridor of sand south of Interstate 10 is the eastern extension of the Palen-Ford Playa Dunes ACEC sand transport corridor and provides habitat for the Mojave fringe-toed lizard (*Uma scoparia*). The adjacent Mule Mountains are known to contain major bat colonies including a maternity roost for California leaf-nosed bats (*Macrotus californicus*).

Goals for the Mule-McCoy Linkage ACEC are to maintain wildlife connectivity between the Chuckwalla DWMA and the Palo Verde and Palen-McCoy Wilderness Areas and maintain the integrity of the sand transport system. Priority wildlife species include burro deer and Mojave fringe-toed lizard. Priority sensitive vegetation communities include microphyll woodland. Project overlap with this ACEC occurs in the eastern portion of the alignment (Figure 3 of the BRTR [Appendix C]).

Palen-Ford Playa Dunes ACEC

The Palen-Ford Playa Dunes ACEC consists of 54,767 acres and encompasses the entire playa and dune system in the Chuckwalla Valley of eastern Riverside County. The area is bordered on the east by the Palen-McCoy Wilderness Area and on the west by Joshua Tree National Park. This ACEC contains extensive and pristine habitat for the Mojave fringe-toed lizard. The ACEC protects an entire dune ecosystem for this and other dune-dwelling species, including essential habitat and ecological processes (e.g., sand transport system). The Palen-Ford Playa Dunes ACEC also contributes to the overall linking of five currently isolated Wilderness Areas with each other and Joshua Tree National Park. Furthermore, this ACEC provides crucial habitat connectivity for key wildlife species, including the desert tortoise and desert bighorn sheep. Palen-Ford Playa Dunes ACEC also contains sensitive plant species and vegetation alliances that are associated with dune and playa systems. A goal for the Palen-Ford Playa Dunes ACEC is to maintain the integrity of essential Mojave fringe-toed lizard habitat and essential ecological processes. Project overlap with this ACEC occurs along the central portion of the alignment (Figure 3 of the BRTR [Appendix C]).

5.4.2.1.2 State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) (Public Resources Code Section 15000, et seq.) requires identification of significant environmental effects of proposed projects (including impacts on biological resources) and avoidance (where feasible) or mitigation of the significant effects. CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. "Projects" are activities that have the potential to have a physical impact on the environment (Section 21065). Pursuant to Section 15063 of Title 14 of the California Code of Regulations, if the Lead Agency determines that any aspect of the project, individually or cumulatively, may cause a significant environmental impact, an Environmental Impact Report (EIR) must be prepared. However, if the Lead Agency finds the project would not result in significant environmental impacts, either as proposed or modified to include mitigation measures identified in the Initial Study, a Negative Declaration or Mitigated Negative Declaration, as appropriate, would be prepared instead.

California Public Utilities Commission General Order 95

CPUC General Order 95 Rules for Overhead Line Construction (GO 95) provides general standards for the design and construction of overhead electric transmission lines.

California Fish and Game Code

The California Fish and Game Code (CFGC) includes mandates for persons in the State of California who tamper with, affect, or alter environmental resources. The following sections illustrate the sections of the CFGC that pertain to the Project.

California Endangered Species Act (CFGC Section 2050-2116)

The CESA is administered by the CDFW and prohibits the take of plant and animal species identified as either threatened or endangered in the State of California by the Fish and Game Commission. Under the CESA, "take" means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill, and does not include the harm or harassment provisions in the FESA definition. However, Sections 2081 and 2080.1 of the CESA allow the CDFW to authorize exceptions to the prohibition of take of the State listed threatened or endangered plant and animal species for purposes such as public and private development based on a determination that the project or action includes measures sufficient to "fully mitigate" impacts.

Fully Protected Species (CFGC Section 3511, 4700, 5050, and 5515)

CFGC Sections 3511, 4700, 5050, and 5515 list the bird, mammal, reptile, amphibian, and fish species that are identified as "fully protected." Fully protected wildlife may not be harmed, taken, or possessed. The classification of "fully protected" was California's initial effort to identify and provide additional protection to those wildlife species that were rare or faced possible extinction. Most of the fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations.

Migratory Birds (CFGC Section 3500-3516, and 3800)

CFGC Section 3513 furthers the intent of the MBTA by prohibiting any take or possession of birds in California that are designated by the MBTA as migratory non-game birds, except as allowed by federal rules and regulations promulgated pursuant to the MBTA. In addition, CFGC Sections 3503, 3503.5, 3511, and 3800 further protect nesting birds and their parts, including passerine birds, raptors, and State "fully protected" birds. These regulations protect almost all native nesting birds, not just special-status birds.

Waters and Wetlands (CFGC Section 1600)

CFGC Sections 1600-1617 require consultation with CDFW if a proposed activity has the potential to detrimentally affect a stream, and thereby wildlife resources that depend on a stream for continued viability. All streams present on a proposed project site must be identified to characterize the potential for adverse project-related impacts on the stream and associated wildlife. Under CFGC Sections 1600 et seq., CDFW regulates activities that would result in (1) any potential detrimental impacts associated with the substantial diversion or the obstruction of the natural flow of a stream, (2) substantial changes to the bed, channel, or banks of a stream, or the use of any material from the bed, channel, or banks, and (3) the disposal of debris or waste materials that may pass into a stream. CDFW jurisdiction can only be applied once stream presence is identified, and a project design is developed to a level of detail adequate to perform impact analysis.

In practice, the CDFW may assert its jurisdiction under CFGC Sections 1600 et seq. over activities to the top of the bank (stream or lake), or to the outer edge of the riparian vegetation, whichever is wider. Determining jurisdiction based on these parameters in the dry desert regions of California is challenging. Therefore, CDFW, in coordination with the California Energy Commission, has developed guidance for determining jurisdictional waters of the State for desert aquatic features. The Project is subject to CDFW Region 6 (Inland Deserts Region) jurisdiction.

Native Plant Protection Act (CFGC section 1900-1913)

The Native Plant Protection Act (NPPA) of 1977 gave the California Fish and Game Commission the authority to designate native plants as endangered or rare and to protect these plants from take. Species that are considered by the California Native Plant Society (CNPS) to qualify for this status and meet the definitions of Section 1901, Chapter 10 (NPPA) or Sections 2062 and 2067 (CESA) of the CFGC are included on the California Rare Plant Ranks (CRPR) 1A, 1B, 2A, and 2B. Section 1913(b) of the NPPA states: "Notwithstanding the provisions of Section 1911…the removal of endangered or rare native plants from a…right-of-way by the owner of the land or his agent…or the performance by a public agency or a publicly or privately owned public utility of its obligation to provide service to the public, shall not be restricted by this chapter because of the presence of rare or endangered plants." However, these plants may be addressed in CEQA documents depending on specific site conditions. CRPR definitions are as follows (CNPS 2006):

- 1A: Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct and those that are presumed extirpated in California. A plant is extinct if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.
- 1B: Plants that are rare throughout their range with the majority of them endemic to California. Most of the plants of CRPR 1B have declined significantly over the last century.

- 2A: Plants presumed extirpated because they have not been observed or documented in California for many years. This list only includes plants that are presumed extirpated in California, but more common elsewhere in their range.
- 2B: Plants that are rare throughout their range in California but are common beyond the boundaries of California. CRPR 2B recognizes the importance of protecting the geographic range of widespread species.
- 3: A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.
- 4: A watch list for plants that are of limited distribution or infrequent throughout a broader area in California and their vulnerability or susceptibility to threat appears relatively low at this time.

California Desert Native Plant Act

The California Desert Native Plants Act (CDNPA) (California Food and Agriculture Code Section 80001-80201) protects certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. In these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants, or any parts thereof, unless a person has a valid permit or wood receipt and the required tags and seals. The appropriate permits, tags, and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. The CDPNA does not apply to a public agency or to a publicly or privately owned public utility when acting in the performance of its obligation to provide service to the public (Section 80117). Therefore, SCE, and by extension the Project, is exempt from the requirements of the CDNPA.

State and Regional Water Quality Control Board

The SWRCB has jurisdiction throughout California and protects water quality by setting statewide policy and coordinating the nine RWQCBs in California that exercise regulatory activities by basins. Typically, the areas subject to RWQCB jurisdiction coincide with those of the USACE (i.e., Waters of the U.S., including any wetlands), and the RWQCB is therefore responsible for the administration of Section 401 of the federal CWA. The RWQCB also asserts authority over Waters of the State under Waste Discharge Requirements (WDR) pursuant to the 1969 Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Waters found to be isolated and not subject to CWA regulation are often still regulated by the RWQCB under Porter Cologne. If a CWA Section 404 permit is not required for an action, the RWQCB may still require a permit under Porter-Cologne.

Porter-Cologne Water Quality Control Act

Waste Discharge Requirements

Section 13000 et seq. of the 1969 Porter-Cologne Act authorizes the RWQCB to regulate discharges of waste and fill material to waters of the State, including isolated waters and wetlands. The Porter-Cologne Act requires a "person discharging waste, or proposing to discharge waste, within any region that could affect the quality of waters of the State" (Cal Water Code Section 13260(a)(1)) to file a WDR, unless waived (Cal Water Code Section 13260(b)). "Waste" is broadly defined to include "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed

within containers of whatever nature prior to, and for purposes of, disposal" (Cal Water Code Section 13050(d)). "Waters of the State" is also broadly defined to include "any surface water or groundwater, including saline waters, within the boundaries of the state" (Cal Water Code Section 13050(e)). Therefore, any discharge of dredged or fill materials is also required to obtain a WDR or Waiver.

Pursuant to SWRCB Order No. 2003-0017-DWQ, discharges of dredged or fill material that have received 401 Certification are eligible for a Waiver of a WDR under Cal Water Code Section 13269. Projects that are not eligible for a 401 Certification must obtain an individual WDR or Waiver unless a General Order is applicable. For projects with impacts totaling less than 0.2 acre, SWRCB Order No. 2004-0004-DWQ allows a streamlined process for obtaining a WDR for dredged or fill discharges to waters deemed by the USACE to be outside of federal jurisdiction.

Wetland Riparian Area Protection Policy

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State (California Wetland Policy). The California Wetland Policy became effective May 28, 2020, and stipulates additional procedures and requirements for obtaining approval from waters boards for discharge of dredged or fill materials to Waters of the State. These additional requirements may include a detailed compensatory mitigation plan that includes:

- A watershed profile
- An assessment of the overall condition of the aquatic resources proposed to be impacted and their stressors using a method approved by the permitting authority
- A description of how impacts and compensatory mitigation would not cause a net loss of aquatic resources based on the watershed profile
- Ecological performance standards, monitoring, and long-term protection and management
- Timetables for implementing compensatory mitigation
- An assessment of reasonably foreseeable impacts associated with climate change and measures to avoid and minimize those impacts if required by the permitting authority

However, discharges of dredged or fill materials to Waters of the State that are regulated under a General Order are not subject to the requirements of the California Wetland Policy and instructions should be followed for applying under the applicable General Order (SWRCB 2019). RWQCB Region 7 will review and authorize the Project pursuant to the Porter-Cologne Act and the California Wetland Policy.

Species of Special Concern

An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Extirpated from the state or, in the case of birds, extirpated in its primary season or breeding role
- Listed federally, but not by the state, as threatened or endangered; meets the state definition of threatened or endangered but has not formally been listed
- Experiencing, or having formerly experienced, serious noncyclical population declines or unreversed range retractions that, if continued or resumed, could qualify it for state threatened or endangered status
- Naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines that would qualify it for state threatened or endangered status

SSC is an administrative designation, not a legal listing status. The CEQA requires State agencies, local governments, and special districts to evaluate and disclose impacts from projects in the State meeting certain criteria. According to Section 15380 of the *CEQA Guidelines*, SSCs should be included in an analysis of project impacts if they can be shown to meet the sensitivity criteria.

CDFW Burrowing Owl Staff Report

CDFW's 2012 Staff Report on Burrowing Owl Mitigation describes CDFW's comprehensive conservation and mitigation strategy for burrowing owls (*Athene cunicularia*), a California SSC. CDFW determined that reversing declining population and range trends for burrowing owls will require implementing more effective conservation actions, including developing more rigorous burrowing owl survey methods; working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level. The 2012 Staff Report (CDFW 2012) takes into account the *California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines* (CBOC 1993) and supersedes the survey, avoidance, minimization, and mitigation recommendations in the earlier 1995 Staff Report.

5.4.2.1.3 Local

The California Public Utilities Commission (CPUC) has sole and exclusive State jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

County of Riverside General Plan

County of Riverside General Plan: Multipurpose Open Space Element

The Multipurpose Open Space Element of the *County of Riverside General Plan* contains policies and programs that are designed to protect and conserve environmental resources in Riverside County while encouraging economic development and growth and setting the direction for the framework of its transportation system. The Multipurpose Open Space Element includes the protection and preservation of natural resources including following key resources: water, biological, forest, vegetation, agriculture and soils, open space, parks and recreation, regional aesthetics, cultural and paleontological, renewable resources, and non-renewable resources (County of Riverside 2015).

The Multipurpose Open Space Element addresses policies to protect biologically sensitive resources in Riverside County. These Project-applicable policies include:

- OS 5.6: Identify and, to the maximum extent possible, conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.
- 0.S. 6.2: Preserve buffer zones around wetlands where feasible and biologically appropriate.
- OS 9.3: Maintain and conserve superior examples of native trees, natural vegetation, stands of established trees, and other features for ecosystem, aesthetic, and water conservation purposes.
- OS 9.6: Conserve important traditional Native American plant gathering resource areas.
- OS 18.3: Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.
- O.S. 18.4b: Use only "open" fencing that permits the movement of wildlife, and limit fencing to locations outside of setbacks surrounding watercourses. No fencing is permitted to cross the banks or channel of a watercourse, unless no other option is available.
- O.S. 18.4c: Allow fuel modification only outside of riparian vegetation and vegetation on slopes that buffer a watercourse from erosion and storm water pollution.
- O.S. 18.4d: No planting of non-native invasive species is permitted.
- O.S. 18.4e: No lighting of watercourse area is permitted.

County of Riverside General Plan: Desert Center Area Plan

The County of Riverside prepared the *County of Riverside General Plan: Desert Center Area Plan,* which was adopted in October 2011. The following light pollution, vehicle use, and wildlife habitat policies are applicable to the Project (County of Riverside 2011a):

- DCAP 5.1: When outdoor lighting is used, require the use of fixtures that would minimize effects on the nighttime sky and wildlife habitat areas, except as necessary for security reasons.
- DCAP 10.2: Work to limit off-road vehicle use within the Desert Center planning area.
- DCAP 10.3: Require new development to conform to Desert Tortoise Critical Habitat designation requirements.

County of Riverside General Plan: Palo Verde Valley General Plan

The County of Riverside prepared the *County of Riverside General Plan: Palo Verde Valley Area Plan*, which was adopted in October 2011. The following biological resource conservation policies are applicable to the Project (County of Riverside 2011b):

- 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 Water Resources and Watershed Management sections of the Multipurpose Open Space Element, as well as through use of Best Management Practices.
- PVVAP 12.1: Protect biological resources in the Palo Verde Valley planning area through adherence to the Sensitive Environmental Land and Watershed Management sections of the General Plan Multipurpose Open Space Element.

City of Blythe General Plan

The Open Space and Conservation Elements of the *City of Blythe General Plan 2025* contain policies and programs that encourage sustainable development and seek to balance growth and conservation in Blythe,

California. The Open Space and Conservation Elements aim to preserve and enhance the natural environment through the implementation of policies for open space lands and the conservation of natural resources. The following Project-applicable policies (City of Blythe 2007) include:

- Policy 15: Protect habitats that are sensitive, rare, declining, unique, or represent valuable biological resources in the Planning Area.
- Policy 16: Preserve and protect populations and supporting habitat of special-status species in the Planning Area, including species that are state or federally-listed as rare, threatened, or endangered, all federal "candidate" species for listing, other species on officially adopted federal and/or state listings, and all California SSCs.
- Policy 17: Minimize impacts to sensitive natural habitats throughout the Planning Area. In new developments, emphasis should be placed on protecting and preserving valuable and sensitive natural habitats. The comprehensive habitat mapping and biological resource inventory prepared as part of Plan preparations shall be consulted when reviewing development applications.
- Policy 18: Preserve and protect areas determined to function as regional wildlife corridors, particularly those areas that provide natural connections permitting wildlife movement between sensitive habitats and areas being considered for future conservation because of their high value.
- Policy 19: Cause no net loss of overall wetland acreage. Where such losses may be unavoidable at the project level, require mitigation that meets the goal of no net loss.

5.4.2.2 Habitat Conservation Plan

There are no Habitat Conservation Plans relevant to the Project.

5.4.3 Impact Questions

5.4.3.1 Biological Resources Impact Questions

The thresholds of significance for assessing impacts come from the CEQA Environmental Checklist. For biological resources, the CEQA Checklist asks, 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 in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

5.4.3.2 Additional CEQA Impact Questions

There is one CPUC-identified additional CEQA impact question:

- Would the project create a substantial collision or electrocution risk for birds or bats?

5.4.4 Impact Analysis

5.4.4.1 Biological Resources Impact Analysis

5.4.4.1.1 Methodology

Vegetation Mapping and Habitat Assessment

A reconnaissance survey was conducted as part of preliminary planning efforts for the Project (AECOM 2016). The purpose of the survey was to map vegetation communities, assess the suitability of habitat for the special-status plant and wildlife species with potential to occur in the study area, and document observations of special-status species. The survey did not constitute a protocol-level presence/absence survey for any taxa. Rather, special-status species were recorded if observed incidentally to the habitat assessment and vegetation mapping efforts. A botanist and wildlife biologist conducted a comprehensive pedestrian field survey of the study area between November 14 and 17, 2016. Areas that were not accessible were assessed from an adjacent location using binoculars to document as many species as possible. Species were recorded if observed directly (sightings and vocalizations) or indirectly (physical sign such as tracks or scats). Data were collected using hand-held global positioning system (GPS) units, photographs, and field maps.

The Project Alignment overlaps SCE's Devers to Palo Verde No. 2 Reconductor Project (DPV2) alignment for approximately 7 miles. The overlap area was not visited by the Project field team, and data from DPV2 were incorporated into the desktop analysis. Previous assessments of the area (e.g., DPV2 surveys) described vegetation communities using the system of Holland (Holland 1986). These communities were cross-referenced in the field during the 2016 effort with the MCVII, to align with current SCE data collection methods.

A follow-up vegetation mapping effort was conducted in January and April 2021 to address work areas that were added to locations where the existing structures would not be replaced, but where activities supporting wire stringing would be required. The survey area for the 2021 effort included the new work areas plus a 25-foot buffer, restricted to the width of the SCE ROW. Minor adjustments to the earlier vegetation mapping were also made throughout the Study Area to reflect current conditions. Furthermore, the 2016 mapping was revised as appropriate based on vegetation alliance updates from the online MCVII database (CNPS 2022a).

Aquatic Resources Delineation

Aquatic resource delineations were conducted in July 2017, April 2019, and January 2021. The 2017 delineation included the disturbance areas in the Project design at that time, primarily the locations where structures would be replaced, wire sites, guard structures, and laydown yards. The survey area included the disturbance areas plus an 82-foot (25-meter) buffer. The locations where existing structures would not be replaced were excluded from the 2017 delineation. In 2019, the 2017 survey area was revisited to document any changes in hydrology. In 2021, an additional delineation focused on the work areas recently added to the Project design for locations where existing structures would not be replaced, but where activities

associated with wire stringing would occur. The survey area for the 2021 effort included the disturbance areas, plus a 25-foot buffer, restricted to the width of the existing ROW. Cumulatively, the delineations conducted to date include all disturbance areas in the current design of the Project. The aquatic resources delineations were conducted in accordance with current guidelines from the USACE, RWQCB, and the CDFW. The full methods and results are presented in the *Aquatic Resources Delineation Report* (ARDR) (Artemis 2021b) (Appendix I of the BRTR [Appendix C]).

Special-status Plants

Based on the desktop analysis and habitat assessment, it was determined that 10 special-status plant species have potential to occur in the study area. Prior to conducting focused special-status plant surveys, supplemental database queries and a literature review were conducted to refine the preliminary Species List. Floristic surveys were then conducted in two phases to target peak bloom periods typical of each species having potential to occur in the study area. Phase I surveys were conducted in May 2017. Phase II surveys were conducted in August 2017 to detect late-blooming species. The survey area for the special-status plant surveys included areas subject to ground disturbance based on the 2016 project description plus a 100-foot survey buffer. Surveys were conducted by walking transects spaced approximately 33 feet (10 meters) apart to fully cover the plant survey area. In areas that did not contain suitable habitat for special-status plants or where terrain prevented that method, transects were spaced at 49 feet (15 meters) apart. The survey methods followed industry-standard plant survey guidelines (CDFW 2009, CNPS 2001). Special-status plant species were mapped using a Trimble Juno GPS unit capable of 1-meter accuracy. Vascular plant species encountered were identified to the level necessary to determine their status. A complete list of plant species observed was compiled (Appendix D of the BRTR [Appendix C]). Keys used for identification were those found in *The Jepson Manual Second Edition* (Baldwin et al. 2012). Nomenclature used also follows *The Jepson Manual Second Edition*. The complete methods and results of this effort can be found in the Special-Status Plants Survey Report (GANDA 2018) (Appendix E of the BRTR [Appendix C]).

Focused special-status plant surveys were scheduled for spring 2021. However, based on reference site visits on March 26, 2021, and information from botanists surveying for other projects in Southern California, drought conditions had significantly impeded the germination of annual plant species and many perennial plants were found to be desiccated. Due to the lack of germination in the study area, the spring survey effort was postponed. Focused special-status plant surveys were conducted in September 2021 during the fall blooming period. Although the monsoonal rainfall of the summer was variable across the study area, rainfall was sufficient in many areas to enable the detection of special-status annual plants. Additional rare plant surveys were conducted in the spring of 2023 after the region received increased monsoonal rainfall during the fall and winter of 2022 and 2023. The survey area covered all locations where work would be performed, including those that were excluded from the previous surveys, plus a 100-foot buffer. Access roads and a 10-foot buffer were also surveyed, as were construction material yards except for the Ragsdale Yard. The complete methods and results of this effort can be found in the 2021 and 2023 Special-Status Plants Survey Report (Artemis 2021a and 2023) (Appendix F and G of the BRTR [Appendix C]).

Special-status Wildlife

Based on the desktop analysis and habitat assessment, desert tortoise was determined to be the only FESA- or CESA-listed species with potential to occur in the study area, and it was assumed to be present. A focused desert tortoise survey and habitat assessment was conducted in May 2017. The purpose of the survey was to confirm the presence of desert tortoise and, if possible, to provide data useful for determining abundance

of the species in the Action Area (as defined in Section 5.4.1.6). Because the Action Area included the entire ROW, the desert tortoise habitat assessment and survey covered the work areas that were excluded from initial surveys for other resources. The complete methods and results are presented in the Desert Tortoise Survey Report (Jacobs 2017) (Appendix H of the BRTR [Appendix C]).

5.4.4.1.2 Impact Definitions

Impacts are defined as project-related activities that destroy, damage, alter, or otherwise affect biological resources. This may include injury or mortality to plant or animal species, alteration of an animal's behavior (such as through harassment or frightening of an animal by construction noise), as well as the loss, modification, or disturbance of natural resources or habitats. Impacts are defined as either direct or indirect, and either permanent or temporary.

Direct Impacts

Direct impacts are generally those that occur during project implementation and at the same time and location as the cause of the impact. Direct impacts for this Project may include injury, death, and/or harassment of special-status wildlife species, if present in the work areas or vicinity during project implementation. Direct impacts may also include the destruction of vegetation communities required by special-status species for breeding, foraging, or shelter. Direct impacts to plant species can include crushing of plants, bulbs, or seeds where present in the impact areas.

Indirect Impacts

Indirect, or secondary impacts are those that are reasonably foreseeable and caused by a project but occur later in time and/or potentially at locations of some distance from the source of the impact. If a direct physical change in the environment in turn leads to another change in the environment, then the second change is an indirect impact. Specific examples for this Project may include soil compaction that, following completion of the Project, prevents wildlife from digging burrows or allows weedy plant species to thrive. Other examples may include dust that drifts outside of Project disturbance areas and covers native plants, thereby decreasing their photosynthetic capacity, and the unintentional introduction of weedy plant species that over time negatively affect the local ecology.

Permanent Impacts

Impacts that result in the long-term or irreversible loss of biological resources are considered permanent. For example, construction of a new electrical substation, which would result in a large developed and fenced property where native vegetation may be removed, would result in a permanent impact.

Temporary Impacts

Temporary impacts to biological resources are those that are reversible over time, with or without implementation of applicant proposed measures (APM). Examples include the generation of noise and fugitive dust during Project implementation, trimming or crushing vegetation that would regrow following Project completion, and removal of vegetation that would be actively restored.

In desert ecosystems, especially during periods of drought, it can take many years for the vegetation to return to preconstruction conditions. In some cases, temporary impacts may be considered long-term or permanent. It is important to note, however, that the nature of transmission lines is such that they result in a relatively small permanent (i.e., developed) footprint. The areas of native vegetation between structures

remain undisturbed and the temporary work areas, which are typically very small relative to the abundance of area in the vicinity of the Project, do recover over time. The Project has been designed to minimize impacts to native vegetation to the extent feasible, and overland travel methods would be employed to the extent feasible. Upon completion of construction, SCE would restore temporarily disturbed areas following the methods in the Habitat Restoration and Revegetation Plan (HRRP) prepared for the Project, as described in APM BIO-9, which would include success criteria subject to review and approval by the appropriate agencies. Therefore, impacts to native vegetation associated with temporary disturbance areas are considered temporary.

5.4.4.1.3 Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Less than Significant Impact with Mitigation.

***Special-status Plant Species*.** Implementing the Project could directly or indirectly impact 10 non-listed special-status plant species that occur in or adjacent to the disturbance areas. These ten species include: Watson's amaranth, Harwood's milk-vetch, gravel milk-vetch, Emory's crucifixion thorn, foxtail cactus, ribbed cryptantha, California ditaxis, Abram's spurge, roughstalk witch grass, and desert unicorn plant. Although not detected in the study area during surveys, an additional two species (Harwood's eriastrum and slender-spined althorn) are likely to occur in suitable habitats in the study area. As currently designed, Project implementation may result in direct impacts to all special-status plant species known to occur in the study area with the exception of Emory's crucifixion thorn, Watson's amaranth, California ditaxis, and roughstalk witch grass.

If special-status plants are present in disturbance areas in a live, vegetative state when construction activities occur, and if avoidance is not feasible, they may be subject to direct impacts. These direct impacts may include crushing, trampling, and burying of plants by vehicles and construction equipment and personnel.

A preliminary impact analysis was conducted to quantify direct impacts to any special-status plant species known to occur in the study area. Each individual plant or group of individuals documented as a point or polygon during Project surveys (as described in Section 5.4.4.1.1through 5.4.4.1.4, above) was buffered by 25 feet to create a polygon representing occupied habitat, based on the assumption that the soils surrounding plants contain a viable seed bank. Occupied habitat polygons that overlapped were dissolved into a single polygon. A GIS analysis was conducted to determine the distances between the occupied habitat polygons. Polygons of a given species separated from each other by no more than 0.25 mile were grouped together and considered a "local occurrence" of that species. The occupied habitat polygons were then intersected with the disturbance areas to determine which local occurrences may be impacted during construction. The space between occupied habitat polygons within a local occurrence was considered to be unoccupied and therefore was excluded from the impact analysis.

Through the methods described above, it was determined that the survey data represent five occupied habitat polygons of Watson's amaranth comprising one local occurrence; 66 occupied habitat polygon and seven local occurrence of Harwood's milkvetch; six occupied habitat polygons of Emory's crucifixion thorn comprising one local occurrence; 57 occupied habitat polygons of Alverson's foxtail cactus comprising one local occurrence; eight occupied habitat polygons of California ditaxis comprising two local occurrences; 39 occupied habitat polygon of Abram's spurge comprising two local occurrences; 27 occupied habitat polygons of ribbed cryptantha comprising four local occurrences; 20 occupied habitat polygons of

roughstalk witch grass comprising two local occurrences; 3 occupied habitat polygons of gravel milk-vetch comprising three local occurrences, and 118 occupied habitat polygons of desert unicorn plant comprising 10 local occurrences.

Based on the current Project design, impacts are anticipated to one local occurrence of Harwood's milkvetch, one local occurrence of Alverson's foxtail cactus, one local occurrence of Abram's spurge, three local occurrences of ribbed cryptantha, one local occurrence of gravel milk-vetch, and three local occurrences of desert unicorn plant (Table 5.4-6).

Indirect impacts may occur to special-status plant species in the study area. Potential indirect impacts to special-status plant species may occur from fugitive dust which can adversely affect plants by reducing the rates of metabolic processes such as photosynthesis and respiration. Additional indirect impacts to special-status plant species may occur from soil compaction that permits water to pond for longer periods of time, enabling weedy invasive plant species to become established or spread. Weedy plant species, which are opportunistic and often occupy disturbed soils such as those along the ROW access roads and spur roads, may compete with native species for limited resources. This competition can adversely affect special-status plant species by reducing their growth, dispersal, and recruitment.

Direct and indirect impacts to special-status plant species are similar to those for vegetation communities and native plants (see Impact 5.4.4.2.2). To limit these impacts, disturbance areas have been designed to include the smallest area possible to allow for safe construction. Pre-construction surveys would be conducted to identify special-status plants present in disturbance areas and flag them for avoidance. At the start of construction, "microsite" modifications would be made as necessary and feasible to avoid special-status plant species. In all temporary disturbance areas, trucks and equipment would drive over and crush existing vegetation without removing it to the extent feasible. Direct and indirect impacts to special-status plants would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-9, BIO-10, BIO-11, BIO-12, BIO-13, BIO-14, BIO-18, AIR-2, and HAZ-1. APM BIO-1 involves a Worker's Environmental Awareness Program (WEAP), which would provide training to construction workers about environmental issues that may be encountered on the site. APM BIO-2 involves pre-construction biological clearance surveys to avoid or minimize impacts on special-status plants and wildlife species, habitat, nesting birds and other sensitive biological resources in areas with the potential for resources to be present. APMs BIO-9 and BIO-10 involve preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan, respectively, which would restore and revegetate habitats impacted by Project construction while also avoiding the introduction of invasive species. APMs BIO-11, BIO-12, and BIO-13 include measures to avoid or minimize impacts to sensitive vegetation communities, special-status plants, and jurisdictional waters, wetlands, and riparian habitats. APMs BIO-14 and BIO-18 limits Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour. APM AIR-2 requires the implementation of measures to control fugitive dust. APM HAZ-1 requires the preparation of a Hazardous Materials Management Plan, which would outline proper hazardous materials handling, use, storage and disposal requirements as well as hazardous waste management procedures during Project construction. Therefore, construction impacts would be less than significant with mitigation.

Table 5.4-6 Potentially Impacted Special-Status Plant Species

Species[1]	Local Occurrence Unique Identifier	Occupied Habitat Unique Identifier	Work Area[2]
Astragalus insularis Harwood's milkvetch CRPR 2B.2	ASTINS-07	ASTINS-064	Guard Site 20
		ASTINS-065	Guard Site 20
Coryphantha alversonii Alverson's foxtail cactus CRPR 4.3	CORALV-01	CORALV-002	SWA:1604705E
		CORALV-003	O_M:7029492, SWA:1604706E
		CORALV-005	O_M:7029492, SWA:1604706E
		CORALV-007	SWA:1604707E
		CORALV-010	SWA:1604708E
		CORALV-011	SWA:1604708E
		CORALV-012	O_M:7029493, SWA:1604708E
		CORALV-015	O_M:7029494, SWA:1604710E
		CORALV-016	O_M:7029494, SWA:1604710E
		CORALV-017	O_M:7029494, SWA:1604710E
		CORALV-019	SWA:1604710E
		CORALV-027	O_M:7029495, SWA:1604711E
		CORALV-028	SWA:1604713E
		CORALV-030	SWA:1604713E
		CORALV-032	O_M:7029497, SWA:1604715E
		CORALV-035	SWA:1604716E
		CORALV-036	O_M:7029498, SWA:1604716E
		CORALV-038	SWA:1604717E
		CORALV-039	O_M:7029499, SWA:1604719E
		CORALV-040	SWA:1604720E
		CORALV-042	O_M:7029500, SWA:1604720E
		CORALV-044	SWA:1604721E
		CORALV-047	SWA:1604723E
		CORALV-052	O_M:7029502, SWA:1604724E
		CORALV-055	SWA:1604725E
Euphorbia abramsiana Abram's spurge CRPR 2B.2	EUPABR-01	EUPABR-025	Wire Setup 31
Johnstonella costata Ribbed cryptantha CRPR 4.3	JOHCOS-01	JOHCOS-001	Wire Setup 31
	JOHCOS-02	JOHCOS-023	Guard Site 20
		JOHCOS-025	Guard Site 21
		JOHCOS-026	Guard Site 21
	JOHCOS-03	JOHCOS-009	Wire Setup 32

Species[1]	Local Occurrence Unique Identifier	Occupied Habitat Unique Identifier	Work Area[2]
Astragalus sabulonum Gravel milk-vetch CRPR 2B.2	ASTSAB-02	ASTSAB-008	SWA:N4587725E_C4587724E_S4587723E
		ASTSAB-010	SWA:N4587725E_C4587724E_S4587723E
Proboscidea althaeifolia Desert unicorn plant CRPR 4.3	PROALT-06	PROALT-055	Guard Site 21
		PROALT-057	Guard Site 21
		PROALT-060	Wire Setup 33
		PROALT-062	Wire Setup 34
		PROALT-063	Wire Setup 33
		PROALT-068	Wire Setup 33
	PROALT-07	PROALT-085	SWA:124684AE_124684BE
	PROALT-09	PROALT-095	SWA:E4169110E_W4169109E
		PROALT-102	Wire Setup 8

[1] Federally listed, State-listed, and California Rare Plant Ranks (CRPR) 1, 2, 3 and 4 species documented in Project disturbance areas

[2] SWA = Structure work area; ESWA = Existing structure work area; WS = Wire stringing site; GS = Guard site

Special-status Wildlife Species. Project implementation could result in significant impacts to one federally listed wildlife species (desert tortoise) and 13 non-listed special-status wildlife species. The 2016 habitat assessment identified and mapped suitable habitat for several special-status wildlife species to evaluate the potential for special-status species to occur in the study area. It was not intended to provide a basis for quantifying impacts to species because it did not cover all portions of the study area or address all special-status wildlife species with potential to occur. The following species-specific impacts sections focus instead on the types of impacts that may result from Project construction and the appropriate APMs that would be employed to minimize these impacts.

Desert Tortoise and Desert Tortoise Critical Habitat. Nearly all Project impacts to desert tortoise habitat would be temporary in nature; permanent impacts are considered negligible as described in Impact 5.4.4.2.2. Project activities are expected to result in approximately 16.73 acres of impacts to desert tortoise habitat, of which 9.44 acres are in designated critical habitat and 7.29 acres are suitable habitat (Table 5.4-7). Individual desert tortoises would be at risk of being injured or killed if struck by vehicles and equipment used during Project implementation. Desert tortoise burrows may be damaged or collapsed by Project vehicles, equipment, or personnel. Improper disposal of trash associated with the Project could attract predators of the desert tortoise, such as common ravens and domestic and feral dogs. Direct impacts to desert tortoise may result from the removal of annual vegetation on which tortoises forage and mature shrubs they use for shade and predator evasion.

Table 5.4-7 Estimated Maximum Temporary Impacts to Critical and Suitable Desert Tortoise Habitat

	Impacts (acres) by Project Feature Type[1]			
Habitat Type	**Structure Work Areas**	**Guard Structure Sites**	**Wire Setup Sites**	**Total**
Critical Habitat	0.00	0.40	4.02	**9.44**
Suitable Habitat[1]	1.21	0.48	5.61	**7.29**
Total	**1.21**	**0.88**	**9.63**	**16.73**

[1] Suitable habitat refers to habitat suitable for desert tortoise outside of USFWS-designated critical habitat. Approximately 28.21 acres of developed, disturbed, and/or active agricultural land, which do not include the physical and biological features essential to the recovery of the species, are not included among the suitable habitat or critical habitat impacts.

Indirect impacts to desert tortoise suitable and critical habitat may result from the introduction and spread of invasive and non-native plants, which can reduce available foraging resources for desert tortoise by outcompeting native plants and by fueling wildfires. The presence of humans and human-caused food and water subsidies during Project implementation may temporarily increase the presence of common ravens, which may prey on juvenile desert tortoises.

The Project could result in impacts to desert tortoise and desert tortoise critical habitat. Direct and indirect impacts to the species and its habitat would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-5, BIO-9, BIO-10, BIO-14, BIO-15, BIO-16, BIO-17, BIO-18, AIR-2, and HAZ-1. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10, involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; APM AIR-2 requires the implementation of measures to control fugitive dust; and APM HAZ-1 requires the preparation of a Hazardous Materials Management Plan. APM BIO-5 requires pre-construction surveys and monitoring for desert tortoise during Project construction. APMs BIO-15, BIO-16, and BIO-17 provide measures to avoid wildlife pitfalls and entrapment, minimize standing water (which could attract desert tortoise to work areas), and prohibit firearms and domestic dogs from the Project Area during Project construction.

In addition, the Project would implement the adopted conservation measures for protection of desert tortoise contained in the USFWS-issued Biological Opinion (BO) for Activities in the California Desert Conservation Area (USFWS 2017), as approved under the guidance of the DRECP LUPA (BLM 2016). The BO includes sections describing transmission/utility work occurring in the DRECP area. These measures would be implemented during Project construction and restoration. Since they have been approved by the USFWS for impacts to desert tortoise habitat in the DRECP area, the measures are expected to sufficiently protect the desert tortoise and its critical habitat in the Project Area. The measures in the BO include environmental training, reduced speed limits, monitoring by qualified tortoise biologists, limiting the size and extent of the disturbance area, fencing open trenches, and flagging all potentially active burrows for avoidance.

Similar to the BO, the Project would also implement the measures issued by the CDFW in the State-issued Incidental Take Permit (ITP) that provides coverage under CESA for impacts to State-listed and candidate species.

The measures in the BO and ITP include environmental training, reduced speed limits, monitoring by qualified tortoise biologists, limiting the size and extent of the disturbance area, fencing open trenches, and flagging all potentially active burrows for avoidance.

Couch's Spadefoot. One non-listed special-status amphibian species, Couch's spadefoot, has potential to occur in the study area. Suitable habitat for Couch's spadefoot was not identified in disturbance areas during the 2016 habitat assessment but may be present in the larger study area. Couch's spadefoot individuals may cross access roads or move through disturbance areas that are located in the vicinity of suitable habitat.

Direct impacts to Couch's spadefoot individuals may include being crushed by Project vehicles and equipment, buried by displaced soil, or trapped in excavations. Because no suitable habitat for Couch's spadefoot has been identified in Project disturbance areas, most direct impacts to this species are not anticipated. However, Couch's spadefoot can be crushed by vehicles traveling on access roads in the larger study area, especially if workers deviate from approved routes.

Nearby suitable habitat may be indirectly impacted by runoff of sediment and hazardous materials from disturbance areas and by the spread or introduction of invasive plants.

Although suitable habitat is not expected in Project disturbance areas, impacts to this species may still occur. Direct and indirect impacts to Couch's spadefoot would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-9, BIO-10, BIO-14, BIO-15, BIO-17, BIO-18, AIR-2, and HAZ-1. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; APM AIR-2 requires the implementation of measures to control fugitive dust; and APM HAZ-1 requires the preparation of a Hazardous Materials Management Plan. As discussed further above under "Desert Tortoise and Desert Tortoise Critical Habitat", APMs BIO-15 and BIO-17 provide measures to avoid wildlife pitfalls and entrapment and prohibit firearms and domestic dogs from the Project Area during Project construction.

Mojave Fringe-Toed Lizard. Mojave fringe-toed lizard is a non-listed special-status reptile species with potential to occur in the study area. Suitable sandy dune habitat may be present in the study area and in Project disturbance areas.

Direct impacts could include injury or death as a result of individuals being crushed or buried by Project vehicles, equipment, or displaced soil, entrapment in excavations, disturbance from construction-related noise and vibration, impacts to vegetation used for food and shelter, and disturbance of ant colonies that Mojave fringe-toed lizards also rely on for food.

Indirect impacts may result from an increase in invasive plants that could outcompete native plants and thereby reduce foraging habitat for Mojave fringe-toed lizard. Erosion and sedimentation, fire, and hazardous materials may also indirectly impact this species by decreasing the quality of foraging habitat. Additionally, if soil compaction occurs it could reduce the ability of lizards to burrow.

Direct and indirect impacts to Mojave fringe-toed lizard would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-6, BIO-9, BIO-10, BIO-14, BIO-15, BIO-16, BIO-17, BIO-18, and AIR-2. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; and APM AIR-2 requires the implementation of measures to control fugitive dust. As discussed further above under "Desert Tortoise and Desert Tortoise Critical Habitat", APMs BIO-15, BIO-16, and BIO-17 provide measures to avoid wildlife

pitfalls and entrapment, minimize standing water, and prohibit firearms and domestic dogs from the Project Area during Project construction. APM BIO-6 requires -preconstruction surveys and monitoring for Mojave fringe-toed lizards during Project construction.

Burrowing Owl. Burrowing owl, a non-listed special-status bird species, is known to occur in the study area (Jacobs 2017). Suitable habitat is present in Project disturbance areas.

Direct impacts to burrowing owl could result from destruction of occupied burrows and/or active nest sites, loss or degradation of foraging habitat, collisions with Project vehicles or equipment, and disturbance from construction noise and activity that may cause owls to flush from active nest sites or preferred foraging grounds.

The introduction or spread of invasive or non-native plants could indirectly impact burrowing owl by decreasing habitat value. Soil compaction as a result of construction activities may limit burrow creation.

Direct and indirect impacts to burrowing owl would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-3, BIO-4, BIO-9, BIO-10, BIO-14, BIO-16, BIO-17, BIO--18, and AIR-2. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; and APM AIR-2 requires the implementation of measures to control fugitive dust. As discussed further above under "Desert Tortoise and Desert Tortoise Critical Habitat," APMs BIO-16 and BIO-17 provide measures to minimize standing water and prohibit firearms and domestic dogs from the Project Area during Project construction. APM BIO-3 requires the preparation of a Nesting Bird Management Plan, which would specify nest buffer distances and acceptable work activities within nest buffers, as well as outline monitoring and reporting procedures. APM BIO-4 requires pre-construction surveys and monitoring for burrowing owls during Project construction.

Birds. Vegetation clearing could directly impact nesting birds by crushing active nests and destroying eggs or chicks, as well as by reducing suitable foraging and nesting habitat. Increased noise and human presence could result in nest abandonment. Vehicle strikes resulting in injury or mortality could also increase with additional vehicles and equipment being operated in the area. Fatal collisions with power lines may also reduce nesting bird populations. Pets brought to work areas may disturb or kill nesting birds and destroy nests.

Indirect impacts are likely to result from fugitive dust generated by road grading, which can accumulate on surrounding vegetation and degrade the quality of nesting and foraging habitats for birds. Vegetation trimming may temporarily reduce the quantity and quality of habitat by decreasing vegetative cover. Erosion and sedimentation, fire, hazardous materials, and invasive non-native plants can also indirectly impact nesting and foraging habitats. Although several special-status bird species were considered for their potential to occur in the study area (see Appendix K of the BRTR [Appendix C]), some were determined to be unlikely to nest there because only migration or foraging habitats are present. Many common bird species may also forage or migrate in the study area. Impacts to migration or foraging habitats during construction activities may have an indirect effect on birds that rely on these habitats but nest elsewhere.

Direct and indirect impacts to nesting birds would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-3, BIO-9, BIO-10, BIO-14, BIO-17, BIO-18, and AIR-2. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10

involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; and APM AIR-2 requires the implementation of measures to control fugitive dust. APM BIO-3 requires the preparation of a Nesting Bird Management Plan, which would specify nest buffer distances and acceptable work activities within nest buffers, as well as outline monitoring and reporting procedures. APM BIO-17 prohibits firearms and domestic dogs from the Project Area during Project construction.

Five non-listed special-status passerine bird species occur, or have potential to occur, in the study area: black-tailed gnatcatcher, Bendire's thrasher, crissal thrasher, LeConte's thrasher, and loggerhead shrike. These species may nest in the study area where suitable habitat is present. One non-listed special-status raptor species, prairie falcon, has potential to forage in the study area but is not expected to nest there due to lack of cliff habitat. Direct and indirect impacts to these species would be similar to those described above for nesting birds.

Direct and indirect impacts to special-status bird species would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-3, BIO-9, BIO-10, BIO-14, BIO-16, BIO-17, BIO-18, and AIR-2. APM BIO-16 requires the minimization of standing water, which could attract birds to the work area during Project construction.

American Badger and Desert Kit Fox. American badger and desert kit fox, both non-listed special-status mammal species, occur or have potential to occur in the study area. Suitable habitat for these species is present in the study area and may be present in Project disturbance areas. However, desert kit fox burrows, which are indicative of the species' presence, were only observed outside disturbance areas during the focused desert tortoise surveys (Jacobs 2017).

If American badger or desert kit fox are present in disturbance areas during construction, there is potential for direct impacts to the species, including injury or death resulting from vehicle collision, damage or destruction of occupied burrows, disturbance from construction noise/vibration, and loss or degradation of foraging habitat. In addition, vehicle collisions can occur on access roads used in the larger study area.

Potential indirect impacts to American badger and desert kit fox include soil compaction and vegetation removal during ground disturbance, which reduce habitat suitability and may promote the establishment of invasive plant species. Additionally, the presence of humans and human-caused food and water subsidies may attract both species to disturbance areas during Project implementation. Pets (i.e., dogs) brought on-site may harass or kill either species and can spread canine distemper to the desert kit fox and American badger populations.

Direct and indirect impacts to American badger and desert kit fox would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-7, BIO-9, BIO-10, BIO-14, BIO-15, BIO-16, BIO-17, BIO-18, and AIR-2. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; and APM AIR-2 requires the implementation of measures to control fugitive dust. APM BIO-4 requires pre-construction surveys and monitoring for desert kit fox and other special-status mammal species during Project construction. APMs BIO-15, BIO-16, and BIO-17 provide measures to avoid wildlife pitfalls and entrapment, minimize standing water, and prohibit firearms and domestic dogs from the Project Area during Project construction.

California Leaf-Nosed Bat and Cave Myotis. Two non-listed special-status bat species, California leaf-nosed bat and cave myotis, have potential to occur in the study area. Suitable foraging habitat may be present in Project disturbance areas and the I-10 bridges may provide suitable night roost habitat in the larger study area.

The Project may impact foraging habitat for bats, including California leaf-nosed bat and cave myotis. Potential direct impacts could also include disturbance from construction noise/vibration and vehicle strikes during foraging activity.

Indirect impacts are likely to result from fugitive dust generated by road grading near potential night roosts. Implementation of construction activities may also decrease the quality of foraging habitat.

Direct and indirect impacts to California leaf-nosed bat and cave myotis would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-8, BIO-9, BIO-10, BIO-14, and AIR-2. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APM BIO-14 limits Project disturbance areas and access routes to existing access roads; and APM AIR-2 requires the implementation of measures to control fugitive dust. APM BIO-8 requires pre-construction surveys and monitoring for bats during Project construction.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.4 Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Less than Significant Impact with Mitigation. Potential impacts on riparian habitat or other sensitive natural communities may include temporary loss of habitat associated with ground-disturbing activities and may also include other direct and indirect impacts. The only permanent impacts are associated with new structure footprints and footprints of replacement structures that are slightly larger than those of the original structures. As such, the Project would result in permanent impacts of approximately 0.06 acre, negligible relative to the abundance of habitat in the Project vicinity. As such, permanent impacts are considered negligible in this analysis.

Twelve natural vegetation communities were mapped in Project disturbance areas. Of these communities that may be impacted by the Project, four are considered sensitive under CEQA: Alkali Weed – Saltgrass Playas and Sinks (i.e., playas), Desert-Willow – Smoketree Wash Woodland, Mesquite Thicket, and Mojave – Sonoran Desert Dunes. Table 5.4-8 provides the acreages of Project impacts for each type of land cover, which includes the vegetation communities as well as developed and disturbed areas.

Table 5.4-8 Temporary Project Impacts to Vegetation Communities and Land Cover Types

Type of Land Cover	Status	Temporary Impacts (acres)	Permanent Impacts (acres) [1]
Sensitive Vegetation Communities			
Alkali Weed – Saltgrass Playas and Sinks	G2/S2	0.59	--
Big Galleta Shrub-Steppe	G3/S2	--	--
Desert-willow – Smoketree Wash Woodland	G4/S3	0.01	--
Mesquite Thicket	G5/S3	0.024	--
Mojave – Sonoran Desert Dunes	G3/S2	0.20	--
Total Sensitive Vegetation Communities		**0.82**	**--**
Non-Sensitive Vegetation Communities			
Allscale Scrub	G4/S4	--	--
Blue Palo Verde – Ironwood Woodland	G4/S4	2.69	--
Cheesebush – Sweetbush Scrub	G4/S4	--	--
Creosote Bush Scrub	G5/S5	4.93	--
Creosote Bush – White Bursage Scrub	G5/S5	7.84	--
Red Brome or Mediterranean Grass Grasslands	GNA/SNA	--	--
Rigid Spineflower – Hairy Desert Sunflower	G4/S4	--	--
Tamarisk Thickets	GNA/SNA	--	--
Tournefort's Mustard and Other Ruderal Desert Forb Patches	GNR/SNR	--	--
White Bursage Scrub	G5/S5	--	--
Total Non-Sensitive Vegetation Communities		**15.46**	--
Sensitive Land Cover Types			
Desert Pavement		1.09	--
Total Sensitive Land Cover		**1.09**	**--**
Non-Sensitive Land Cover Types			
Ornamental/Landscaped		0.03	--
Active Agriculture		0.65	--
Developed		1.20	--
Disturbed		4.55	--
Total Non-Sensitive Land Cover		**6.43**	**--**
Overall			
Total Vegetation Communities Overall		**16.28**	**--**
Total Land Cover Overall		**7.52**	**--**
Total Vegetation Communities and Land Cover Overall[2]		**23.80**	**--**

Note: dashes indicate no impacts

[1]Permanent impacts are negligible and therefore unable to be meaningfully attributed to individual vegetation communities. Actual permanent impacts total 0.06 acres Project-wide due to an increased pole footprint resulting from using slightly larger replacement structures.

[2] Small discrepancies within the table are due to rounding.

In addition to the negligible amount of permanent loss of habitat due to installation of replacement structures, potential direct impacts would include the crushing of vegetation and compaction of soil in temporary disturbance areas. These impacts would result primarily from the use of construction vehicles and equipment in work areas associated with structure replacement, wire setup, and guard pole installation, overland travel (i.e., drive and crush), and from excavation where direct replacement is not proposed or feasible. Soil compaction may prevent seeds from germinating or becoming established should they occur in disturbance areas. Impacts to approximately 16.28 acres would occur in native vegetation communities.

Indirect impacts could result from Project activities, and may include reduced seed germination, revegetation rates, and plant vigor. Grading and the use of construction equipment and vehicles may generate fugitive dust and lead to erosion and sedimentation, which may indirectly impact vegetation communities, as well as individual native plants, by degrading soil and reducing the photosynthetic capabilities of vegetation. If Project activities result in the introduction or spread of invasive plant species, they may indirectly impact vegetation communities and native plants through competition for resources or alteration of natural fire regimes or other processes. Invasive, non-native plants are opportunistic and often occupy disturbed soils (e.g., within transmission line corridors, areas of exposed bare ground), that may occur in Project disturbance areas. Once introduced, invasive plant species often lead to a reduction in growth, dispersal, and recruitment of native species and the eventual degradation of the vegetation community.

Other indirect effects to plants may include microclimate changes due to removal or modification of adjacent vegetation such as local increases in temperature, incident sunlight, and surface wind speeds. These can increase the incidence of heat shock and drought stress for plants, reduce growth rates and reproductive success, and increase mortality associated with heat and drought. Changes in vegetative cover or plant vigor may also affect pollinator abundance and reproduction. In addition, some construction activities have the potential to result in wildfires, which may damage or destroy entire vegetation communities. Hazardous materials may contaminate soil and hinder native plant germination and growth.

Disturbance areas have been designed to include the smallest possible area that allows for safe construction. Upon initiation of construction, "microsite" modifications may be made to avoid sensitive vegetation. In all temporarily disturbed areas, trucks and equipment would drive over and crush existing vegetation without removing it to the extent feasible. Leaving vegetation in place and keeping intact the roots of woody plants would aid in the regeneration of vegetation, reducing overall impacts. Where possible, the new structures would be erected via direct replacement. Impacts from cutting, clearing, or removal of existing vegetation would occur only where necessary. In addition, boom trucks staged on access roads may be substituted for guard poles. Temporary disturbance areas would be revegetated upon completion of construction activities as described in the HRRP. Direct and indirect construction impacts to native vegetation communities and individual native plants would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-9, BIO-10, BIO-11, BIO-12, BIO-13, BIO-14, BIO-18, AIR-2, and HAZ-1. As discussed further above under "Special-status Plant Species," APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-11, BIO-12, and BIO-13 include measures to avoid or minimize impacts to sensitive vegetation communities, special-status plants, and jurisdictional waters, wetlands, and riparian habitats; APMs BIO-14 and BIO-18 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas and limits speeds of vehicular travel to 15 miles per hour; APM AIR-2 requires the implementation of measures to control fugitive dust; and APM HAZ-1 requires the preparation of a Hazardous Materials Management Plan.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.5 Would the project have a substantial adverse effect on state or federally protected wetlands and waters, as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact with Mitigation. No regulated Waters of the U.S. or wetlands that fall under federal or State jurisdiction are present in the study area. Intrastate stream channels under State jurisdiction (CDFW and/or RWRCB) have been identified in the jurisdictional survey area, some of which are in Project work areas and may be impacted by Project implementation. Due to the isolated nature of these features and the limited number of features present in disturbance areas, the Project would not substantially affect the hydrology of the area. No impacts would occur to aquatic or riparian habitats because none have been identified in the study area.

Table 5.4-9 summarizes the Project's potential impacts to Waters of the State under joint RWQCB and CDFW jurisdiction, and under exclusive CDFW jurisdiction. For the same reason as described under Impact 5.4.4.2.3 above, permanent impacts are considered negligible in this analysis.

Table 5.4-9 Potential Impacts to Jurisdictional Waters of the State

Waters Type	Temporary Impacts (acres/linear feet)	Permanent Impacts[2] (acres/linear feet)
Waters of the State (RWQCB/CDFW Jurisdiction)		
Basin	-- / --	--
Ditch/Canal	-- / --	--
Unvegetated Channel	0.01/280	--
Vegetated Channel	--/--	--
Subtotal Waters of the State (RWQCB/CDFW Jurisdiction)	*0.01/28*	--
Waters of the State (CDFW Exclusive Jurisdiction)		
Ditch/Canal - Channel Bank	--/--	--
Unvegetated Channel - Channel Bank	0.01/28	--
Vegetated Channel - Channel Bank	--/--	--
Watercourse[1]	0.12/441	--
Subtotal Waters of the State (CDFW Exclusive Jurisdiction)	*0.13/469*	--
Grand Total RWQCB Jurisdiction	**0.01/28**	**--**
Grand Total CDFW Jurisdiction	**0.13/469**	**--**

CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board
Note: dashes indicate no impacts
[1] Defined as a larger channel delineated to encompass multiple smaller channels.
[2] Permanent impacts are negligible and therefore unable to be meaningfully attributed to individual jurisdictional features. Actual permanent impacts total 0.06 acres Project-wide due to an increased pole footprint resulting from using slightly larger replacement structures.
NA = Not applicable

Temporary direct impacts to jurisdictional waters may result from minor grading and leveling activities to ensure equipment stabilization: removal and replacement of structures in structure replacement work areas; removal of fill in structure removal work areas; vegetation crushing and overland travel in all work areas; and installation of temporary erosion control fencing, berms, and other erosion control measures to comply with SWPPP requirements.

Potential indirect impacts may occur to jurisdictional waters where they are present adjacent to the limits of designated work areas. Adjacent jurisdictional waters may be indirectly impacted by the introduction or spread of invasive weeds and by increased or altered water flow from runoff if site contours in work areas are appreciably changed.

The Project would likely require (1) submittal of an Approved Jurisdictional Determination package to USACE, (2) authorization from RWQCB Region 7 to discharge waste (i.e., fill material) into Waters of the State, and (3) a Lake and Streambed Alteration Agreement from CDFW for impacts to Waters of the State. The RWQCB and CDFW permits may mandate additional measures to avoid, minimize, or mitigate the temporary impacts to jurisdictional waters. In addition, direct and indirect construction impacts to aquatic resources would be reduced to a less than significant level through implementation of APMs BIO-1, BIO-2, BIO-9, BIO-10, BIO-11, BIO-13, BIO-14, AIR-2, and HAZ-1. As discussed further above under "Special-status Plant Species", APMs BIO-1, BIO-2, BIO-9, and BIO-10 involve a WEAP training, pre-construction biological clearance surveys, preparation of a Habitat Restoration and Revegetation Plan and an Invasive Plant Management Plan; APMs BIO-11 and BIO-13 include measures to avoid or minimize impacts to sensitive vegetation communities and jurisdictional waters, wetlands, and riparian habitats; APM BIO-14 limit Project disturbance areas and access routes to existing access roads and previously disturbed areas; APM AIR-2 requires the implementation of measures to control fugitive dust; and APM HAZ-1 requires the preparation of a Hazardous Materials Management Plan.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.6 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 corridor, or impede the use of native wildlife nursery sites?

Less Than Significant Impact. The Project Alignment spans 53 miles and overlaps several ACECs, which are special management areas that contain native habitats and function as movement corridors for desert wildlife species. Such movement is typically associated with daily activities involving reproduction, foraging, and seeking shelter. Construction activities could cause localized, short-term impediments to movement through the study area by resident or migratory wildlife due to increased noise, lighting, dust, and human activity in construction areas. During construction, certain species may temporarily avoid active disturbance areas, but these areas are small relative to open space in the surrounding area to support wildlife movement. Construction activities the Project would temporarily introduce into the environment would affect only small, geographically dispersed areas at any one time, resulting in temporarily altered movement paths for individual wildlife, and would not create substantial barriers to movement. In addition, native wildlife nursery sites are not known to occur within the study area. Overall, impacts related to the movement of wildlife, migratory wildlife corridors, or native wildlife nursery sites area less than significant.

Proposed permanent new and replacement structures as part of the Project may interfere with the movement of individual animals but would not create significant barriers to the movement of wildlife species. Because

the Project involves the replacement of existing subtransmission towers and structures, no permanent alterations of existing wildlife corridors are anticipated as a result of project implementation. New poles and lines, however, could result in a risk of collisions for birds, interfering with the movement of individuals or flocks. To avoid impacts to avian movement from new structures, all new and replacement structures and conductor for the Project would be designed to follow the intent of Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee [APLIC] 2006). Further, all structures and conductor would be evaluated for potential collision risk and, where determined to be high risk, lines would be marked with collision reduction devices in accordance with Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012), reducing potential impacts to avian movement to a less than significant level.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.7 Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact with Mitigation. As presented in Section 5.4.2.1.3 above, the County of Riverside General Plan and City of Blythe General Plan contain policies intended to protect biological resources, including sensitive natural communities, special-status species, riparian habitat and wetlands, wildlife corridors, and to protect against the spread or introduction of noxious weed species. Implementation of the APMs described throughout this impact analysis, including APMs BIO-1 through BIO-18, would ensure the protection of the resources identified in the applicable General Plans, or the minimization of impacts to said resources, and thus impacts would be less than significant under this criterion.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.8 Would the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?

No Impact. There are no adopted HCPs or NCCPs within the study area, and no known approved local, regional, or State habitat conservation plans covering the Project Alignment. Therefore, there would be no impacts under this criterion.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.1.9 Would the project create a substantial collision or electrocution risk for birds or bats?

Less than Significant Impact. Special-status bird species addressed in Section 5.4.1.5.2 occur within the Project study area. Special-status bat species addressed in Section 5.4.4.1.3 occur within the Project study area.

The Project would introduce into the environment, temporarily, construction equipment that, by its presence and use, could present a collision risk for birds or bats. Because construction equipment is large, solid, generally non-static, and highly visible, and does not include exposed, live currents, collision or electrocution risk for birds or bats from such equipment is anticipated to be very low; therefore, a less than significant impact would occur under this criterion.

As previously described under 5.4.4.2.4, all new and replacement structures and conductor for the Project would be designed to follow the intent of Suggested Practices for Avian Protection on Power Lines: the State of the Art in 2006 (APLIC 2006). Further, all structures and conductor would be evaluated for potential collision risk and, where determined to be high risk, lines would be marked with collision reduction devices in accordance with Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). Design consistency with APLIC would reduce any potential collision or electrocution impacts to birds or bats to a less than significant level.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.4.4.2 Quantify Habitat Impacts

Habitat impacts for known disturbance areas are quantified for the Project Alignment are presented in Section 5.4.4.1.3 above.

5.4.4.3 Special-status Species Impacts

Impacts to special-status species are addressed in Section 5.4.4.1.3 above.

5.4.4.4 Wetland Impacts

Impacts to RWQCB and CDFW jurisdictional waters are addressed in Sections 5.4.4.1.4 and 5.4.4.1.5 above.

5.4.4.5 Avian Impacts

Impacts to avian species are addressed in Impacts 5.4.4.1.3 and 5.4.4.1.6above.

5.4.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for Biological Resources.

5.4.5.1 Applicant Proposed Measures

The following APMs would be implemented to reduce biological resource impacts associated with the Project:

- **APM BIO-1. Worker Environmental Awareness Program**. All workers on the Project Site shall be required to attend a Worker's Environmental Awareness Training Program (WEAP). Training shall inform all construction personnel of the resource protection and avoidance measures as well as procedures to be followed upon the discovery of environmental resources. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:
  - Environmentally Sensitive Areas boundaries

- Housekeeping (trash and equipment cleaning)
- Safety
- Work stoppage
- Communication Protocol
- Consequences of non-compliance

- **APM BIO-2. Pre-Construction Biological Clearance Surveys and Monitoring.** Pre-construction clearance surveys will be performed by a qualified biologist (i.e., a biologist with the requisite education and experience to address specific resources), who may be chosen from biologists previously approved by the California Department of Fish and Wildlife (CDFW), to avoid or minimize impacts on special-status plants and wildlife species, habitat, nesting birds and other sensitive biological resources in areas with the potential for resources to be present. Sensitive resources identified during the clearance survey will be:
  - Flagged for avoidance
  - Moved to outside impact areas
  - Avoided by implementing procedures to avoid impacts to individuals while impacting habitat (e.g., burrows, dens, etc.)
  - Documented based on permit authorizations

  Specific details on the pre-construction survey requirements may be found within measures for each individual species.
  - Where special-status species (e.g., reptiles, birds, mammals, and bat roosts) or unique resources (defined by regulations and local conservation plans) are known to occur and there is a potential for significant impacts, qualified biologists will monitor construction activities to ensure that impacts to special-status species, sensitive vegetation types, wildlife habitat, and unique resources are avoided and minimized.

- **APM BIO-3. Nesting Bird Management Plan.**

  Prepare Nesting Bird Management Plan. SCE will prepare and implement a Nesting Bird Management Plan (NBMP) to address nesting birds undertaken in collaboration with CDFW and United States Fish and Wildlife Service (USFWS). The Plan will be an adaptive management plan that may be updated as needed if improvements are identified or conditions in the field change. The Plan will include the following:
  - Nest management and avoidance
  - Field approach (survey methodology, reporting, and monitoring)
  - Communication protocols
  - The Project's avian biologist's qualifications

  Prepare and Implement a Nesting Bird Management Plan. SCE shall prepare a NBMP in coordination with CDFW, BLM, and USFWS. The NBMP shall describe methods to minimize potential Project effects to nesting birds and avoid any potential for unauthorized take. Project-related disturbance including construction and pre-construction activities shall not proceed within 300 feet of active nests of common bird species or 500 feet of active nests of raptors or special-status bird species until approval of the NBMP by CDFW and BLM in consultation with USFWS.

- Surveys shall cover all potential nesting habitat within the ROW or other work areas within 500 feet of these areas for raptors and 300 feet for non-raptors.
- Pre-construction surveys shall be conducted for each work area, no longer than 10 days prior to the start of construction activity. On the first day of construction at any given site, a qualified avian biologist will perform a pre-construction "sweep" to identify any bird nests or other resources that may have appeared since the 10-day survey.
- SCE shall provide the CDFW and BLM a report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity of the surveyor(s); a list of species observed; and electronic data identifying nest locations and the boundaries of buffer zones. The electronic data set will be updated following each preconstruction nest survey throughout the nesting season. The format and contents of this report will be described in the draft NBMP and will be subject to review and approval by CDFW and BLM.

Nest Buffers and Acceptable Activities. The NBMP shall specify measures to delineate buffers on the work site, to consist of clearly visible marking and signage. Buffer locations shall be communicated to the construction contractor and shall remain in effect until formally discontinued (when each nest is no longer active). In addition, the NBMP shall specify measures to ensure the buffers are observed, including a direct communication and decision protocol to stop work within buffer areas. In some cases, active nests may be found while work is underway. Therefore, the NBMP shall include a protocol for stopping ongoing work within the buffer area, securing the work site, and removing personnel and equipment from the buffer.

The NBMP shall describe proposed measures to avoid take or adverse effects to nests, such as buffer distances from active nests. These measures shall be based on the specific nature of the bird species and conservation status, and other pertinent factors. The NBMP will identify bird species (or groups of species) that are relatively tolerant or intolerant of human activities and specify smaller or larger buffer distances as appropriate for each species. If no information is available to specify a buffer distance for a species, then the NBMP shall specify 300 feet as a standard buffer distance, and 500 feet for raptors and, special-status species. Nest management for listed threatened or endangered species will be prescribed in a USFWS Biological Opinion, CDFW Incidental Take Permit, or both. All applicable avoidance measures, including buffer distances, must be continued until nest monitoring (below) confirms that the nestlings have fledged and dispersed, or the nest is no longer active. For each special-status species potentially nesting within or near Project work areas, the NBMP shall specify applicable buffers and any additional nest protection measures, specialty monitoring, or restrictions on work activities, if needed.

The NBMP shall identify acceptable work activities within nest buffers (e.g., pedestrian access for inspection or BMP repair) including conditions and restrictions, and any monitoring required. The NBMP shall include pictorial representation showing buffer distances for ground buffers, vertical helicopter buffers, and horizontal helicopter buffers for nests near the ground and nests in towers.

Nest Buffer Modification or Reduction. At times, SCE or its contractor may propose buffer distances different from those approved in the NBMP. Buffer adjustments shall be reviewed and recommended by a qualified avian biologist, who has been approved by CDFW and BLM in consultation with the USFWS. The NBMP shall provide a procedure and timing requirements for notifying CDFW, BLM, and USFWS of any planned adjustments to nest buffers. Separate and distinct procedures will be provided for special-status birds. The NBMP will list the information to be included in buffer reduction notifications in a standardized format.

Nest Deterrents. The NBMP shall describe any proposed measures or deterrents to prevent or reduce bird nesting activity on Project equipment or facilities, such as buoys, visual or auditory hazing devices, bird repellents, securing of materials, and netting of materials, vehicles, and equipment. It shall also include timing for installation of nest deterrents and field confirmation to prevent effects to any active nest, guidance for the contractor to install, maintain, and remove nest deterrents according to product specifications, and periodic monitoring of nest deterrents to ensure proper installation and functioning and prevent injury or entrapment of birds or other animals. In the event that an active nest is located on Project facilities, materials or equipment, SCE will avoid disturbance or use of the facilities, materials or equipment (e.g., by red-tag) until the nest is no longer active.

Communication. The NBMP shall specify the responsibilities of construction monitors in regards to nests and nest issues and specify a direct communication protocol to ensure that nest information and potential adverse impacts to nesting birds can be promptly communicated from nest monitors to construction monitors, so that any needed actions can be taken immediately.

The NBMP shall specify a procedure to be implemented following accidental disturbance of nests, including wildlife rehabilitation options. It also shall describe any proposed measures, and applicable circumstances, to prevent take of precocial young of ground-nesting birds such as killdeer or quail. For example, chick fences may be used to prevent them from entering work areas and access roads. Finally, the NBMP will specify a procedure for removal of inactive nests, including verification that the nest is inactive and a notification/approval and approval process prior to removal.

Monitoring. SCE shall be responsible for monitoring the implementation, conformance, and efficacy of the avoidance measures (above). The NBMP shall include specific monitoring measures to track any active bird nest within or adjacent to Project work areas, bird nesting activity, Project-related disturbance, and outcome of each nest. For nests with reduced buffers, SCE shall monitor each nest until nestlings have fledged and dispersed or until the nest becomes inactive. Nests with default buffers do not require further monitoring once construction work is completed in the area. New nests discovered after work completion in an area will not require monitoring. In addition, monitoring shall include pre-construction surveys, daily sweeps of work areas and equipment, and any special monitoring requirements for particular activities (tree trimming, vegetation removal, etc.) or particular species (noise monitoring, etc.). Nest monitoring shall continue throughout the breeding season during each year of the Project's construction activities.

Reporting. Throughout the construction phase of the Project, nest locations, Project activities in the vicinity of nests (including helicopter traces), and any adjustments to buffer areas shall be updated and available to CDFW on a daily basis in the Field Reporting Environmental Database. All buffer reduction notifications and prompt notifications of nest-related non-compliance and corrective actions will be made via email to CDFW. In addition, the NBMP shall specify the format and content of nest data to be provided in regular monitoring and compliance reports. At the end of each year's nest season, SCE will submit an annual NBMP report to the CDFW, BLM, and USFWS.

- **APM BIO-4. Burrowing Owl.**

  Pre-Construction Survey. A pre-construction, focused burrowing owl (*Athene cunicularia*) survey will be conducted no more than 30 days prior to initial start of construction within habitat to determine if any occupied burrows are present. If occupied burrows are found, adequate buffers shall be established around burrows. Adequate buffers will be determined by a Project avian biologist based upon field conditions and resource agency guidelines for wintering burrows and breeding season burrows.

Prepare Burrowing Owl Management Plan. SCE will develop a Burrowing Owl Management Plan for the Project. The Plan will include information related to:

- Assessment of burrow suitability
- Replacement burrows
- Methods for relocation
- Monitoring and reporting
- Implementation locations

Conduct Surveys and Avoidance for Burrowing Owl. Burrowing owl surveys shall be conducted in accordance with the most current CDFW guidelines (CDFW 2012 or updated guidelines as they become available). SCE shall take measures to avoid impacts to any active burrowing owl burrow within or adjacent to a work area. The default buffer for a burrowing owl burrow is 300 feet for ground construction and 300 feet horizontal and 200 feet vertical for helicopter construction. The NBMP will specify a procedure for adjusting this buffer, if needed. Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the Project Site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission.

If active burrowing owl burrows are located within Project work areas, SCE may passively relocate the owls by preparing and implementing a Burrowing Owl Passive Relocation Plan, as described below. SCE shall prepare a draft Burrowing Owl Passive Relocation Plan for review and approval by CDFW prior to the start of any ground-disturbing activities. No passive relocation of burrowing owls shall be permitted during breeding season, unless a qualified biologist verifies through noninvasive methods that an occupied burrow is not occupied by a mated pair, and only upon authorization by CDFW. The Plan shall include, but not be limited to, the following elements:

Assessment of Suitable Burrow Availability. The Plan shall include an inventory of existing, suitable, and unoccupied burrow sites within 300 feet of the affected Project work site. Suitable burrows will include inactive desert kit fox, ground squirrel, or desert tortoise burrows that are deep enough to provide suitable burrowing owl nesting sites, as determined by a qualified biologist. If two or more suitable and unoccupied burrows are present in the area for each burrowing owl that will be passively relocated, then no replacement burrows will need to be built.

Replacement Burrows. For each burrowing owl that will be passively relocated, if fewer than two suitable unoccupied burrows are available within 300 feet of the affected Project work site, then SCE shall construct at least two replacement burrows within 300 feet of the affected Project work site, or in suitable locations within 0.25 mile when suitable locations within 300 feet are not available. Burrow replacement sites shall be in areas of suitable habitat for burrowing owl nesting and subject to minimal human disturbance and access. The Plan shall describe measures to ensure that burrow installation or improvements will not affect sensitive species habitat or any burrowing owls already present in the relocation area. The Plan shall provide guidelines for creation or enhancement of at least two natural or artificial burrows for each active burrow within the Project disturbance area, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFW guidelines (CDFW 2012 or more current guidance as it becomes available) and shall be approved by CDFW.

Methods. Provide detailed methods and guidance for passive relocation of burrowing owls, outside the breeding season. An occupied burrow may not be disturbed during the nesting season (generally, but

not limited to, February 1 to August 31), unless a qualified biologist determines, by non-invasive methods, that it is not occupied by a mated pair. Passive relocation will include installation of one-way doors on burrow entrances that will let owls out of the burrow but will not let them back in. Once owls have been passively relocated, burrows will be carefully excavated by hand and collapsed by, or under the direct supervision of, a qualified biologist.

Monitoring and Reporting. Describe monitoring and management of the replacement burrow site(s) and provide a reporting plan. The objective shall be to manage the relocation area for the benefit of burrowing owls, with the specific goal of maintaining the functionality of the burrows for a minimum of two years. Monitoring reports shall be available to CDFW on a weekly basis.

- **APM BIO-5. Desert Tortoise.**

  Pre-Construction Surveys/Construction Monitoring. Prior to initial ground-disturbing activities, a biological monitor under the supervision of a USFWS- or CDFW-approved biologist—with experience monitoring and handling desert tortoise—will conduct a pre-activity survey in all work areas within potential desert tortoise habitat, plus an approximately 100-foot buffer. All desert tortoise burrows within the pre-activity survey area (including desert tortoise pallets) will be prominently flagged at that time so that they may be avoided during work activities.

  An approved biologist will be on-site to monitor vegetation removal and grading and provide regular inspections of all other construction activities within desert tortoise habitat. The approved biologist will have the authority to halt all non-emergency actions (as soon as safely possible) that may result in harm to desert tortoise and will assist in the overall implementation of APMs for the tortoise.

  In the event a desert tortoise is encountered in the work area, all work will cease, and the approved biologist will be contacted. Work will not commence until the animal has voluntarily moved to a safe distance away from the work area.

  No tortoise will be handled except under authorization from the USFWS and CDFW. Encounters with desert tortoise will be documented and provided to the appropriate wildlife resource agencies. In the event a dead or injured desert tortoise is observed, the approved biologist will be responsible for notifying SCE's herpetologist and reporting the incident to the wildlife resource agencies.

  Coordinate with agencies. If desert tortoise is observed in the Project Area, and avoidance cannot be ensured through Project design, SCE will obtain the necessary permits or authorizations in consultation with USFWS, CDFW, and/or land management agencies.

- **APM BIO-6. Mojave Fringe-Toed Lizard.** Pre-construction surveys for Mojave fringe-toed lizards (*Uma scoparia*) shall be conducted by qualified biologist(s) in suitable habitat (sand dunes/partially stabilized dunes) within 14 days prior to the start of construction. The survey area shall include disturbance areas, plus a 100-foot buffer. Qualified biologist(s) shall walk transects at 5-meter (16-foot) intervals. Biological monitor(s) shall be present in each area of active construction in occupied Mojave fringe-toed lizard habitat. Biological monitor(s) shall examine the disturbance areas periodically for the presence of Mojave fringe-toed lizards and shall inspect all trenches, holes, or excavations for the presence of lizards prior to backfilling. If a lizard is found trapped in an excavation, the biological monitor(s) shall capture the lizard by hand, if feasible, and immediately release it to suitable habitat outside of the disturbance area, placed in the shade of a shrub.

- **APM BIO-7. Desert Kit Fox and Other Special-Status Mammal Species**. Pre-construction surveys for special-status mammals shall be conducted within 14 days prior to the start of construction. The survey area shall include the Project disturbance areas, plus a 300-foot buffer during the breeding season (March 1 through August 31) and a 100-foot buffer outside the breeding season. Potentially occupied burrows in Project disturbance areas and the survey buffer shall be mapped and qualified biologist(s) shall utilize tracking stations and/or wildlife cameras to determine whether the burrows are occupied. If a burrow is determined to be occupied by desert kit fox or other special-status mammal species during the breeding season, the burrow shall be demarcated with a 300-foot buffer. If a burrow is determined to be occupied outside the breeding season, it shall be demarcated with a 100-foot buffer. Burrows determined to be unoccupied shall be demarcated with a 50-foot buffer. If occupied burrows are found in Project disturbance areas and cannot be avoided, qualified biologist(s) shall passively relocate the occupying animals through the use of one-way doors at burrow entrances that allow the animals to leave on their own. Once vacant, burrows shall be excavated by hand and collapsed. Passive relocation will be avoided from March 1 through August 31 and shall not occur while young are in the burrow and still dependent upon their parents. CDFW shall be consulted prior to any relocation of desert kit fox.

- **APM BIO-8. Bats, Common and Sensitive Species.**

  Pre-Construction Surveys. A qualified bat biologist will conduct surveys before the start of construction to identify active bat roosting or maternity colonies within or adjacent to Project impact areas. Trees, rock outcrops, and man-made structures with bat roost potential will be assessed for the presence of bats during the maternity season (April 15 to August 15) or winter torpor season (October 31 to February 15). For the maternity season, a one-night visual emergence survey during acceptable weather conditions (e.g., no rain or high winds, night temperatures >45F) may be employed to determine presence. Alternatively, the roost can be physically examined if conditions permit (e.g., remote cameras or lift equipment).

  High-value habitat features (large tree cavities, crevices, bark fissures, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, rock outcrops, buildings, etc.) will be identified and the area around these features searched for bats and bat sign (guano, culled insect parts, staining, etc.).

  If no roosts (maternity, wintering, or otherwise) are present, tree trimming/removal or building/structure removal may continue as planned. If an active roost has been identified or lasiurine bats are present, removal of trees/structures around the roost will be conducted between September 15 to October 30, and February 15 to April 15, which corresponds to time periods when bats are active, not in torpor, and not caring for non-mobile young.

  Removal of trees requires the following two-step process prior to trimming/removal:

  - On Day 1 under the supervision of a qualified bat biologist, Step 1 will include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This will create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree will either abandon the roost immediately (rarely) or, after emergence, will avoid returning to the roost.
  - On Day 2, Step 2 of the tree removal may occur, which will be removal of the remainder of the tree. Trees that are only to be trimmed and not removed will be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches will be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost will be removed on Day 2.

Removal of structures requires the following process:

- Removal of structures containing or suspected to contain active bat roosts shall be partially dismantled (e.g., create holes in roof, remove windows) under the supervision of the qualified biologist in the evening prior to the emergence of bats. Structures shall be partially dismantled to significantly change the roost conditions (i.e., temperature, air currents), causing adult bats to abandon the roost and seek new roosting locations. Structure removal shall be completed the subsequent day.

Construction Monitoring. If a colonial or solitary maternity roost was located, tree/structure removal will be avoided between April 15 and August 15 (the maternity period) to avoid impacts to active maternity roosts (reproductively active females and dependent young). A qualified biologist will determine the appropriate buffer area around active nest(s) and provisions for buffer exclusion areas. Unless restricted by the qualified biologist, construction vehicles will be allowed to move through a buffer area with no stopping or idling. The qualified biologist will determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and existing conditions. Furthermore, the roost will be monitored to determine activity. Roost monitoring will be conducted by qualified biological monitors with knowledge of bat behavior under the direction of a CDFW-qualified bat biologist. The qualified biological monitor will observe and document implementation of appropriate buffer areas around active roosts(s) during Project activities.

- **APM BIO-9. Habitat Restoration and Revegetation Plan.** Temporary impacts to regulated species' habitats, plant species, and vegetation communities shall be restored or revegetated. Regulated species and vegetation communities include all species designated as threatened, endangered or rare, sensitive, or of concern by resource or land agencies. Species and vegetation communities that require restoration and revegetation will be determined by the resource agencies through the permitting process.

  SCE shall develop and implement a Habitat Restoration and Revegetation Plan (HRRP). SCE will consult with appropriate agencies during development of the HRRP and implement the HRRP in conjunction with applicable permit conditions and mitigation measures. The HRRP shall be submitted to CDFW for review and approval prior to the start of construction. Invasive plant management will be performed in conjunction with the HRRP per the Invasive Plant Management Plan (IPMP; APM BIO-12).

  For all revegetation or restoration sites, the HRRP shall include:

  - Revegetation and restoration goals and objectives based on vegetation type and jurisdictional status of each site
  - Quantitative restoration success criteria
  - Implementation details as applicable. Details may include topsoil stockpiling and handling, post-construction site preparation, soil decompaction and recontouring, planting and seeding palettes to include only native, locally sourced materials with confirmed ability to produce from suppliers, fall or other suitable season-season planting or seeding dates
  - Maintenance details, which may include irrigation or hand-watering schedule and equipment, and erosion control
  - Monitoring and reporting, specifying monitoring schedule and data collection methods throughout establishment of vegetation with key indicators of successful or unsuccessful progress, and

quantitative criteria values to objectively determine success or failure at the conclusion of the monitoring period

- Adaptive management procedures such as reseeding, re-planting, drainage repairs, adjustments to irrigation schedule, and repair or remediation of sites to meet success criteria on schedule

For temporary disturbance in common vegetation or habitat (e.g., creosote bush scrub) or in disturbed areas such as roads or agricultural lands, the goal of the HRRP will be revegetation to minimize spread of invasive plants, dust generation, and soil erosion. For revegetation sites the goals, objectives, and success criteria specified in the HRRP will be limited to requirements of the Stormwater Pollution Prevention Plan (SWPPP) and the IPMP (APM BIO-12). No additional goals, objectives, or success criteria regarding habitat condition are required for revegetation sites.

For species and vegetation communities with permit requirements, including wetlands and riparian habitats, the goal of the HRRP will be to restore plant species, habitat values, or vegetation communities. For restoration sites the goals, objectives, and success criteria specified in the HRRP will include native species cover and species richness compatible with the specific vegetation and habitat type.

For all revegetation or restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CDFW, and BLM damages the area within the monitoring period, SCE will be responsible for one reseeding or replanting event, as applicable. If a second event occurs, no replacement is required.

For all revegetation (per SWPPP requirements) or restoration (per the HRRP) areas, seed and/or potted nursery stock of locally native species will be used. The list of plants observed during botanical surveys of the Project Area will be used as a guide to site-specific plant selection, additional appropriate species may be included.

Monitoring of the revegetation sites will be conducted according to requirements of the SWPPP, and the IPMP. Monitoring of the restoration sites will continue annually until HRRP success criteria are achieved. SCE will be responsible for implementing adaptive management as needed.

Reporting of revegetation will be according to requirements of the SWPPP and the IPMP. For all restoration areas, SCE will provide annual reports to the CDFW and BLM to verify the total vegetation acreage subject to restoration, areas that have been completed, and areas still outstanding. The annual reports will also include a summary of the restoration and adaptive management activities for the previous year, success criteria progress and completion, and any adjustments to planned activities, for the upcoming year.

- **APM BIO-10. Invasive Plant Management Plan.** SCE shall prepare and implement an IPMP. This plan shall include measures designed to avoid the introduction and spread of new nonnative invasive plant species (invasive plants) and minimize the spread of existing invasive plants resulting from Project activities. The IPMP also must meet BLM's requirements for NEPA disclosure and analysis if herbicide use is proposed for the Project. The IPMP shall be submitted to CDFW and BLM for review and approval prior to the start of construction.

  For the purpose of the IPMP, invasive plants shall include plants that (1) are invasive and rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC 2006), or (2) aid and promote the spread of wildfires (such as *Bromus tectorum* [cheatgrass], *Brassica tournefortii* [Sahara mustard], and *Bromus madritensis* spp. *Rubens* [red brome]), or (3) identified by BLM as special concern. The IPMP will be implemented throughout Project pre-construction, construction, and restoration phases.

The IPMP will include the information defined in the following sections:

Assessment. An assessment of the proposed Project's potential to cause spread or introduction of invasive plants into new areas, or to introduce new invasive plants into the ROW. This section will list known and potential invasive plants occurring on the ROW and in the Project region and identify threat rankings and potential for Project-related occurrence or spread for each species. This section will identify control goals (e.g., eradication, suppression, or containment) for invasive plants of concern with potential to occur on the ROW.

Pre-Construction Invasive Plant Inventory. SCE shall inventory all invasive plants of concern in areas (both within and outside the ROW) subject to Project-related vegetation removal/disturbance, overland travel, and ground-disturbing activity. The invasive plants inventory area shall also include vehicle and equipment access routes within the ROW and all Project laydown yards. Invasive plants of concern shall be mapped by area of occurrence and percent cover. The map will be updated with new occurrences at least once a year.

Pre-Construction Invasive Plants Treatment. Invasive plant infestations identified in the pre-construction invasive plants inventory shall be evaluated to identify potential for Project-related spread and potential benefits (if any) of pre-construction treatment. Pre-construction treatment will consider the specific invasive plants, potential seed banks, or other issues. The IPMP will identify any infestations to be controlled or eradicated prior to Project construction. Control and follow-up monitoring of pre-construction invasive plants treatment sites will follow methods identified in appropriate sections of the IPMP.

Prevention. The IPMP will specify methods to minimize potential transport of new invasive plant seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on invasive plants of concern in the ROW. The IPMP will specify inspection procedures for construction equipment entering the proposed Project Area. Vehicles and equipment may be inspected and cleaned at entry points to specified sections of the ROW, and before leaving work sites where invasive plants of concern must be contained locally. Construction equipment shall be inspected to ensure it is free of any dirt or mud that could contain invasive plant seeds, roots, or rhizomes, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering Project work areas.

All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations (including air washing) will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to BLM and CDFW monitors on request.

Erosion control materials (e.g., straw bales) must be certified free of invasive plant seed ("weed-free") before they are brought onto the site. The IPMP must prohibit on-site storage or disposal of mulch or green waste that may contain invasive plant material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility.

The IPMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the proposed Project Area, transported from site to site within the proposed Project Area, or transported from the proposed Project Area to an off-site location, to prevent the introduction or spread of invasive plants to or from the proposed Project Area.

Monitoring. The IPMP shall specify methods to survey for invasive plants of concern during pre-construction, construction, and restoration phases, and shall specify qualifications of specialists responsible for invasive plant monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new invasive plant infestations to prevent further spread. Surveying and monitoring for invasive plant infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season invasive plants. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control.

Control. The IPMP must specify manual and chemical invasive plant control methods to be employed. The IPMP shall include only invasive plant control measures with a demonstrated record of success for target invasive plants, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any Project-related invasive plant infestation is located (e.g., located on a Project disturbance site), to ensure effective and timely invasive plant control. Invasive plant infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed invasive plant control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any environmentally sensitive areas identified within or adjacent to the ROW. New infestations by invasive plants of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. Invasive plant occurrences can be considered eradicated when no new seedlings or resprouts are observed for three consecutive years, or a single season where new seedlings or resprouts are observed in reference populations but not at the control site. Invasive plant control efforts may cease when eradication is complete.

Manual control shall specify well-timed removal of invasive plants or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with San Bernardino County guidelines, if such guidelines are available.

The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with BLM's Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States (BLM 2007) and National Invasive Species Management Plan (NISC 2008). All herbicide applications will follow United States Environmental Protection Agency label instructions and will be in accordance with federal, State, and local laws and regulations. Only State and BLM-approved herbicides may be used. Herbicide treatment will be implemented by a licensed qualified applicator. Herbicides shall be applied in accordance with product labels and applicator licenses. Herbicides shall not be applied during or

within 24 hours of high confidence predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied in high wind conditions.

Reporting Schedule and Contents. The IPMP shall specify reporting schedule and contents of each report.

- **APM BIO-11. Sensitive Vegetation Communities Protective Measures and Compensatory Mitigation.** SCE shall avoid impacts to sensitive vegetation communities to the extent feasible. Work areas shall be designed to avoid sensitive vegetation communities. Sensitive vegetation communities shall be flagged for avoidance prior to the start of construction. Overland travel methods shall be implemented to the extent feasible. Care shall be taken to not cause root erosion or damage to sensitive vegetation community plant root systems. A biological monitor shall be present during construction to help direct crews where to drive and stage vehicles to minimize impacts to sensitive vegetation. Workers shall restrict activities to established work areas and access routes.

  SCE shall compensate for impacts to 1.38 acres of alkali weed – saltgrass playas and sinks, 0.25 acre of desert willow-smoketree wash woodland, 0.04 acre of mesquite thicket, and 0.33 acre of Mojave – Sonoran desert dunes through on-site restoration (APM-BIO-9) and land acquisition and/or preservation at a ratio of 1:1. Compensation for impacts to sensitive vegetation communities may be satisfied concurrent with mitigation for impacts to special-status species (e.g., desert tortoise) habitat and jurisdictional waters where impacts overlap.

- **APM BIO-12. Special-Status Herbaceous Plants.** SCE shall avoid, minimize or mitigate impacts to any State or federally listed or California Rare Plant Rank (CRPR) 1 or 2 herbaceous plants that may be located on the Project disturbance areas or surrounding buffer areas.

  Pre-Construction Survey. Pre-construction clearance surveys will be performed by a qualified biologist (i.e., a biologist with the requisite education and experience to address specific resources), which may be chosen from a previously approved CDFW-approved biologist, to avoid or minimize impacts on special-status plants. Disturbance-free buffers for herbaceous species shall be 25 feet from the individual and/or occurrence boundary. These buffers shall be established from the previously conducted focused surveys and preconstruction survey results. If a smaller buffer is required, SCE shall develop and implement site-specific monitoring plan to minimize direct impacts to the species. The plan will be submitted to the CDFW for review and approval.

  In the event of a discovery of previously undescribed species, the boundary of the occurrence (defined by CNDDB as all individuals within a 0.25 mile of each other) will be flagged, avoided, and monitored as discussed above and the CDFW and/or BLM will be notified.

  Focused Survey. For construction areas where focused surveys have not occurred, focused surveys will take place prior to construction. Focused surveys will be conducted consistent with methodology described in the Project Biological Technical Report.

  Restoration and Mitigation

  SCE will implement the following activities; other conflicting permit conditions will supersede the activities below.

  - **Coordinate with Agencies.** Agencies shall approve any impacts to special-status plants. Impacts in excess of 10 percent of any occurrence shall be restored or mitigated.

- **Habitat Restoration and Revegetation.** A HRRP shall address topsoil, plant or propagules salvage, and restoration. A Habitat Mitigation and Management Plan (HMMP) shall address mitigation. Approval of the HRRP by appropriate agencies is required before impacts to special-status plant occurrences are allowed. A draft HMMP will be submitted to the appropriate agencies prior to impacts to special-status plants. For more information see APM BIO-RES-1.
- **Salvage.** SCE shall consult with a qualified restoration ecologist or horticulturist regarding the feasibility and likely success of salvage efforts for each species. If salvage is feasible, based on prior success with similar species, SCE shall include salvage methods in the HRRP. For special-status plants, the goal shall be to preserve existing populations or establish new populations. The HRRP will include at minimum: (a) species and locations of plants identified for salvage, (b) criteria for determining whether a species is appropriate for salvage, (c) the appropriate season for salvage, (d) equipment and methods for collection, transport, and re-planting plants or propagules, to retain intact soil conditions and maximize success, (e) details regarding storage of plants or propagules for each species, (f) location of the proposed recipient site, and detailed site preparation and plant introduction techniques, as applicable, (g) a description of the irrigation, and other maintenance activities, as applicable, (h) success criteria, including specific timeframe for survivorship of each species, and (i) a detailed monitoring program, commensurate with the HRRP goals. Invasive plant control for special-status plants will be addressed in the IPMP (APM BIO-12).
- **Off-Site Compensation.** Where restoration is not feasible, SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plant occurrences at a 1:1 ratio of acreage for any occupied habitat affected by the Project. Occupied habitat will be calculated on the Project Site and on the compensation lands as including each special-status plant occurrence. If compensation is selected as a means of mitigating special-status plant impacts, it may be accomplished by purchasing credit in an established mitigation bank, acquiring conservation easements, or direct purchase and preservation of compensation lands. Compensation for these impacts may be "nested" or "layered" with compensation for habitat loss.

Annual construction monitoring reports shall be submitted to CDFW and BLM. Reports shall include, but not be limited to, details of plants or propagules salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.), adaptive management efforts implemented (date, location, type of treatment, results, etc.), and evaluation of success of transplantation. After construction, salvage status will be described in the HRRP annual report.

- **APM BIO-13. Jurisdictional Waters, Wetlands, and Riparian Habitats.** The Project shall avoid and/or minimize impacts to all State and federally jurisdictional waters, wetlands, and riparian habitat that occur within the Project Area to the maximum extent feasible. All grading, fill, staging of equipment, infrastructure construction or removal, and all other construction activities shall be designed, sited, and conducted outside of State and federally jurisdictional waters, wetlands, and riparian habitat to the maximum extent feasible.

  The implementation of appropriate BMPs (e.g., silt fencing, straw wattles, secondary containment, avoiding fueling in close proximity to waters, etc.) shall be utilized to ensure that indirect impacts to jurisdictional waters, wetlands and riparian areas are avoided or minimized to the maximum extent feasible. BMPs are also necessary to reduce the risk of an unintended release of sediment or other material into jurisdictional waters. New and upgraded roadways will use at-grade type stream crossings, where possible. Stockpiled and bermed sediment will be redistributed or removed from the site so as not to alter flows. New poles will be sited outside stream channels to the extent possible.

  If permanent impacts to waters, wetlands, and riparian habitats are unavoidable, they shall be mitigated for at a minimum of a 1:1 ratio, or at a ratio determined by the applicable resource agencies (i.e., United

States Army Corps of Engineers [USACE], the State Water Resources Control Board/RWQCBs, and CDFW). Temporary impacts to jurisdictional waters shall be returned to pre-existing contours upon completion of the work.

- **APM BIO-14. Disturbance Area.** Project disturbance areas and access routes shall be limited to existing access roads and previously disturbed areas (such as spur roads, pads, etc.) to the greatest extent feasible. The boundaries of all disturbance areas shall be clearly demarcated with stakes and flagging prior to the initiation of construction activities, and no work shall extend outside of the delineated areas. No paint or permanent discoloring agents will be applied to rocks or vegetation. All temporary fencing and flagging shall be removed at the conclusion of Project activities. Crushing/removal of perennial, native vegetation in disturbance areas shall be avoided, and SCE shall limit ground disturbance to overland travel rather than vegetation removal and grading to the maximum extent feasible. Spoils shall be stockpiled in either disturbed areas lacking native vegetation or areas that do not contain special-status plant species, sensitive vegetation communities, or jurisdictional waters. Where minor grading is needed, the grade shall match surrounding contours and allow for surface flows through the area. Adequate measures shall be taken to prevent any potential runoff from entering areas containing special-status plant species, sensitive vegetation communities, or jurisdictional waters. Parking areas and staging areas/laydown yards shall be located in previously disturbed areas without native vegetation, special-status species habitat, or jurisdictional waters (such as along access roads, spur roads, and pads) to the extent feasible, and conspicuously delineated.
- **APM BIO-15. Wildlife Pitfalls and Entrapment.** All trenches, pipes, and culverts shall be inspected at the end of each workday to ensure that all potential wildlife pitfalls have been backfilled, sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or completely covered to prevent wildlife access. All trenches, pits, or other excavations shall be inspected to ensure no wildlife, including special-status species, are present prior to backfilling. Both ends of all pipes and culverts shall be capped to prevent entry by burrowing owl, desert kit fox, desert tortoise, herpetofauna, or other wildlife. If wildlife become entrapped, they will be relocated by authorized or qualified biologists, as appropriate.
- **APM BIO-16. Standing Water.** Water applied for dust abatement shall be the minimal amount needed to meet safety and air quality standards to avoid the formation of puddles, which may attract wildlife to Project work areas. In particular, desert tortoises and other special-status wildlife species may be attracted to Project work areas and access roads if they are sprayed with water. A qualified biologist shall be present after water application to ensure that no special-status wildlife species (or nuisance predators such as common ravens or coyotes) are attracted to the water. No standing water shall be allowed to persist.
- **APM BIO-17. Pets and Firearms.** SCE shall prohibit firearms and domestic dogs from the Project Area during Project construction, except those in the possession of authorized security personnel or local, State, or federal law enforcement officials, or persons with disabilities (in the case of service dogs).
- **APM BIO-18. Vehicle Travel.** Motor vehicle speeds along Project routes and existing access roads shall not exceed 20 miles per hour and Project personnel shall exercise care to observe and avoid wildlife, including desert tortoises. SCE shall restrict Project-related vehicle traffic to the established Project work areas, including existing roads, staging and parking areas, and established construction areas. Project personnel shall not cross native species habitat outside of or in route to the Project work areas and vehicular travel in washes shall be avoided. SCE shall clearly mark speed limits and inform all Project personnel of these limits. Engines of stopped vehicles shall be turned off if the vehicle is not

required for immediate use for Project activities. If additional routes are needed, they shall be surveyed by the qualified biologist(s).

5.4.5.1.1 Cross-Referenced APMs

The following APMs relevant to different impact categories would also reduce biological resources impacts associated with the Project in addition to the biological resources-specific APMs described previously:

- **APM AIR-2. Dust Control.** During construction, fugitive dust will be controlled by implementing the following measures:
  - Surfaces disturbed by construction activities shall be covered or treated with a dust suppressant or water until the completion of activities at each site of disturbance.
  - Inactive, disturbed (e.g., excavated or graded areas) soil and soil piles shall be sufficiently watered or sprayed with a soil stabilizer to create a surface crust, or would be covered.
  - Drop heights from excavators and loaders shall be minimized to a distance of no more than 5 feet. Vehicles hauling soil and other loose material would be covered with tarps or maintain at least 6 inches of freeboard.
  - Vehicles will maintain speeds of 15 mph or less on unpaved public roads that do not have a posted speed limit, Proposed Project-specific access routes, and within temporary work areas.
- **APM HAZ-1. Hazardous Materials Management Plan.** SCE shall prepare and implement a Hazardous Materials Management Plan during Project construction. The plan shall outline proper hazardous materials handling, use, storage and disposal requirements as well as hazardous waste management procedures. This plan shall be developed to ensure that all hazardous materials and wastes would be handled and disposed of according to applicable rules and regulations. The Hazardous Materials Management Plan shall address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements.

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5.5 Cultural Resources

This section describes the cultural resources in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project), as well as the potential impacts to cultural resources from construction and operation of the Project. See Section 5.18, Tribal Cultural Resources, for information related to cultural resources potentially of importance to California Native American tribes.

Cultural resources are defined as any object or specific location of past human activity, occupation, or use that is identifiable through historical documentation, inventory, or oral evidence. Cultural resources can be separated into three categories: archaeological, built environment, and traditional cultural resources. Traditional cultural resources are described in Section 5.18, Tribal Cultural Resources. Archaeological resources include both prehistoric and historic remains of human activity. Prehistoric resources can include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails. Historic-era resources are typically those that are 50 years or older. Historic archaeological resources can consist of structural remains (e.g., concrete foundations), historic objects (e.g., bottles and cans), features (e.g., refuse deposits or scatters), and sites (e.g., resources that contain one or more of the aforementioned categories). Built environment resources range from historic buildings to canals, historic roads and trails, bridges, ditches, cemeteries, and electrical infrastructure, such as transmission lines, substations, and generating facilities.

This section is based on information obtained from the technical reports prepared for the Project. Two Class III Cultural Resources Inventory Reports, which together cover the entirety of the Project Area, were conducted for the Project: *Class III Cultural Resources Inventory Report for the Proposed Southern California Edison Eagle Mountain-Blythe 161kv Transmission Line Rating Remediation Project, Riverside County, California* (AECOM 2017) (referred to herein as "original report"), and *SCE Eagle Mountain-Blythe 161kV Transmission Line Rating Remediation Project Cultural Resources Assessment* (Rincon 2021) (referred to herein as "subsequent report"). The results of the original and subsequent reports will be considered during the final design of the Project to minimize impacts on cultural resources during construction.

The Area of Potential Effects (APE) of an undertaking is defined in 36 CFR 800.16(d) as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist."

The original report addressed the original APE based on the initial Project design, and the subsequent report addressed the additional APE resulting from the addition of work areas following the completion of the original report. The APE for both reports includes 528 work areas, including 379 tower structures, 15 overland travel sites, 45 guard stations, 30 boring locations, 53 wire set up sites, five new material yards, and one existing material yard. The total acreage of the APE included in both reports is approximately 432 acres. The vertical APE is expected to reach depths of up to 8 feet below ground surface to install the proposed equipment.

5.5.1 Environmental Setting

The Project is located in eastern Riverside County, in the eastern portion of the Colorado Desert, a subregion of the Sonoran Desert, and generally in the Chuckwalla Valley. The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management (BLM) or the Metropolitan Water District (MWD) (approximately 1 mile), and

approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas. The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe. The Project is in the Victory Pass, East of Victory Pass, Corn Spring, Sidewinder Well, Aztec Mines, East of Aztec Mines, Hopkins Well, Roosevelt Mine, and Ripley 7.5-minute United States Geological Survey (USGS) topographic quadrangles.

5.5.1.1 Cultural Resources Reports

This section describes the two Class III Cultural Resources Inventory Reports, which together cover the entirety of the Project, that were conducted for the Project. The original and subsequent reports are provided under separate cover and have been reviewed and approved by BLM (Confidential Appendix D, provided under separate cover).

5.5.1.2 Cultural Resources Summary

5.5.1.2.1 Cultural Resources Background

The following information is excerpted from the original report (AECOM 2017). The Project is generally assumed to lie within the northernmost extent of the Colorado Desert cultural region, but its location is actually in an area of transition between the Colorado Desert and Mojave Desert cultural regions, with attributes of both of these cultural regions present. While more than 80 years of archaeological investigation have occurred in both regions, relative to the Colorado Desert, the prehistory of the Mojave Desert region is considerably more developed. The basic culture history of the Colorado Desert region over this period has not changed dramatically since pioneering archaeologist Malcolm Rogers (1939, 1945, 1966) published his initial impressions of the chronology and cultural development of the desert. Consequently, our understanding of the prehistory of the Colorado Desert region relies heavily on comparisons with the Mojave Desert Region. One reason for this is due to an apparently intermittent, low-intensity occupation of the Colorado Desert region resulting in mostly superficial sites and a paucity of stratified subsurface sites in the area (Schaefer 1994b). But cultural resources investigations associated with solar power development are now yielding vast quantities of archaeological data which have yet to be fully synthesized with past studies (Kline 2014). The chronological periods described below are generally those first proposed by Crabtree (1980) for the Colorado Desert area with subsequent elaboration by Schaefer (1994b) and Schaefer and Laylander (2007), based on additional archaeological investigations that have occurred in the region since 1980.

The temperature and moisture variations associated with the substantial climatic changes occurring during the late Pleistocene (25,000 to 10,000 years ago) and subsequent Holocene (after 10,000 years ago) significantly affected the distribution and subsistence practices of prehistoric populations in the Colorado Desert. During the late Pleistocene, the generally cool temperatures in California, along with moist conditions, resulted in widespread montane glaciations as well as the creation of numerous pluvial lakes, mostly in the Mojave Desert Region (Antevs 1955; Grayson 1993). The first recognizable human use of the Colorado Desert began at the end of the Pleistocene, some 12,000 to 10,000 years ago. These earliest inhabitants were apparently highly mobile hunter-gatherers that exploited a variety of plant and animal

resources. The settlement patterns of the Late Pleistocene and Early Holocene inhabitants in the Mojave Desert area suggest that they preferred to live along the shores of the numerous prehistoric pluvial lakes as well as on mesas near perennial washes. While pluvial lakes were less common in the Colorado Desert region during this period, a similar pattern is also proposed for the area by Schaefer and Laylander (2007).

Roughly 7,000 years ago, the local pluvial lakes began to evaporate and settlement shifted to the Colorado River and to perennial springs in the mountains and valley floors (Pendleton 1984; Pendleton et al. 1986). The Project, situated mostly in the east-west–trending Chuckwalla Valley between the Peninsular Ranges and Salton Basin to the west, and the Colorado River to the east, is located in an area that at various times, prehistorically, was used as an access corridor to more productive adjacent resource areas. To the west, several narrow east-west–trending valleys within the Eagle, Orocopia, and Chocolate Mountains that connect to the Chuckwalla Valley, allowed for east-west travel between the Colorado River and the Salton Sea Basin, which at various times, prehistorically, contained the large Lake Cahuilla. The Colorado River, located at the east end of the Project, has, over millennia, carved a series of raised terraces along its western bank. During that time, areas along the western side of the river have been subject to flooding, that, depending on the velocity of the water flow, sometimes cut away the land and other times deposited quantities of silt, gravel, and rock. The varying aggrading and depositional actions of the river created the raised, stepped terraces and cobble deposits of the Palo Verde Mesa along the west side of the river. These cobble deposits contained valuable cryptocrystalline, lithic raw materials (e.g., chert) for stone tool making, which, along with the animal and vegetal food resources available in the riparian habitat present along the river, would have been important resources prehistorically.

In the intervening mountains between these resource areas, springs, such as McCoy Springs in the McCoy Mountains, and close to the Project, Corn Springs in the Chuckwalla Mountains are documented locations for prehistoric habitation. Singer (1984, page 39) has noted that, based on the presence of a "vast network of trails and trail segments, markers, and shrines," the "Chuckwalla Valley could easily have served as an east-west trade route or corridor to and from the Pacific" (1984, page 38). Similarly, Whitley (1996, page 107) observed about the Corn Springs petroglyph site that "This important locale provided water along what was once a major east-west Native American trail, connecting Corn Spring with the Colorado River region to the east and the Coachella Valley to the west."

Paleoindian Period

The earliest well-documented prehistoric sites in Southern California are identified as belonging to the Paleoindian Period. In the adjacent Mojave Desert, the Paleoindian Period is dated from approximately 10,000 to 12,000 years ago (Sutton et al. 2007, page 236). In the western United States, most evidence for the Paleoindian peoples derives from finds of large fluted spear and projectile points (Fluted-Point Tradition) associated with big game hunting, in places such as Clovis and Folsom in the Great Basin and the northern Desert southwest (Moratto 1984, pages 79–88). In California, however, most evidence for the Fluted-Point Tradition derives principally from along the margins of these areas (Dillon 2002; Rondeau et al. 2007). These marginal areas include the Sierra Nevada (e.g., Moratto et al. 2011; Zimmerman et al. 1989), the southern Central Valley (e.g., Peak and Weber 1978; Riddell and Olsen 1969; Wallace 1978), the Peninsular Range (AECOM 2017), and the Mojave Desert area of southeastern California (e.g., Davis 1978; Sutton et al. 2007, page 234).

Hints at other Paleoindian lithic traditions in the Far West, some potentially contemporary with or earlier than Clovis, are also emerging. Several forms of projectile points with stems and constricted bases have been termed Western Stemmed Points. Alongside stone crescents, domed scrapers, gravers, and drills, these points appear indicative of a Western Stemmed Point Tradition (Dixon 1999). Recent excavations at Paisley

Caves in south central Oregon have yielded Western Stemmed points alongside human coprolites and other materials that have been radiocarbon dated to 13,200 calendar years BP (Jenkins et al. 2012).

Another tradition associated with this period is the San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition. It is characterized by an artifact inventory consisting almost entirely of flaked stone biface and scraping tools, but lacking the fluted points associated with the Fluted-Point Tradition. In California (Alta California), this tradition has been documented only in the Mojave and Colorado Deserts (Rogers 1966; Schaefer 1994b; Warren 1967) and in the coastal area of San Diego County (Carrico et al. 1993; Rogers 1966; Warren 1966, 1967; Warren and True 1961). Warren dates the San Dieguito Tradition as beginning sometime before 10,000 years ago and ending sometime between 8,500 and 7,200 years ago (Warren 1967, 1968, page 4; Warren et al. 1998). The subsistence system or emphasis of the San Dieguito Tradition, while not yet entirely agreed upon, is suggested by Warren as having an economy oriented toward hunting rather than gathering, based on an artifact assemblage of primarily hunting-associated tools. To date, definite evidence for the Paleoindian Period remains more common in the Mojave Desert (Sutton et al. 2007, page 234) than in the Colorado Desert area (Schaefer and Laylander 2007, page 247).

Archaic Period

The Archaic Period is differentiated from the earlier Paleoindian Period by a shift from hunting focused subsistence systems to a more generalized economy with an increased focus on the gathering of vegetal foodstuffs and the use of grinding tools and seed-processing technology. As with the Paleoindian Period, however, little archaeological evidence has yet been encountered in the Colorado Desert area that can be definitely attributed to the early part of the Archaic Period, i.e., from circa 8,000 to 4,000 years ago (Schaefer 1994b, page 64; Schaefer and Laylander 2007, page 247). One find of note, described below, for the late Archaic consists of deposits at the Indian Hill Rock shelter site in Anza-Borrego Desert State Park. These cultural deposits have been dated by radiocarbon dating to 4,070 + 100 years B.P.

Evidence for the late Archaic (after circa 4,000 years ago) has also been in found in the western Colorado Desert from subsurface investigations conducted in the northern Coachella Valley (Love and Dahdul 2002). The contexts of several sites in the Coachella Valley, some possibly associated with ancient stands of Lake Cahuilla, were radiocarbon dated to circa 2,000–3,000 years ago (Love and Dahdul 2002; Schaefer and Laylander 2007, page 249). Other evidence for the late Archaic in the area includes deposits found at the Indian Hill Rockshelter in Anza-Borrego Desert State Park (McDonald 1992) and at another rock shelter in Tahquitz Canyon, near Palm Springs (Bean et al. 1995; Schaefer and Laylander 2007, page 247).

In the Chuckwalla Valley area and vicinity, evidence for Archaic period use or occupation is comparatively slight, with sites in the area rarely containing organic materials for radiocarbon dating or temporally diagnostic projectile points or other artifacts necessary to securely date them to the Archaic (Flenniken and Spencer 2001; Mitchell 1989; Schaefer 1985, 1994; 2003; Singer 1982, 1984). Occasional isolated artifacts have been found such as a "Pinto point," discovered along the south side of Hayfield Dry Lake, adjacent to the western portion of the Project (Hammond 1981). At site CA-RIV-1814, a large quarry site in the Chuckwalla Valley, an Amargosa style projectile point was recovered (Singer 1982, page 10).

The Genesis Solar Project performed extensive studies at Ford Dry Lake (AECOM 2017). AECOM analyzed the artifact assemblages, including projectile points and ceramics, from multiple sites, performed obsidian hydration analysis, and completed geoarchaeological studies. One potentially significant result of the Genesis Solar Project archaeological investigations is the evidence for Paleoindian and early Archaic period presence at Ford Dry Lake. Obsidian hydration dating yields Archaic ages for specimens between

about 2500 and 5500 B.P. However, as Kline notes, hydration rates are strongly affected by temperature and humidity (see also Rogers 2007), which are much different at Lost Valley than at Ford Dry Lake. Therefore, while the Ford Dry Lake specimens may date to the late Archaic, this assignment remains uncertain.

Late Prehistoric Period

The Late Prehistoric Period in the Colorado Desert dates from approximately 1,500 B.P. to the historic period (Schaefer 1994b). In Southern California generally, this period is seen as a time marked by a number of rather abrupt human behavioral changes, as reflected in the archaeological record. The magnitude of these changes and the short period of time within which they took place are reflected in the significant alteration of previous subsistence practices and the adoption of significant new technologies. As discussed further below, some of this change may have resulted from significant variations in climatic conditions.

As shown in the archaeological record, subsistence and technological changes that occurred in Southern California during the Late Prehistoric Period include:

- a shift from hunting using the atlatl and dart to using the bow and arrow, as indicated by the presence of smaller projectile points;
- a reduced emphasis on shellfish gathering along some areas of the coast (possibly as a result of silting-in of the coastal lagoons);
- the introduction and production of pottery;
- an increase in storage of principal foodstuffs, such as mesquite, acorns, and piñon nuts, as indicated by the presence of mortars and pestles and large ceramic storage vessels;
- a shift in burial practices from inhumation to cremation; and
- along the Colorado River, a change in economic and settlement patterns that involved subsistence expansion to include floodplain horticulture.

In the Coachella Valley and Salton Basin area in the western Colorado Desert, the Late Prehistoric Period is associated with the periodic infilling and emptying of Lake Cahuilla. This substantial hydrological feature is seen as recurrently altering the course of human settlement in the area during the period (Schaefer and Laylander 2007, pages 250–251). During periods of lake absence, and elsewhere in the Colorado Desert area, settlement is seen as associated with semisedentary villages established along major water courses and around springs, with adjacent montane areas seasonally occupied to exploit mesquite, acorns, and piñon nuts. Mortars for mesquite, piñon nuts, and/or acorn processing increased in frequency relative to seed-grinding basins. Most archaeological resources in the record for the western Colorado Desert that date to the Late Prehistoric Period, however, are associated with the Lake Cahuilla shoreline (Apple et al. 1997; Laylander 1997; Schaefer 2006; Wilke 1978), with other important cultural resources associated with springs, major drainages, and adjacent seasonally occupied montane areas.

Schiffer and McGuire (1982, pages 216–222) and Waters (1982a), using a chronology originally proposed by Rogers (1945), divided this period in the Colorado Desert area chronologically, based on the progression or changes in development of ceramic types. Using the term "Patayan" (instead of the term "Yuman," used by Rogers) for these periods, three Patayan periods were defined (in addition to a preceramic period) based on ceramic types associated with changes in ceramic traits through time that he correlated with fillings and desiccations of Lake Cahuilla.

To date, the majority of the archaeological materials observed in the Colorado Desert, and in the Chuckwalla Valley in particular, date to the Late Prehistoric and Protohistoric periods (e.g., Rogers 1945; Schaefer 1994b, 2003). Sites in the area often consist only of ceramic sherd scatters, and/or contain only a limited variety of stone tools and tool-making debris. Prehistoric quarries, however, have also been documented (e.g., Singer 1984). However, very few temporally diagnostic tools or projectile point types are recorded in the Project. Ritter (1981, page 9) noted the presence of a Rose Spring (Rosegate) projectile point, as well as Tizon Brown Ware and Parker series pottery at site CA-RIV-1515 along Palen Dry Lake bed, and based on these temporal indicators, estimated occupation of the site from A.D. 500 to A.D. 1000/1200. A study conducted by Singer (1984) at a bedrock quarry site, CA-RIV-1814, located just south of the western portion of the Project, in the Chuckwalla Mountains, described the technology at the site as relatively simple consisting of the procurement of bedrock raw material in the form of blocks or tabular chunks, which were then reduced to macro flakes and blades to produce a variety of core types, either for the eventual production of regular flakes and blades, or to produce cores to be used as tools such as choppers, scrapers, planes, and small to moderate sized biface performs (1984, page 41).

In contrast, another recent detailed study by Flenniken and Spencer (2001) conducted at sites near Blythe in the McCoy Valley, adjacent to the Colorado River, suggests that most of the lithic reduction (stone-tool making) was directed at the production of relatively small, thin flakes suitable for the creation of arrow-sized projectile points, which only appear roughly 1,500 years ago during the Late Prehistoric Period in the region (see also Ludwig 2005). Singer (1984) noted a similar reduction technology at site CA-RIV-1819, a site located at the foot of the Mule Mountains, also adjacent to the Colorado River. The raw material source at the site is a cobble (river gravel) deposit versus volcanic bedrock resulting in a reduction trajectory oriented toward the production of relatively small, thin flakes suitable for use as small flake tools or for blanks for the creation of arrow-sized projectile points. While the results of the McCoy Wash and CARIV-1819 studies indicated a likely association, principally, with Late Prehistoric occupation in the area, Singer speculates that use of the quarry at CA-RIV-1814, as well as the one at CA-RIV-1819, may span a greater period of time. He states that "it appears that RIV-1814, and probably RIV-1819 as well, has been used periodically since the beginning of the Holocene" (1984, page 39). But even heavily patinated rock art may be of relatively recent age. Most of the earth art and rock art sites, as well as many trails and ceremonial sites, are interpreted to most likely date to the Late Prehistoric Period with some ceremonial features continuing in use even after European contact and even to the present day (Altschul and Ezzo 1994; Hedges 1982; McCarthy 1982; Schaefer 1994b; Whitley 1996).

Ethnographic Study

For an ethnographic overview, refer to Section 5.18.1.3, Ethnographic Study, in Section 5.18, Tribal Cultural Resources.

5.5.1.2.2 Historical Background

European exploration of the Colorado Desert began in 16th century, but sustained Euro-American settlement of the region did not occur until the mid-19th century. This extended period of exploration without expansion creates a long Protohistoric period in the region, during which Europeans and local Native American groups knew of one another, but interacted very little. This time period is discussed above from the point of view of Native American history. Below, the Euro-American expansion into the region is described and subsequent historical developments.

Spanish Period

The 16th-century Spanish explorers Francisco de Ulloa, Hernando de Alarcon, and Francisco de Coronado led expeditions from the Gulf of Mexico up the Colorado River past the Gila confluence, but it was not until 1702 that Father Eusebio Francisco Kino, a Jesuit missionary, cartographer, and explorer, explored the interior of the Colorado Desert. One focus of Kino's exploration was to dispel the myth that Baja California was an island, which led him to seek routes from Arizona to the Pacific Ocean. The establishment of an overland route to Monterey to access the Manila galleon trade was rejected by New Spain officials in Mexico City, who felt that the idea was too risky and that resources could be better spent elsewhere (Lavender 1972; Rice et al. 1996). The inhospitable nature of the route deterred further immediate exploration.

Kino's route was later followed by Father Francisco Garcés, who reached the confluence of the Gila and Colorado Rivers in 1771. Garcés's route across the desert became part of what was known as the Old Spanish Trail, an important transportation link between New Mexico and California. The major route of migration to the north primarily circumvented the Colorado Desert, and early Spanish development of the region was tied to activity along the Colorado River.

In 1780, missions La Purísima Concépcion and San Pedro y San Pablo de Bicuner were established under the direction of Father Garcés on the west bank of the Colorado River (near present-day Yuma). Although the Yumans were initially welcoming, assisting the early settlements, abuse and theft of prize farmland by the Spanish soldiers resulted in escalating hostilities between the two groups. In 1781, the Quechan attacked a military camp and both missions. This action, dubbed the "Yuma massacre," effectively closed Anza's trail, halting further immigration and forcing Spain to supply the new colonies by the expensive and unreliable sea route (Rice et al. 1996, pages 99–100). Subsequent military campaigns by Spain and, later, Mexico failed to defeat or subdue the Quechan, and the area was effectively closed to European exploration, settlement, and mining until after the Republic of Mexico was established in 1823.

Mexican and Euro-American Period

Into the early 19th century and the period of Mexican rule until 1848, development in the Colorado Desert remained sparse. The Romero Expedition was undertaken during this time (between 1823 and 1826), and the expedition crossed into Cahuilla territory near the San Gorgonio Pass in 1823 and may have explored as far east as present-day Desert Center (Bean and Mason 1962). Meanwhile, early American settlers began arriving in California. Jedediah Smith blazed a new trail to California in 1826 (through present-day Needles). As the migration into California continued and later boomed with the Gold Rush after the 1848 discovery of gold at Sutter's Mill, and tensions between the settlers and Native Americans increased, the U.S. Calvary developed camps and forts throughout the Arizona, Nevada, and California Deserts to protect settlers and immigrants from hostile tribes. One of the earliest of these was Camp Calhoun, established in 1849 by the Americans on the banks of the Colorado River near present day Yuma. In 1855, the name was changed to Fort Yuma.

American Period

Following the establishment of forts through the area, the California desert region again opened up for exploration and settlement. As part of an effort to establish a railroad route from St. Louis to the Pacific Ocean, the U.S. government conducted a series of surveys from 1853 to 1855 to identify feasible routes. Lieutenant Amiel Weeks Whipple, a topographical engineer in the Army, was assigned the task of determining the westernmost section from Arkansas to Los Angeles. Whipple passed through Mojave

territory in 1854, crossing the Colorado River near present-day Needles (Rice et al. 1996). The railroad surveys recorded the terrain and geology of areas of the Colorado Desert, as well. The land contained in the Project was included in the survey in 1853 (BLM 2009).

After the Treaty of Guadalupe–Hidalgo in 1848, the U.S. took control of the U.S. Southwest in the same year that gold was discovered in California. Mining camps were established in the desert as early as 1850, with the beginning of gold mining at Salt Creek in the Amargosa Desert. Along the eastern bank of the Colorado River, the town of La Paz, once known as Pot Holes, developed when gold was discovered nearby. The subsequent mini-gold rush in the area made La Paz an instant boomtown whose population peaked at 1,500 in the 1860s (Wilson 1961, page 25). Along the stage line between San Bernardino and the Colorado River, La Paz was an important stop, serving as the county seat for Yuma County until 1870 (Thompson 1985).

The first Americans to arrive in the Colorado Desert in any numbers were prospectors hunting for the next big gold strike. Regionally, mining and prospecting activity was most intense in the mountains and high deserts of the Mojave, but small-scale mining has been a consistent feature of the Colorado Desert from the 1800s to the present day. By 1863, between "2,500 and 3,000 Americans and Mexicans were on the river between Palo Verde Valley and El Dorado Canyon," most of them engaged in mining (Bean and Vane 1978, pages 5–21).

In the 1820s, limited placer mining began in the eastern Colorado Desert. In the early 1800s, prospectors were some of the only Euro-Americans traveling in the California deserts, and they frequently came into conflict with Native American groups. From the 1840s through the 1880s, the U.S. Cavalry established a series of camps and forts throughout the Arizona, Nevada, and California Deserts to protect settlers and immigrants from the often hostile tribes whose territories they were invading. In 1848, the discovery of gold at Sutter's Mill brought a tremendous influx of American and European settlers to California. Between 1849 and 1860, an estimated 8,000 emigrants crossed the Colorado Desert on their way to California (Laflin 1998, page 10).

Significant economic development of the Colorado Desert region began in the 1870s and came to fruition in the early part of the 20th century. Development was dependent largely on two things: transportation and water. The first of these came in 1872, with the construction of the Southern Pacific Railroad from Los Angeles to present-day Indio and, eventually, Yuma. The early townsite of Indio, the mid-point between Los Angeles and Yuma, was created to provide living quarters for train crews and railroad workers. A nearby Native American reservation provided some of the labor force. The first trains ran on May 29, 1876 (Pittman 1995, page 36). Railroad stops were built at Walters (now called Mecca), Woodspur (Coachella), and Thermal, among others. The second transcontinental railroad was completed when the Southern Pacific and the Atchison, Topeka, and Santa Fe Railroads were linked at Deming in New Mexico Territory on March 8, 1881, providing settlers relatively quick and easy access to the region.

The Southern Pacific Railroad reached Yuma on September 30, 1877. The railroad was the single most important boost to mining in the southeastern Colorado Desert, offering convenient transportation of heavy mining equipment, supplies, personnel, and bullion. By 1880, the Southern Pacific Railroad was providing regional access to gold and silver ore deposits in the Chocolate Mountains, Cargo Muchachos, and Palo Verde Mountains. When mines opened up near the turn of the 20th century, stamp mills and small tracks leading from the mines to the stamp mills were built. Mining productivity in the southeastern Colorado Desert was greatest between 1890 and 1910, with a brief resurgence in the 1930s (Morton 1977; Rice et al. 1996).

BLYTHE

From 1855 to 1884, the U.S. General Land Office registered many new settlers in the Palo Verde Valley (Setzler 1998, page iv), but the first large-scale venture to develop land in the valley began in the 1870s with the arrival of Thomas H. Blythe, "the father of the Palo Verde Valley." Blythe was the visionary developer of the seasonally inundated lands on the west bank of the Colorado River, directly across from the established portage point at Ehrenberg, Arizona.

In 1875, Blythe traveled with an ambitious civil engineer named William Calloway to Ehrenberg, Arizona along the Colorado River. Calloway had previously been engaged in building many of the desert roads of San Diego County, which at that time included most of current Riverside County. Calloway's knowledge of the land and engineering acumen impressed Blythe and encouraged him to consider investing in development along the Colorado River. Blythe and Calloway envisioned the development of the river-fed lands, and Blythe had a particular dream of constructing an elaborate hacienda in his newly developed riverside retreat (Setzler 1998, page 10). To realize his dream, Blythe hired Calloway as a project engineer and George S. Irish as project manager. In 1876, Blythe was introduced to Mexican General Guillermo Andrade, a promoter of colonization of the Colorado River on behalf of the Mexican government. Andrade became a silent partner in Blythe's scheme for development. In the coming years, Blythe's venture to clear and develop 40,000 acres of land west of the Colorado River became an obsession for him, although he spent very little time there (Setzler 1998, page 10).

In 1875, the venture filed with the State of California for 400,000 acres of Swamp Land District No. 310, as designated by the Swamp and Overflow Act (Palo Verde 2005, page 7). By late 1875, Blythe named his fledgling town, "Blythe City, in compliment to myself" (Setzler 1998, page 10). Initially the town consisted of tent houses, a corral, and a general store. Thomas Blythe made the first filing in California for water rights in 1877, when he requested rights to Colorado River water for his venture (Setzler 1998, page v). He was granted 190,000 miner's inches. Water-rights in hand, Calloway and Irish developed experimental ditch and canal irrigation systems, hiring local Native American laborers who had been farming the floodplains successfully for centuries. The centerpiece of their irrigation system was a masonry head gate in the riverbank to control flow to the system (Palo Verde 2005, page 7). By 1878, a 40-acre experimental farm, known as the Colorado Company, was planted. In 1880, Calloway killed a Chemehuevi man in an altercation, and was promptly killed by two Chemehuevi workers who witnessed the fight. Relations were already strained between work foreman Calloway the increasingly disenfranchised Chemehuevi laborers, whose traditional lands had been granted for development (Bean and Vane 1978, pages 5-22). After the killings, most of the Chemehuevi workers fled the area, causing a delay in the completion of the main canal intake. Calloway was eventually replaced by C.C. Miller, new hands were hired, and work continued (Setzler 1998, page 11). Two years later, the canal was almost complete, and Blythe made his second and last visit to the site. Blythe was enthusiastic about the progress, but fatefully, he would never see the fruition of his $82,000 investment. Only one year later, on April 4, 1883, Thomas Blythe died of a heart attack in San Francisco (Setzler 1998, page 11). After years of convoluted legal battles, Blythe's daughter Florentine inherited the property in 1904.

Almost immediately after Blythe's daughter inherited the property, the Mutual Water Company (precursor to the Palo Verde Irrigation District) was formed to purchase the land from her. In 1904, Florentine sold the land and titles were transferred to the Mutual Water Company. During this time, pioneering settlers continued to pour into the valley, and the town of Blythe grew from a tent city to a proper town, incorporating in 1916 with 600 residents on 832 acres of land (Palo Verde 2005, page 7). The first residents were "desert characters, homesteaders, pioneer settlers who wanted land of their own, fugitives from the law and adventurers who met the accepted challenge to help tame the area, and make it civilized" (Setzler

1998, page ii). Mining activities and then homesteading and experimental farming continued to attract new residents and commerce, via steamboat and railroad. Most of the early homes throughout the Palo Verde Valley were tent houses, although there were also a few adobe buildings in the region (Setzler 1998, page 1). The town of Blythe and the Palo Verde Valley prospered in the 1910s, with high demands for crops related to wartime activities, most of all cotton. With a new cotton gin in 1911, and settlers clamoring for homestead lots, the town of Blythe experienced a small boom, peaking with high cotton production in 1919 and the end of WWI. Several civil projects were constructed during this period of prosperity, and set the foundation for the continuing growth of the city.

Water Development

Water has always played an important role in the development of southern California. In 1922, California reached an agreement with the other States (with the exception of Arizona) in the Colorado River watershed basin allowing the allotment of water needed to construct the Colorado River Aqueduct (CRA) (Gruen 1998). The construction of the CRA by the Los Angeles Metropolitan Water District (MWD) occurred along various points simultaneously between 1934 and 1941 helping to fuel a torpid economy in the midst of the Great Depression. This massive undertaking allowed the MWD, through its contractors and subcontractors, including Kaiser and Griffith, to employ up to 10,500 people at any given time with a total employment of 35,648 over an eight-year period, making it southern California's single-largest work opportunity during the Great Depression (Gruen 1998). The MWD also established better infrastructure in the desert with the grading of new roads, a water supply system, power lines, and telephone lines, leading to new towns associated with the construction of the CRA (Gruen 1998). Many of these MWD company towns were at the pumping plants of Iron Mountain, Hayfield, Intake, Gene, and Eagle Mountain helping to further alter the desert landscape (PanGIS and AECOM 2017).

The construction of the various aqueducts across southern California brought about other changes. Prior to the CRA, the Los Angeles Aqueduct Project began to offer its employees basic medical care years before such compensation benefits were mandatory as a condition of employment (City of Los Angeles 2002). This tradition continued during the construction of the CRA. The Contractors General Hospital, located 6 miles west of Desert Center, was the first experimental Health Maintenance Organization facility. Operated by Dr. Sidney Garfield, a renowned pioneer of health maintenance and disease, the hospital was established to care for contractors and employees building the CRA through the Mojave Desert (PanGIS and AECOM 2017). Supported by Henry J. and Edgar Kaiser of Kaiser Industries, whose interests lay in the "economic advantage of maintaining a healthy work force," Garfield's experiment midway along the aqueduct near the newly opened U.S. Route 60 reshaped the face of medicine (Kaiser Foundation 1990, pages 1-2).

Transportation

The first road through what is now Riverside County was blazed by William Bradshaw in 1862 as an overland stage route beginning at San Bernardino, California, and ending at La Paz, Arizona (now Ehrenberg, Arizona). Early in the 1860s, Hank Brown and John Frink independently developed routes to access the gold mines in the vicinity of La Paz, Arizona (von Till Warren et al. 1980). Frink's route was an east-west road established as an alternative to the more southern Butterfield Stage route. This was apparently the first development across the Palo Verde Mesa, although it has since all but disappeared (von Till Warren and Roske 1981, pages 17–18). In 1862, William D. Bradshaw opened a route, later known eponymously as the Bradshaw Trail. This route crossed the desert to the La Paz mining district. Bradshaw also operated a ferry across the Colorado River near Providence Point, opposite a small community that would become Ehrenberg, Arizona.

The east-west overland stage route was used extensively between 1862 and 1877 to haul miners and other passengers to the gold fields at La Paz (Lyman 2004). The trail has been largely or completely obliterated, and is now a 65-mile-long graded road that traverses mostly public land south of the Chuckwalla Mountains.

Bradshaw developed his road partly along Brown's and Frink's previous routes, although Bradshaw's trail headed more directly east from Salt Creek Pass to the north slopes of the Chocolate Mountains. Bradshaw, like the majority of early trailblazers, used Native American routes that predated Spanish exploration. Part of Bradshaw's Trail may have been the Coco-Maricopa Trail, which intersected the Colorado River near Blythe and may have passed south of the Project. The Bradshaw Trail is located near Corn Spring and extends across the Chuckwalla Mountains, approximately 8 miles south of the Project (Ross 1992, page 129). The Bradshaw Trail, like many other cross-country routes, became largely obsolete with the arrival of rail service in the desert and the depletion of the La Paz gold fields in the late 1870s. The railroads reoriented the development of trails and wagon roads that connected new mining communities to major routes of transportation. Railroad stops became destinations for wagon roads, allowing points of access to develop the remote desert interior (von Till Warren et al. 1980).

The early highway system in the United States developed out of a patchwork of trails that later became unimproved roads and eventually were connected into an integrated system of paved routes. Often, early roads in the United States followed prehistoric trails that had been established by Native Americans in prehistoric times. One of the earliest transportation corridors through the Chuckwalla Valley included U.S. Routes 60 and 70, currently known as Chuckwalla Valley Road. As late as 1926, portions of Chuckwalla Valley Road were still unpaved.

Today, Interstate 10 (I-10) is the major transportation corridor through the Chuckwalla Valley. The highway is the major connector between Los Angeles and Phoenix. The road was completed in 1968 and has become a major east-west corridor for travelers and commerce.

Mining

Mining, particularly of precious metals, was a fundamental factor influencing California's early economy, culture, and politics. Gold and silver mines from the mid- to late 19th century and the wealth that they generated were central to the influx of prospectors and settlers that transformed the former Mexican outpost into a land of plenty. The Colorado Desert's mining history, albeit less intensive than in other areas of California, similarly fostered the arrival of prospectors and the subsequent development of numerous towns and communities. Between 1849 and 1860, an estimated 8,000 emigrants crossed the Colorado Desert (Laflin 1998, page 10). The surge in mining activities in the early 1850s led to rapid changes in mining technology and the character of the industry.

Survey and prospecting of the mountains near Palen Lake began to increase in the 1860s. With declining results in lode mines in the Sierra Nevada, mineral exploration was being undertaken in other areas. In the 1860s, mining districts were established at La Paz and Castle Rock on the Arizona side of the Colorado River near Blythe. Miners moved into the area in the 1860s and 1870s. No large-scale mining took place in what is now Riverside County, but small-scale mining operations were present in isolated spots throughout the Colorado Desert (California Department of Transportation 2008, page 18).

Prospects for mining were known to have existed in the Mule Mountains in 1861, and in the Big Maria Mountains and McCoy Mountains (named for prospector William McCoy) in 1862. These mines were part of the larger Ironwood Mining District (Gunther 1984; von Till Warren et al.1980; Vredenburgh et al. 1981). The Big Maria Mountains were originally called the Half-Way Mountains by the Ives expedition, and the Chemehuevi Mountains on maps dating to the 1860s (Gunther 1984, pages 310–311). In addition

to mines that were part of the Ironwood Mining District, the Chemehuevi Mining District included mines in the Big Marias, McCoy, and the Palen Mountains, named for prospector Matt Palen (Gunther 1984).

Eagle Mountain was prospected by Joe Torres between the late 1870s and early 1880s. Jack Moore staked a claim with his father at the Eagle Mountains in the early 1880s. They established the Eagle Mountain Mining District for the extraction of iron, gold, and silver. They were unsuccessful in maintaining the mine, and it was abandoned shortly after it was founded. The mine was reopened in 1895 by L.S. Barnes as part of a consolidation of Joe Torres's former claims (Belden 1964).

Small-scale mining took place in the Chuckwalla Mountains near Corn Springs as well. The Bryan Mine and a stamp mill were located near Corn Springs between 1898 and 1900, operated by two men. The men, Adams and Pickering, processed their ore at the stamp mill and may have processed ore from other nearby mines (Vredenburgh et al. 1981). In 1909, the Chemehuevi Mountains were divided and renamed the Big Maria and Little Maria Mountains. Mineral deposits at these mines included gold, silver, fluorite, manganese, copper, gypsum, and uranium (von Till Warren et al. 1980).

With the onset of World War II (WWII), the demand for steel increased. However, the iron ore in the Eagle Mountain claims was protected as part of the Joshua Tree National Monument. Henry J. Kaiser had a steel mill at Fontana and the Vulcan iron mine near Kelso that supplied materials for his west coast shipyards. Kaiser purchased the mine and succeeded in having the boundaries of Joshua Tree Monument shifted to exclude Eagle Mountain. Kaiser constructed a rail line that connected to the Southern Pacific Railroad, and ore mining commenced in 1948. By 1971, the Eagle Mountain Mine produced 90% of California's iron (USDI Bureau of Mines 1971).

At its height, the mine employed more than 4,000 people, making it the largest employer in Riverside County. The town of Eagle Mountain included schools, fire and police departments, facilities, 416 rental houses, 185 trailers, 383 dormitories, and 32 apartments (Bull et al. 1991). Kaiser Steel needed to provide medical care for the residents of Eagle Mountain, and medical care provided by the company eventually became what is today Kaiser Permanente (Love 1994). The Kaiser Steel Corporation closed the mine in 1983 because of economic factors and competition from abroad.

Military Training Activities

DESERT TRAINING CENTER (DTC)

During WWII, shortly after the bombing of Pearl Harbor and the U.S. entry into the war, Lt. General Lesley J. McNair, Director of Army Ground Forces and Combat Training for the War Department, decided to establish the DTC in southeastern California, Arizona, and Nevada to train U.S. troops in the event that they would be sent to North Africa to fight. It would be the first simulated theater of operations in the United States (Meller 1946: Introduction). Major General George S. Patton, Jr., the first DTC Commanding General, was tasked with overseeing the transformation of the desert stretching from the California/Arizona border and the Mexican border north to the southern part of Nevada. Participation in large-scale maneuvers was a standard practice for all divisions and corps prior to deployment to active theaters of operation.

General Patton scouted the area by plane, jeep, and horseback beginning in March 1942. The area was suitable for training because of its openness, established railroads and highways, and the presence of several military installations throughout the region (Henley 1992, pages 5–7). The DTC was also suitable because it contained a variety of terrain types and no large population centers (Howard 1985, pages 273–274). Patton also investigated water supplies, meeting with the Water District Office in Los Angeles to ascertain what facilities would be available (Meller 1946, page 2). He brokered agreements with the Southern Pacific

Railroad to use the only existing tracks between Indio and Yuma, and with the Southern California Telephone Company and the Coachella Valley Home Telephone Company to set up three talking circuits for use at the DTC and to prohibit female operators on the circuits (Meller 1946, page 2). He was "unstinting in his praise of the area," and found it "probably the largest and best training ground in the United States" (Meller 1946, page 3). However, the first reaction of the troops was "distinctly unfavorable" (Meller 1946, page 11).

The DTC was the largest training installation ever created (approximately 16,156 square miles). Its purpose was to train soldiers for the harsh conditions of North Africa, as well as to field test equipment and supplies. The original facility extended from the Colorado River on its eastern border to just west of Desert Center, California, and from Searchlight, Nevada, in the north to Yuma, Arizona, in the south. Maneuver areas were located along Palen Pass, all across the Palen-McCoy valley and at strategic mountain passes in the Big and Little Marias, and the Chuckwallas. After 19 months of training and expansion, the DTC was officially named "The Desert Training Center California-Arizona Maneuver Area" (DTC/C-AMA), and had grown in size to an area twice the size of Maryland. The DTC/C-AMA included tank, infantry, and air units training for desert warfare. Patton established his base of operations at Shaver's Summit (now Chiriaco Summit) at Camp Young. Troops began arriving at the DTC/C-AMA in April 1942, and endured harsh physical training that included restricted access to water, physical endurance training, and lack of sleep. Life at the DTC/C-AMA was so difficult that the officers and enlisted men came to refer to it as "the place that God forgot" (Henley 1992, pages 22–24).

Patton commanded the DTC/C-AMA until July 1942, when he was placed in charge of "Operation Torch," the Allied invasion of North Africa. Patton had developed tactics at the DTC/C-AMA that he would use in his campaign. When Patton was replaced by Major General Alvan Gillem, Jr., 12,000 troops were stationed at the DTC/C-AMA. As WWII continued, that number grew to more than 200,000 troops by May 1943 (Henley 1992, page 25). The need for troops around the world during WWII required that the various units stationed there be sent to places other than North Africa. In light of this need, the DTC/C-AMA was closed in April 1944.

With the end of WWII came a reduction in military activity in the Colorado Desert region. Civilian buildings and airports converted for use by the military during the war years returned to civilian use. Surplus military barracks were recycled for a variety of uses throughout the local communities. The primary post-war activities in the area were mining and agriculture. Agricultural practices were primarily confined from the middle to the western portion of the county, but there was also agricultural development in the Palo Verde Valley due to its location near the Colorado River.

Several of the camps associated with the DTC/C-AMA are located near the Project. Camp Coxcomb is located approximately 11 miles to the north-northeast of the Project, and Camp Young is approximately 25 miles west of the Project, near Chiriaco Summit and the George S. Patton Museum. Also, the Desert Center Army Airfield is located approximately less than 1 mile from the Project at Camp Desert Center. Camp Granite and Camp Iron Mountain are located farther northwest, approximately 22 miles from the Project.

CAMP COXCOMB

Camp Coxcomb was constructed in the summer of 1942. Several armored divisions and infantry divisions were stationed at Camp Coxcomb in 1942 and 1943. Camp Coxcomb was a more permanent camp than the other DTC/C-AMA camps. It had wooden-floored buildings, screened doors, 39 shower buildings, 165 latrines, 284 pyramidal wooden tent frames, one 40,000-gallonwater tank, and one combination observation and flag tower. Camp Coxcomb also featured a relief map of the entire DTC/C-AMA. There was also a

series of live-fire ranges, and the surrounding canyons were used for training exercises (Bischoff 2000, pages 55–56).

Camp Coxcomb is currently in disrepair, but footprints of buildings remain. Portions have been washed away over time, but rock alignments and insignias remain, as does an altar that was constructed at the camp. Camp Coxcomb was recommended eligible for inclusion to the NRHP by Bischoff (Bischoff 2000, pages 56–58).

CAMP YOUNG

Camp Young was the headquarters of the DTC/C-AMA and the first divisional camp inhabited. It is where General Patton was stationed during his time at the DTC/C-AMA. Camp Young had the most improved facilities of any of the camps, including more than 3,000 tents (many with wooden floors and half walls and stoves).

Camp Young was heavily impacted by the construction of I-10 and the construction of various pipelines and transmission lines. Camp Young has also been affected by erosion, and pot-hunting has scoured the surface of artifacts. Bischoff noted that the impacts to Camp Young preclude it from being listed to the NRHP, although he noted that listing it in the CRHR was a possibility for its preservation (Bischoff 2000, page 89).

CAMP DESERT CENTER

Camp Desert Center consisted of approximately 34,000 acres that were set aside through a permit obtained by the War Department from the Department of the Interior. The camp is located along the north side of what is currently I-10, between Chiriaco Summit and Desert Center. The installation reportedly consisted of a maneuver area, as well as an encampment with temporary housing, an evacuation hospital, observers camp, ordnance composite, and quartermaster truck site (Bischoff 2000, page 58). The Desert Center Army Airfield, constructed in the early 1940s, was located northeast of Camp Desert Center. It served as a support base for Thermal Army Airfield. Two runways, a parking apron, and more than 40 buildings made up the airfield (Bischoff 2016).

Little remains of Camp Desert Center besides rock-lined roads, walkways, and tent areas in the vicinity of Eagle Mountain Road, many of which were oiled or asphalted. Refuse is also apparent around the camp and to the immediate north, mostly consisting of oil cans, gas cans, and food cans (Bischoff 2000, pages 59–61). The Desert Center Army Airfield was turned over to the Army Corps of Engineers at the conclusion on the war. The public was allowed to purchase the buildings. Remains of the runway and concrete foundations are still visible today (Bischoff 2016).

BLYTHE ARMY AIR BASE

To support the mission of the DTC/C-AMA, several desert airfields were commandeered and significantly improved by the Army between 1942 and 1944. One of these wartime training bases was the Blythe Army Air Base, which was originally constructed by the Civil Aeronautics Administration (CAA) in 1940 as Intermediate Flying Field Site 21 (Wilson 2008, page 4). Site 21 was further upgraded in 1941, when the National Defense Program awarded $400,000 to the Works Progress Administration (WPA) to expand the runways to accommodate larger military planes with (Wilson 2008, page 7). With the development of the DTC/C-AMA, the little airfield west of Blythe was identified as an excellent candidate for Army use, and it was officially taken over by the Army in April 1942, under the direction of General Henry H. Arnold, Commanding General of the Army Air Forces (Wilson 2008, page 12). One month later, the 46th

Bombardment Group was deployed to the Blythe Army Air Base, and the men immediately went to work building base housing, bringing in utilities, and improving the airfield facilities.

By September 1942, the airfield was formally designated the Blythe Army Air Base, with paved runways suitable for military aircraft. In the spring of 1943, the airfield was further improved, and an "unusually large taxi strip, of a type heavy enough to accommodate the largest four motored bombers" was constructed (AECOM 2017). From the fall of 1942 to 1945, the Blythe Army Air Base supported numerous training exercises in the DTC/C-AMA and became known for its excellent training of heavy bomber crews who went on to complete successful bombing missions in Europe and the Pacific (Wilson 2008).

CAMP GRANITE

Camp Granite was established in 1943. The original camp was flooded and subsequently moved closer to the mountains. The camp included pyramidal tents, shower buildings, latrines, and a 50,000-gallon water tank. Portions of the camp have been washed away over time, although some rock-lined footpaths remain. The western portion of the camp is well preserved, and sections have been roped off to aid in preservation (Bischoff 2000, page 63).

Bischoff recommended Camp Granite as eligible for inclusion to the NRHP because enough of the camp retains sufficient integrity to reflect the camp's historical associations (Bischoff 2000, page 63).

CAMP IRON MOUNTAIN

Camp Iron Mountain was established in the spring of 1942. Many roads and live-fire ranges were located at the camp. Many of the maneuvers of the DTC/C-AMA were planned at Camp Iron Mountain, which benefited from the use of a relief map similar to that located at Camp Coxcomb. The map measured 200 feet by 17 feet and was constructed by the U.S. Army Corps of Engineers. The map showed an area from Kingman to Twentynine Palms and Hoover Dam to Coachella Valley. The map was built to scale and had a wooden walkway spanning its distance (Bischoff 2000, page 71).

Although no formal camps were located within the current Project, facilities associated with the DTC/C-AMA are located nearby. Perhaps most prominent of these is one of the main roads leading from Camp Coxcomb toward Blythe. The Red Route, as it was known, is listed on historic DTC/C-AMA topographic maps of the Project from 1943 (namely Palen Mountains). It runs from Camp Coxcomb along the base of the Palen Mountains to the east of the Palen Lake playa. The road is visible from existing aerial images of the mountains. Red Route may have been used for the transport of troops or tanks between maneuver areas. It may be possible that tank tracks identified in the Project were made by tanks that traveled to the area along Red Route and to roads leading through the Project.

DESERT STRIKE

One brief military training exercise, known as Desert Strike, took place in the desert maneuver area in May 1964. Amidst the nuclear arms race, the U.S. Strike Command conducted the joint Army and Air Force field training exercise for the major combat organizations and their support units in employing tactical nuclear and conventional weapons (Desert Strike undated, page 312). Army and Air Force troop units were trained in passive and active tactics, and concepts and procedures for joint operations.

The exercise was a two-sided enactment, with fictitious world powers "Calonia" and "Nezona" sharing a common border at the Colorado River. The premise of the conflict between these two entities, each led by a Joint Task Force, was a dispute over water rights. Major tactical operations during the exercise included

deep armor thrusts, defensive operations along natural barriers, counterattacks including airmobile and airborne assaults, and the simulated use of nuclear weapons. The Air Force provided fighter, air defense, interdiction, counter air reconnaissance, and troop carrier operations in support of both joint task forces (Desert Strike undated, page 316). In the first phase of Desert Strike, Calonia initiated mock battle with a full-scale invasion of Nezona. A new concept for military river crossings was put into operation during this invasion, accomplished with a combination of assault boats, amphibious armored personnel carriers, ferries, bridges, and fords at eight major sites across a 140-mile-long stretch of the Colorado River. The practice of attack and counterattack continued into a second phase, in which simulated nuclear strikes and airborne assaults were traded between the forces.

The magnitude of the troop movements and the required supplies and equipment created one of the largest operations that occurred in the United States since the WWII period (Desert Strike undated, page 319). The nature of the Desert Strike joint training exercise proved cumbersome and somewhat controversial. The total cost of Desert Strike was $35,342,493, with the participation of 89,788 troops (Desert Strike undated, page 323). The U.S. Continental Army Command initially critiqued the operation as being inefficiently planned because of poor timing in the unit training cycles, equipment degradation in the difficult environment, and a lack of value in troop training for the time and cost (Desert Strike undated, page 321). After Desert Strike, large-scale joint field training exercises were discontinued in the DTC/C-AMA.

Agricultural/Ranching

Agriculture became an important industry, second only to mining, by the late 1850s. Homesteading formed the foundation for California's agricultural economy in the 19th century, and the official passage of the Homestead Act in 1862 opened vast areas of the public domain to private citizens. The Desert Land Act of 1877 also promoted the acquisition of open tracts of land, with an entitlement to 640 acres for each applicant, who were primarily speculators. Generally, lands that fell under this act were marginal for sustained agriculture. Transforming arid land into productive farming and grazing lands was the key. Although agriculture became an important industry in the Palo Verde Valley near Blythe and the Colorado River, significant agricultural development did not take place near the Project.

Land claims continued into the 20th century, with numerous Desert Land Entries in the Project dating to 1909 and 1910 (BLM 2009). However, most 20th-century claims on residual federal lands were poorly suited for agriculture. Several claims were abandoned or rejected. Many Desert Land Entries were never improved or established due to inadequate water and harsh conditions. Lands available for homesteading also became increasingly marginal over time, requiring ever-larger tracts to achieve success. Large-scale farming came to dominate the regional marketplace.

5.5.1.3 Cultural Resource Survey Boundaries

Maps showing boundaries of survey areas are available in the cultural resource reports provided under separate cover (see Section 5.5.1.1).

5.5.1.3.1 Cultural Resources Methods and Results

Archaeological Methods and Results

The original report addressed the original APE based on the initial Project design. The subsequent report addressed the additional APE resulting from the addition of work areas following the completion of the original report. These studies were conducted in accordance with BLM 8100 Manual series guidelines for compliance with the requirements of Section 106 of the National Historic Preservation Act. The Class III

inventory reports included a cultural resources records search, intensive pedestrian surveys, and resource documentation and evaluation (AECOM 2017; Rincon 2021).

RECORDS SEARCH METHODS

The California Historical Resource Information System (CHRIS) records search for the Project was conducted from March 24 to March 31, 2016 at the Eastern Information Center (EIC) located at the University of California, Riverside. The records search results indicated that 74 previous cultural resources studies have been conducted within 0.5 mile of the Project, 41 of which overlap with the Project work areas. The records search results also indicated that a total of 276 cultural resources have been previously recorded within a 0.5-mile radius of the Project work locations. Of the 276 resources, 30 are located within the APE (AECOM 2017; Rincon 2021).

PEDESTRIAN SURVEYS

Archaeological pedestrian surveys of the APE were conducted for both reports. Both reports prepared for the Project resulted in the relocation of 29 previously recorded resources and the identification of 25 new archaeological sites and 14 new isolates. Of the identified cultural resources, 60 are historic, 11 are prehistoric, and one is multi-component. In total, 68 cultural resources were either relocated or identified during the surveys (AECOM 2017; Rincon 2021). Table 5.5-1 provides a summary of identified cultural resources within the Project.

Table 5.5-1 Summary of Cultural Resources within the Project

Resource Designation	Location	Landowner	Resource Type	Age	Site Description
Original Report					
Previously Recorded Sites					
P-33-000260	Buffer	BLM	Site	Prehistoric	Temporary camp/habitation site
P-33-000662	Work area	BLM	Site	Historic	Shooting range
P-33-002790	Work area	BLM	Site	Prehistoric	Cobble procurement site and associated lithic scatter
P-33-002791	Work area	BLM	Site	Multi-component	Cobble procurement site with associated lithic scatter and historic refuse
P-33-003803	Buffer	BLM	Site	Prehistoric	Trail
P-33-006825	Buffer	Private	Site	Historic	Well, boiler, and cement reservoir
P-33-006914	Work area	Private	Structure	Historic	Colorado River Aqueduct Pumping Plant
P-33-009183	Work area	Private	Site	Historic	Refuse scatter
P-33-011110	Work area	Private	Site	Historic	Pilot Knob 16kV Transmission Line
P-33-011265	Work area	Private	Structure	Historic	Colorado River Aqueduct; Casa Loma Siphon; East Portal of the San Jacinto Tunnel

Resource Designation	Location	Landowner	Resource Type	Age	Site Description
P-33-012532	Work area	Private	Site	Historic	Niland-Blythe 16kV Transmission Line
P-33-013655	Work area	BLM	Site	Historic	Refuse scatter & cobble foundation
P-33-013662	Buffer	BLM; Private	Site	Historic	Refuse scatter associated with gas station/ garage
P-33-013663	Work area	BLM; Private	Site	Historic	Depression-era Placer mill and lode claim, refuse scatter
P-33-017766	Work area	BLM; Private	Site	Historic	Chuckwalla Valley Road; U.S. Route 60 and U.S. Route 70.
P-33-018846	Buffer	BLM	Site	Historic	Refuse scatter
P-33-019398	Buffer	BLM	Site	Historic	Refuse scatter
P-33-022249	Work area	Private	Structure	Historic	Indigo No. 1 Transmission Line
P-33-018971; P-33-019415; P-33-023910	Work area	BLM; Private	Site	Historic	Blythe Eagle Mountain 161kV Transmission Line
P-33-024144	Buffer	Private	Structure	Historic	Kaiser Road
P-33-018837	Work area	Private	Structure	Historic	Blythe Army Base
SMB-BMKM-005*	Work area	Private	Structure	Historic	Housing Subdivision
Newly Recorded Sites					
CWA24-MesaYard-1	Work area	Private	Site	Historic	Trash scatter
CWA24-SWA98-1	Buffer	BLM	Site	Historic	Ceramic scatter
CWA24-SWA150-1	Buffer	BLM	Site	Historic	Trash scatter
CWA24-SWA181-1	Buffer	BLM	Site	Historic	Trash scatter
CWA24-SWA184-1	Buffer	BLM	Site	Historic	Trash scatter
CWA24-WS37-1	Work area	BLM	Site	Historic	Two-track road
CWA 24-SWA 130-H-1	Buffer	BLM	Site	Historic	Trash scatter
CWA 24-SWA 132-H-1	Buffer	BLM	Site	Historic	Trash scatter
CWA 24-SWA 146-H-1	Buffer	BLM	Site	Historic	Trash concentration, burned
CWA 24-SWA 147-H-1	Work area	BLM	Site	Historic	Trash scatter
CWA 24-SWA 171-H-1	Work area	BLM	Site	Historic	Trash scatter
Previously Recorded Isolates					
P-33-017953	Buffer	Private	Isolate	Prehistoric	One chert/jasper end scraper
P-33-018461	Buffer	Private	Isolate	Historic	Vent-hole evaporated milk can

Resource Designation	Location	Landowner	Resource Type	Age	Site Description
P-33-019611	Buffer	BLM	Isolate(s)	Historic	Historic isolates spread out over numerous locations
DVRDCYard-1	Buffer	Private	Isolate	Prehistoric	One felsite flake
CWA 24-SWA165-ISO-1	Buffer	BLM	Isolate	Prehistoric	One chert primary flake
CWA 24-SWA2-ISO-1	Buffer	BLM	Isolate	Historic	Hazel-Atlas bottle base
CWA 24-SWA77-ISO-1	Buffer	BLM	Isolate	Prehistoric	One quartz cobble scraper and one quartz hammerstone
CWA24-GS41-ISO-1	Buffer	Private	Isolate	Historic	Coke bottle fragments (1940)
CWA24-SWA62-ISO-1	Buffer	BLM	Isolate	Historic	Pepsi bottle base (1956)
CWA24-SWA73-ISO-1	Buffer	BLM	Isolate	Historic	Pepsi bottle base (1957) and 50 fragments
CWA24-SWA106-ISO-1	Buffer	BLM	Isolate	Historic	Beer bottle base (1965)
CWA24-SWA110-ISO-1	Buffer	BLM	Isolate	Historic	Highway sign
CWA24-SWA179-ISO-1	Work area	BLM	Isolate	Prehistoric	Single Lithic Reduction
CWA24-SWA180-ISO-1	Buffer	BLM	Isolate	Prehistoric	Flaked tool
CWA24-WS22-ISO-1	Buffer	BLM	Isolate	Historic	Dairy bottle frags (1953)
CWA24-WS22-ISO-2	Buffer	BLM	Isolate	Historic	Whiskey bottle fragments (1920s-30s)
CWA24-WS35-ISO-1	Buffer	BLM	Isolate	Historic	Sun colored amethyst bottle base and fragments
CWA24-WS49-ISO-1	Buffer	Private	Isolate	Prehistoric	One potsherd
Subsequent Report					
Previously Recorded Sites					
P-33-000893	No longer extant	BLM	Site	Prehistoric	Trail
P-33-002790	Buffer and Work area	BLM	Site	Prehistoric	Lithic scatter
P-33-013593	Buffer and Work area	BLM	Site	Historic	Refuse scatter
Newly Recorded Sites					
EMB-S-001	Buffer and Work area	BLM	Site	Historic	Low-density can scatter
EMB-S-002	Buffer and Work area	BLM	Site	Historic	Moderate-density refuse scatter
EMB-S-003	Buffer and Work area	BLM	Site	Historic	Moderate-density refuse scatter
EMB-S-004	Buffer and Work area	BLM	Site	Historic	Moderate-density refuse scatter
EMB-S-005	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter

Resource Designation	Location	Landowner	Resource Type	Age	Site Description
EMB-S-006	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-007	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-008	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-009	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-010	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-011	Buffer and Work area	BLM	Site	Historic	High density refuse scatter
EMB-S-012	Buffer and Work area	BLM	Site	Historic	Low density refuse scatter
EMB-S-013	Buffer	BLM	Site	Historic	Low density refuse scatter
EMB-S-014	Buffer	BLM	Site	Historic	Moderate density refuse scatter

NATIVE AMERICAN CONSULTATION

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include taking inventory of places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC Section 5097.98 specifies a protocol to follow when the NAHC is notified of a discovery of Native American human remains from a county coroner.

Assembly Bill (AB) 52 (Gatto; Stats. 2014, ch. 532), which was enacted in September 2014, sets forth both procedural and substantive requirements for analysis of tribal cultural resources, as defined in Public Resources Code (PRC) Section 21074, and consultation with California Native American tribes. The California Public Utilities Commission (CPUC) will perform additional NAHC and tribal outreach activities in accordance with AB 52 at a later date.

See Section 5.18, Tribal Cultural Resources, for information related to cultural resources potentially of importance to California Native American tribes.

5.5.1.3.2 Historic-Period Built Environment Methods

Various archival sources were consulted, including historic topographic maps, photographs, and archival records, and historic topographic maps in the California Historic Topographic Map Collection. The purpose of archival research was to identify historic structures and land use in the Project. Aerial photographs from Nationwide Environmental Title Research, LLC (NETR) Copyright 1999-2016 online were consulted as needed for historical information. Land Patents from the Government Land Office (GLO) were accessed online as needed for historical sites.

Collections of the California State Archives, the Los Angeles County Public Library, the Bancroft Library, the University of California Library System, the Huntington Digital Library, and the Online Archive of

California online resources were examined. Secondary sources for individual biographical information and local area history were also utilized.

An architectural reconnaissance survey of the area of potential effects was not conducted; however, photo-documentation of built environment resources was collected during pedestrian surveys conducted under the original report, and a qualified architectural historian reviewed the site records. The existing Blythe-Eagle Mountain transmission line was identified as a potential built environment resource. However, the resource was previously evaluated and formally determined not eligible for the NRHP and CRHR (AECOM 2017).

5.5.2 Regulatory Setting

5.5.2.1 Regulatory Setting

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

5.5.2.1.1 Federal

Section 106 of the National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to consult with the Advisory Council on Historic Preservation (ACHP) to take into account the effects of their undertakings on historic properties. The Section 106 process involves identification of significant historic resources within an APE; determination if the undertaking will cause an adverse effect on historic resources; and resolution of those adverse effects through execution of a Memorandum of Agreement." Title 36 of the CFR part 800 defines how federal agencies meet these responsibilities. 36 CFR 800.5(a) describes the process for evaluating a project's adverse effects on cultural resources. An adverse effect is found when a federal undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Examples of adverse effects are provided in 36 CFR 800(a)(2) and include, but are not limited to:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

National Register of Historic Places

Authorized by Section 101 of the NHPA, the NRHP is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, State, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per 36 CFR Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Are associated with the lives of persons significant in our past

Criterion C: Embody the distinctive characteristics of a type, period, or method of installation, 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

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined in the following manner:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting: The physical environment of a historic property

Materials: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time

Association: The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluated significance (National Park Service 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

Archaeological Resources Protection Act

The Archeological Resources Protection Act (ARPA) of 1979 provides for the protection of archaeological resources more than 100 years old and which occur on federally owned or controlled lands. The statute

makes it unlawful to excavate and remove items of archaeological interest from federal lands without a permit, and it defines the process for obtaining such a permit from the responsible federal agency. This process includes a 30-day notification to interested persons, including Indian tribes, by the agency to receive comments regarding the intended issuing of a permit. The law establishes a process for prosecuting persons who illegally remove archaeological materials from lands subject to ARPA. The law also provides for curation of archaeological artifacts, ecofacts, notes, records, photographs, and other items associated with collections made on federal lands. Standards for curation are provided for in regulations at 36 C.F.R. 79.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 provides a process for museums and federal agencies to return certain Native American "cultural items" (i.e., human remains, funerary objects, sacred objects, and objects of cultural patrimony) to lineal descendants, culturally affiliated Indian tribes (i.e., tribes recognized by the Secretary of the Interior), and Native Hawaiian organizations, if the legitimate cultural affiliation of the cultural items can be determined according to the law. Museums, as defined under the statute, are required to inventory cultural items in their possession and determine which items can be repatriated to the appropriate party. Cultural items intentionally or unintentionally excavated and removed from federal lands may be subject to NAGPRA.

5.5.2.1.2 State

California Environmental Quality Act

The CEQA Statute (Pub. Resources Code § 21000 et seq.) and the CEQA Guidelines (14 CCR §§ 15000 et seq.) direct lead agencies to determine whether cultural resources are "historically significant" resources. CEQA requires that potential project impacts to cultural resources be assessed and requires mitigation if significant (or "unique") cultural resources would be affected (Section 21083.2 [a-1] and CEQA Guidelines Appendix G). Generally, a cultural resource is considered "historically significant" if the resource is 45 years old or older; possesses integrity of location, design, setting, materials, workmanship, feeling, and association; and meets the requirements for listing on the CRHR under any one of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2) Is associated with the lives of persons important in our past;
3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4) Has yielded, or may be likely to yield, information important in prehistory or history (Title 14 California Code of Regulations [CCR] Section 15064.5).

The statutes and guidelines specify how cultural resources are to be managed in the context of projects, such as the Project. Briefly, archival and field surveys must be conducted, and identified cultural resources must be inventoried and evaluated in prescribed ways. Prehistoric and historical archaeological resources as well as historic built environment resources deemed "historically significant" must be considered in project planning and development. Resources eligible for listing on the CRHR are referred to as "historical resources."

If a Lead Agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines (14 CCR) Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, the site is to be treated in accordance

with the provisions of PRC Section 21083 regarding unique archaeological resources. The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of a project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064[c][4]).

California Register of Historical Resources

Cultural resources include archaeological and historic objects, sites and districts, historic buildings and structures, and sites and resources of concern to local Native Americans and other ethnic groups. Cultural resources that meet the criteria of eligibility to the CRHR are termed "historic resources." Archaeological resources that do not meet CRHR criteria also may be evaluated as "unique;" impacts to such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR if:

a) It is associated with events that have made a significant contribution to the broad patterns of California's History and Cultural Heritage
b) It is associated with the life or lives of a person or people important to California's past
c) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
d) It has yielded, or may be likely to yield, information important to prehistory or history

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

The CRHR automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register
- California Registered Historical Landmarks from No. 770 onward
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion on the California Register

Other resources that may be nominated to the CRHR include:

- Historical resources with a significance rating of Category 3 through 5
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone

Impacts to "unique archaeological resources" also are considered under CEQA, as described under PRC 21083.2. A unique archaeological resource under CEQA is described in Section 5.5.2.1.2, California Environmental Quality Act.

California Assembly Bill 52 of 2014

As of July 1, 2015, Assembly Bill (AB) 52 was enacted and expands CEQA by defining a new resource category, "tribal cultural resources". AB 52 establishes, "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states the CEQA lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and that meets at least one of the following criteria, as summarized in CEQA Guidelines Appendix G:

1) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC 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 subdivision (c) of PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process with California Native American tribes that must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." California Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

California Public Resources Code §5097.98

Section 5097.98 of the California Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code §7050.5, shall immediately notify those persons (i.e., the Most Likely Descendant [MLD]) that it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

5.5.2.1.3 Local

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D (GO 131-D), Section XIV.B:

"Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

County of Riverside General Plan

The County of Riverside General Plan Multipurpose Open Space Element includes the following policies regarding 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. (AI 144)

Policy OS 19.3: Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

Policy OS 19.4: To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state. (AI 145)

Policy OS 19.5: Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

City of Blythe General Plan

The City of Blythe General Plan Open Space and Conservation Element includes the following policy regarding cultural resources (City of Blythe 2007).

Policy 25: Protect archaeologic, historic, and palaeontologic resources for their aesthetic, scientific, educational, and cultural value.

5.5.3 Impact Questions

5.5.3.1 Cultural Resources Impact Questions

The thresholds of significance for assessing impacts come from the CEQA Environmental Checklist. For cultural resources, the CEQA Checklist asks, would the Project:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5?
- Disturb any human remains, including those interred outside of dedicated cemeteries?

5.5.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.5.4 Impact Analysis

5.5.4.1 Cultural Resources Impact Analysis

5.5.4.1.1 Cultural Resources Methodology

This section describes impacts to cultural resources that could result from construction and operation of the Project. Project construction activities will comply with all applicable federal, State, and local regulatory requirements. Also presented are applicant proposed measures (APM), when applicable, which would minimize and avoid impacts and are considered mitigation measures.

The impact analysis is based on information included in the original and subsequent reports, which were reviewed and approved by the BLM, and as described in Section 5.5.1.3.1, Cultural Resources Methods and Results.

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (PRC Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history

If it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in

place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

- Contains information needed to answer important scientific research questions and that 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

5.5.4.1.2 Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less than Significant Impact with Mitigation. Only 22 of the cultural resources identified by the cultural resources records searches and pedestrian surveys may be potentially impacted by the Project (P-33-000662; P-33-002790; P-33-002791; P-33-006914; P-33-009183; P-33-011110; P-33-011265; P-33-012532; P-33-013655; P-33-013663; P-33-017766; P-33-018971; P-33-019415; P-33-022249; P-33- 023910; P-33-018837; P-33-013593; SMB-B-MKM-005; CWA24-MesaYard-1; CWA24-WS37-1; CWA24-SWA147-H-1; and CWA24-SWA171-H-1) because they are situated within the planned work areas. The remaining 46 resources are either located outside of the proposed work areas or are isolates, which are not eligible for inclusion on the NRHP or CRHR. Of the 22 resources that may be impacted, 13 have been previously evaluated for NRHP and CRHR eligibility. Of those, four were recommended or determined eligible, while nine were determined or recommended not eligible for listing on the NRHP and CRHR. In addition, the original and subsequent reports determined that the remaining nine resources are also not eligible for listing on the NRHP and CRHR (AECOM 2017; Rincon 2021).

The four resources within the Project work areas recommended eligible for listing in the NRHP or CRHR consist of P-33-006914, P-33-011265, P-33-017766, and P-33-018837. P-33-006914 encompasses components of the Colorado River Aqueduct Pumping Plant, and although it is situated within the boundaries of a proposed work area, no modifications to this feature are proposed and no impacts would occur. P-33-011265 encompasses the Colorado River Aqueduct; Casa Loma Siphon; East Portal of the San Jacinto Tunnel. Only a berm related to this resource was identified within a proposed work area, and SCE would avoid this feature. P-33-017766 comprises Chuckwalla Valley Road/U.S. Route 60/U.S. Route 70, and segments of the road fall within multiple work areas. However, SCE would not modify this road or its related features. P-33-018837 is the Blythe Army Air Base. All Project components are located within the southeastern portion of the resource; however, no features related to the Air Base were identified within the Project footprint. Furthermore, SCE would implement APMs CUL-1 through CUL-4 to reduce potential impacts to previously undiscovered historical resources.

Prior to construction, SCE would implement APM CUL-1, which includes the preparation and implementation of a Cultural Resources Management Plan (CRMP). The primary objectives of the CRMP would be the management, avoidance, and/or minimization of potential significant impacts to cultural resources. The CRMP would require the demarcation of all environmentally sensitive areas (ESAs) with proper signage prior to construction. Signage would include protective fencing, flagging, or other markers to protect ESAs from inadvertent trespass during construction. The CRMP would specify monitoring requirements for the identification of cultural resources during construction and would outline procedures

to implement during the inadvertent discovery of cultural resources. The CRMP would also specify roles and responsibilities of jurisdictional agencies for the long-term management of identified cultural resources in the APE. All potentially NRHP or CRHR eligible or archaeologically sensitive sites identified during records searches and field surveys would be evaluated to determine eligibility for listing under the CRHR and/or the NRHP. All potentially historically sensitive sites within the APE would be considered ESAs and avoided per APM CUL-2.

Per APM CUL-2, SCE would perform cultural resource surveys prior to construction for any Project Areas that were not previously surveyed, which may include new or modified laydown yards, pull sites, or other work areas. Cultural resources discovered during these surveys would be subject to the mitigation measures and requirements specified in the CRMP. Prior to construction, SCE would implement APM CUL-3, which involve a worker environmental awareness program (WEAP) to train construction personnel by a qualified archaeologist regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) during construction. The WEAP would provide construction personnel with instruction on compliance with APMs and avoidance measures developed after pre-construction surveys. Additional objectives of WEAP include instruction on the roles of cultural resource monitors and the appropriate treatment of ESAs. Further, SCE would deploy monitors per APM CUL-4 which involves conducting construction monitoring by a qualified archaeologist as needed. With incorporation of APMs CUL-1 through CUL-4, construction of the Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5, and impacts would be less than significant with mitigation.

Implementation of the Project would not change the requirement for existing operations and maintenance (O&M) activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.5.4.1.3 Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than Significant Impact with Mitigation. As discussed above under Section 5.5.4.1.1, the Project would not impact cultural resources, including archaeological sites, eligible for listing on the NRHP or CRHR. In addition, according to the original and subsequent reports prepared for the Project, the Project is considered to have low archaeological sensitivity. Given the lack of significant archaeological resources within the proposed work areas, the limited density and diversity of artifacts within APE, and the generally surficial nature of cultural deposits in this geographic/environmental setting, the Project has a low potential to impact buried archaeological resources during Project execution (AECOM 2017; Rincon 2021). However, due to the proximity of previously recorded cultural resources sites, there is a possibility that previously undiscovered archaeological resources may be encountered during Project ground disturbance. As described under Section 5.5.4.1.1, SCE would implement APMs CUL-1 through CUL-4, which include development of a CRMP, avoidance of ESAs, construction personnel training, and cultural resources construction monitoring, as needed. With implementation of APM CUL-1 through APM CUL-4, construction impacts to archaeological resources would be less than significant with mitigation.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.5.4.1.4 Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact with Mitigation. The Class III Cultural Resources Inventory Reports prepared for the Project did not identify cemeteries or archaeological resources containing human remains (AECOM 2017; Rincon 2021). However, the discovery of human remains is always a possibility during ground disturbance activities. Human burials outside of formal cemeteries often occur in prehistoric archaeological contexts. In addition to being potential archaeological resources, human burials have specific provisions for treatment in Public Resources Code Section 5097. Additionally, California Health and Safety Code Sections 7050.5, 7051, and 7054 contain specific provisions for the protection of human burial remains. These existing regulations address the illegality of interfering with human burial remains and protects them from disturbance, vandalism, or destruction. Public Resources Code Section 5097.98 also addresses the disposition of Native American burials, protects such remains and establishes the Native American Heritage Commission as the entity to resolve any related disputes.

If human remains are found, SCE would implement APM CUL-5, which includes compliance with all federal and State regulations for the proper treatment and disposal of human remains. Pursuant to California Health and Safety Code Section 7050.5, in the event of an unanticipated discovery of human remains, no further disturbance would occur until the county coroner has made a determination of origin and disposition in accordance with Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of being granted access to the site and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Implementation of APM CUL-5, which includes compliance with Public Resources Code Section 5097.98 and State of California Health and Safety Code Section 7050.5, would ensure construction impacts to human remains are less than significant with mitigation.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.5.4.2 Human Remains

The potential for encountering human remains during construction of the Project is low. The procedures that would be used if human remains are encountered are described in Section 5.5.4.1.4 above and in APM CUL-5.

5.5.4.3 *Resource Avoidance*

The avoidance procedures that would be implemented to avoid known resources are described in APMs CUL-1, CUL-2, and CUL-3, which include development of a CRMP, avoidance of ESAs, and construction personnel training.

5.5.5 CPUC Draft Environmental Measures

Compliance with existing regulations and APMs CUL-1, CUL-2, CUL-3, CUL-4, and CUL-5 would reduce impacts to a less than significant level with mitigation. No additional CPUC Draft Environmental Measures are required.

5.5.5.1 Applicant Proposed Measures

The following APMs would be implemented to reduce cultural resources impacts associated with the Project:

- **CUL-1: Develop a Cultural Resources Management Plan (CRMP).** SCE shall prepare and submit for approval a Cultural Resource Management Plan (CRMP) to guide all cultural resource management activities during project construction. Management of cultural resources shall follow all applicable federal and State standards and guidelines for the management of historic properties/historical resources. The CRMP shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to the start of construction. The CRMP shall be prepared by a qualified archaeologist who meets the Secretary of Interior's standards for archaeology and include, but not be limited to, the following sections:
  - **Cultural Resources Management Plan:** The CRMP shall define and map all known National Register of Historic Places- (NRHP) and California Register of Historical Resources (CRHR)-eligible properties in or within 100 feet (30.5 meters) of the proposed Project Area of Potential Effect. A cultural resources protection plan shall be included that details how NRHP- and CRHR-eligible properties will be avoided and protected during construction. Measures shall include, at a minimum, designation and marking of Environmentally Sensitive Areas (ESAs), archaeological monitoring, personnel training, and reporting. The plan shall also detail which avoidance measures will be used, where and when they will be implemented, and how avoidance measures and enforcement of ESAs will be coordinated with construction personnel.
  - **Cultural Resource Monitoring and Field Reporting:** The CRMP shall detail procedures for archaeological monitoring and Tribal participation, define the reporting matrix, and establish criteria for when the monitoring effort should increase or decrease if monitoring results indicate that a change is warranted. The CRMP shall also include guidelines for monitoring in areas of high sensitivity for the discovery of buried NRHP- and/or CRHR-eligible cultural resources, burials, cremations, tribal cultural resources, or sacred sites.
  - **Unanticipated Discovery Protocol:** The CRMP shall detail procedures for temporarily halting construction, defining work stoppage zones, notifying stakeholders (e.g., agencies, Native Americans, utilities), and assessing NRHP and/or CRHR eligibility in the event unanticipated discoveries are encountered during construction. It shall include methods, timelines for assessing NRHP and/or CRHR eligibility, formulating mitigation plans, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries shall be reviewed by tribal stakeholders and approved by the CPUC and BLM prior to implementation.
  - **Data Analysis and Reporting:** The CRMP shall detail methods for data analysis in a regional context, reporting of results within one year of completion of field studies, curation of artifacts and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by the CPUC and BLM and dissemination of reports to appropriate repositories.

- **CUL-2: Avoid Environmentally Sensitive Areas (ESA).** SCE shall perform cultural resource surveys for any portion of the proposed Project Area of Potential Effect not yet surveyed (e.g., new or modified staging areas, wire setup sites, existing access roads requiring improvements, or other work areas). Cultural resources discovered during surveys will be subject to APM CUL-1 (Develop CRMP). Where operationally feasible, all NRHP- and CRHR-eligible resources shall be protected from direct project impacts by Project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources shall be avoided by all Project construction, operation and maintenance, and restoration activities, where feasible. Avoidance

measures shall include, but not be limited to, fencing off ESAs for the duration of the proposed Project or as outlined in the CRMP.

- **CUL-3: Train Construction Personnel.** Prior to initiating construction, all construction personnel shall be trained by a qualified archaeologist regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and protection of these resources during construction. Training shall also inform all construction personnel of the procedures to be followed upon the discovery of cultural materials. All personnel shall be instructed that unauthorized removal or collection of artifacts is a violation of federal and State laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend a Worker's Environmental Awareness Training Program (WEAP). The WEAP shall include the Project's potential for the post-discovery review of archaeological deposits, how to operate adjacent to and avoid all ESAs, and procedures to treat post-discovery reviews.
- **CUL-4: Conduct Cultural Resources Construction Monitoring.** Archaeological monitoring shall occur as outlined in the CRMP. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historic and prehistoric resources that could occur within the Project Areas. The qualifications of the principal archaeologist and monitors shall be approved by the CPUC and BLM (when appropriate). Monitoring reports shall be submitted to the CPUC and BLM on a monthly basis. A Tribal Participant may be required at culturally sensitive locations in consultation with CPUC, BLM, and/or as outlined in the CRMP.
- **CUL-5: Properly Treat Human Remains.** SCE shall follow all federal and State laws, statutes, and regulations that govern the treatment of human remains. All work in the vicinity of a find shall cease within a 200-foot radius of the remains, the area will be protected to ensure that no additional disturbance occurs. Should inadvertent discovery of human remains be made on federal lands, the CPUC, BLM, and County Coroner (California Health and Safety Code 7050.5[b]) shall be notified immediately. If the remains are determined to be Native American or if Native American cultural items pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) are uncovered, the remains shall be treated in accordance with the provisions of NAGPRA (43 Code of Federal Regulations [CFR] 10) and the Archaeological Resources Protection Act (43 CFR 7). If the remains are not on federal land, the CPUC shall be notified immediately and the remains shall be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15064.5(e), and Public Resources Code Section 5097.98. SCE shall assist and support the CPUC and BLM, as appropriate, in all required Archeological Resources Protection Act (ARPA) (16 United States Code 470 & 43 CFR 70), NAGPRA (25 United States Code 3001 and 43 CFR 100), and Public Lands (Interior 43 CFR 8365.1-7) actions, government to-government and consultations with Native Americans, agencies, and consulting parties as requested by the CPUC and BLM. SCE shall comply with and implement all required actions and studies that result from such consultations.

5.6 Energy

This section describes the energy-consumption in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project), as well as the potential impacts to energy from construction and operation of the Project. Research for this analysis involved a review of the following resources:

- California Energy Commission (CEC) California Energy Consumption Database
- California Department of Tax and Fee Administration fuel taxes statistics and reports
- Local agency planning documents

5.6.1 Environmental Setting

The Project is located in an existing right-of-way that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas.[1] The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe. This section describes the existing energy use in the Project Area.

5.6.1.1 Existing Energy Use

Station lights and power equipment at the existing Eagle Mountain and Blythe substations associated with the Project represent the only existing consumption of electricity associated with the Project. Fuels consumed during operation and maintenance (O&M) activities of these existing facilities and existing transmission line represent the only other existing energy use associated with the Project. Line losses are not considered a use of energy, but rather a loss of energy. The subsections that follow describe existing energy use in and around the Project. Fuel and energy use associated with the construction phase of the Project is described in Section 5.6.4.3 Fuels and Energy Use.

5.6.1.1.1 Electricity Consumption

Table 5.6-1 shows electricity consumption by sector in the Southern California Edison Company (SCE) service area based on the latest available data from the CEC. As shown, SCE delivered approximately 85.9 billion kilowatt-hours (kWh) of electricity in 2022.

A total of approximately 17.7 billion kWh of electricity was consumed in Riverside County in 2022, broken out by approximately 8.7 billion kWh of electricity consumed in the non-residential sector and approximately 9 billion kWh of electricity consumed in the residential sector (CEC 2024b).

[1] The terms "laydown yard", "staging yard", and "staging area" may be used interchangeably throughout the document.

Table 5.6-1 Electricity Consumption within SCE's Service Territory in 2022

Electricity Consumption (Millions of kWh)							
Agricultural and Water Pump	**Commercial Building**	**Commercial Other**	**Industry**	**Mining and Construction**	**Residential**	**Streetlight**	**Total**
3,150	30,496	5,321	12,877	1,776	31,604	647	85,870

Source: CEC 2024a

5.6.1.1.2 Gasoline, Diesel, and Jet Fuel Consumption

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (CEC 2022b). Approximately 90 percent of gasoline sold in the state is petroleum-based, with the remaining 10 percent being ethanol-based. Diesel fuel represents 17 percent of total fuel sales and is the second-largest category of transportation fuel used in California. Nearly all heavy-duty trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, construction equipment, and heavy-duty military vehicles and equipment have diesel engines. In 2021, taxable gasoline sales (including aviation gasoline) in California accounted for approximately 13.8 billion gallons of gasoline, taxable diesel fuel sales accounted for approximately 3.1 billion gallons of diesel fuel, and taxable jet fuel sales accounted for approximately 187 million gallons of jet fuel (CDTFA 2024).

5.6.1.1.3 Electric Utility Operations

SCE is an investor-owned utility company that provides electricity services to more than 15 million people within a 50,000-square-mile service area of central, coastal, and Southern California. Customers also can obtain electricity from alternative providers (such as municipalities or Customer Choice Aggregators), as well as from distributed-generation resources (such as rooftop solar installations). In 2021, SCE sold a total of 62,685 million megawatt (MW) hours of electricity. Of this total, SCE owns approximately 3,260 MW of generating capacity. The remaining electrical power is purchased from other sources in and outside of California.

5.6.2 Regulatory Setting

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

5.6.2.1 Federal

5.6.2.1.1 National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA), 42 United States (U.S.) Code (USC) § 8201 *et seq*., established energy-efficiency standards for consumer projects and includes a residential program for low-income weatherization assistance, grants, and loan guarantees for energy conservation in schools and hospitals, as well as energy efficiency standards for new construction. NECPA also established fuel economy standards for on-road motor vehicles in the U.S. The National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and revising existing standards under the NECPA. The USDOT is authorized to assess penalties for noncompliance.

5.6.2.1.2 National Energy Policy Act of 2005

The National Energy Policy Act of 2005, 42 USC § 13201 *et seq*., sets equipment energy efficiency standards, seeks to reduce reliance on nonrenewable energy resources, and provides incentives to reduce current demand on these resources. This includes establishing programs to improve the reliability and efficiency of distributed energy resources and systems by integrating advanced energy technologies with grid connectivity.

5.6.2.1.3 Energy and Independence Security Act of 2007 and Corporate Average Fuel Economy Standards

The Energy and Independence Security Act of 2007, 42 USC § 17001, sets federal energy management requirements in several areas, including energy reduction goals for federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use by methods including setting automobile efficiency standards and increases in alternative fuel use. This act also amends portions of the NECPA, as described previously.

5.6.2.2 State

5.6.2.2.1 Warren-Alquist Act

The 1975 Warren-Alquist Act, Public Resources Code § 25000 *et seq*., established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Warren-Alquist Act established a state policy to reduce wasteful, uneconomical, and unnecessary uses of energy.

5.6.2.2.2 State of California Integrated Energy Policy

Public Resources Code section 25301(a) requires the CEC to develop an Integrated Energy Policy Report (IEPR) at least every 2 years for electricity, natural gas, and transportation fuels. The current IEPR (2021 edition) calls for the state to assist in the decarbonization of buildings and the agricultural sector, ensuring electricity reliability in a changing climate, decarbonizing the state's gas systems, and improving electricity demand forecasting.

5.6.2.2.3 Senate Bill 100

Senate Bill 100, signed into law in September 2018, amends the California Renewables Portfolio Standard Program. The program requires the California Public Utilities Commission (CPUC) to establish a renewables portfolio standard requiring all retail sellers to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 25 percent of retail sales by December 31, 2016; 33 percent by December 31, 2020; 40 percent by December 31, 2024; 50 percent by December 31, 2026; and 60 percent by December 31, 2030. The program additionally requires each local publicly owned electric utility to procure a minimum quantity of electricity products from eligible renewable energy resources to achieve the procurement requirements established by the program.

5.6.2.2.4 California Advanced Clean Cars Program/Zero Emission Vehicle Program

In January 2012, the California Air Resources Board (CARB) approved a new emissions-control program for vehicle model years 2017 through 2025. The program combines emissions controls with requirements

for greater numbers of zero-emission vehicles into a package of standards called the Advanced Clean Cars Program. The components of the Advanced Clean Cars Program include the Low-Emission Vehicle regulations that reduce criteria pollutants and greenhouse gas emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulations that require manufacturers to produce an increasing number of pure ZEVs (e.g., battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. In March 2017, CARB voted unanimously to continue with the vehicle greenhouse gas emission standards and the ZEV program for cars and light trucks sold in California past 2025.

5.6.2.2.5 CARB Heavy Duty Regulations

CARB's Truck and Bus Regulation requires diesel trucks that operate in California to be upgraded to reduce emissions. It established a final deadline of January 1, 2023, to upgrade all trucks with 2010 model year engines or equivalent. In 2004, CARB adopted a fourth tier of increasingly stringent advanced after-treatment for new off-road compression-ignition engines, including those found in construction equipment. These "Tier 4" standards were phased in across product lines from 2008 through 2015. In 2007, CARB first approved the Off-Road Regulation that requires off-road fleets to reduce their emissions by retiring, replacing, or repowering older engines.

5.6.2.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and city regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.6.2.3.1 County of Riverside General Plan

The Multipurpose Open Space Element of the County of Riverside General Plan is intended to ensure efficient consumption of energy and water, reduce greenhouse gas emissions, pursue the benefits of renewable energy, and responsibly manage its impacts on the environment, communities, and economy. The element contains goals, objectives, policies, and implementation strategies; none are applicable or relevant to the Project.

5.6.2.3.2 City of Blythe General Plan

The Open Space and Conservation element of the City of Blythe General Plan identifies natural and historical resources within the City's Urban Planning Area and establishes policies and programs intended to preserve them. It includes conservation policies for water, soils, biological resources, cultural resources and air quality; none are applicable or relevant to the Project.

5.6.3 Impact Questions

5.6.3.1 Energy Impact Questions

The significant criteria for assessing the impacts to energy come from the CEQA Environmental Checklist. For energy, the CEQA Checklist asks, would the Project:

- Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

5.6.3.2 Additional CEQA Impact Questions

Pursuant to the CPUC's Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments, the following additional CEQA impact question is required for energy. Would the Project:

- Add capacity for the purpose of serving a nonrenewable energy resource?

5.6.4 Impact Analysis

5.6.4.1 Energy Impact Analysis

5.6.4.1.1 Energy Methodology

The assumptions included in the air quality and GHG emissions modeling prepared for the Project are presented in Appendix B. These assumptions were used to estimate energy consumption associated with the Project. After construction, ongoing maintenance-related activities are not expected to increase above existing conditions. Therefore, operational energy consumption was not quantified. Additional modeling details and assumptions are provided in Appendix J.

5.6.4.1.2 Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Less than Significant Impact. During Project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment, construction worker and water truck travel to and from the work areas, and vehicles used to transport materials to and from the work areas. As shown in Table 5.6-2, Project construction activities would require approximately 613,000 gallons of gasoline and approximately 335,000 gallons of diesel fuel. Gasoline and diesel fuel consumption during Project construction activities would be less than 0.01 percent of countywide and statewide consumption.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. Construction equipment would be subject to the U.S. EPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption. Construction contractors would be required to comply with the provisions of Title 13, Sections 2449 and 2485 of the California Code of Regulations, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than 5 minutes and would minimize unnecessary fuel consumption. In order to reduce potential impacts from noise during the

construction phase of the Project, SCE would also implement Applicant-Proposed Measure (APM) NOI-1. This measure would require all vehicles to minimize idling time to the extent practical, which would reduce fuel consumption. While this APM is not required to ensure energy emissions are less than significant, it would help to further reduce this impact. These practices would result in efficient use of energy necessary to construct the Project. In the interest of cost efficiency, construction contractors also would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, Project construction would not involve the inefficient, wasteful, and unnecessary use of energy during construction. Impacts would be less than significant, and no mitigation is required.

Table 5.6-2 Estimated Fuel Consumption during Construction

	Fuel Consumption (gallons)	
Source	**Gasoline**	**Diesel**
Project Construction	612,750	335,137
Annual Countywide Consumption (Riverside County)	876,000,000	144,000,000
Project Proportion of Countywide Fuel Consumption	**< 0.01%**	**< 0.01%**
Annual Statewide Consumption	12,572,000,000	1,744,000,000
Project Proportion of Statewide Fuel Consumption	**< 0.01%**	**< 0.01%**

Sources: CEC 2021c, Appendix J

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.6.4.1.3 Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. State and local agencies regulate the use and consumption of energy through various plans and programs. Many State regulations have been established to reduce energy use and its associated GHG emissions as a result of the passage of Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006" and the subsequent SB 32, which extended AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030. As discussed under Section 5.8.4.1.3, the Project would be consistent with State and local GHG emission reduction plans and policies as they relate to energy usage, including the State's 2017 Climate Change Scoping Plan, the RPS Program, and the County of Riverside Climate Action Plan (County of Riverside 2019).

For portions of the Project in unincorporated Riverside County, the Multipurpose Open Space Element of the General Plan includes policies related to renewable energy and energy conservation, including policies for wind, solar, and geothermal energy development and energy conservation through efficient building and site design; use of public transportation systems and alternative transportation modes; installation of cogenerating systems; and establishment of waste reduction facilities (County of Riverside 2015). None of the County's policies related to renewable energy and energy efficiency are directly applicable to the Project because it does not involve new development of renewable energy resources, installation of infrastructure that would inhibit future renewable energy development, or development that would generate a long-term increase in energy consumption within Riverside County. For portions of the Project within the City of Blythe, the Open Space and Conservation Element of the City of Blythe General Plan 2025 includes policies to "conserve scarce or nonrenewable energy resources" and "promote energy efficiency in new subdivisions

and in building design" (City of Blythe 2007). The latter of these policies is not applicable to the Project because it does not involve development of subdivisions or buildings. In addition, the Project would support current and future transmission of renewable energy with updated electrical infrastructure and therefore contribute to the conservation of scarce or nonrenewable energy resources. Therefore, the Project would not conflict with or obstruct the City of Blythe's or the County of Riverside's General Plan policies related to renewable energy and energy conservation. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.6.4.1.4 Would the Project add capacity for the purpose of serving a non-renewable energy source?

No Impact. Serving a nonrenewable energy resource is not a purpose of the Project; therefore, no impact would occur.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.6.4.2 Nonrenewable Energy

The Project's existing subtransmission lines would continue to connect existing SCE substations, and the Project would not alter the capacity of the subtransmission line network. The Project would not involve the interconnection or supply of any new renewable or non-renewable energy projects.

5.6.4.3 Fuels and Energy Use

5.6.4.3.1 Total Energy Requirements of the Project by Fuel Type and End Use

Table 5.6-1 provides an estimate of the volume of fuels (i.e., gasoline and diesel) that would be used during construction of the Project. As discussed previously, O&M activities associated with the Project would not change following construction; therefore, there would be no increase in consumption of fuels above the volumes currently consumed.

5.6.4.3.2 Energy Conservation Equipment and Design Features

The Project includes neither equipment nor design features with a primary or sole purpose of energy conservation.

5.6.4.3.3 Energy Supplies that Would Serve the Project

Project construction would not require any new energy supplies. As described in Section 5.8, Greenhouse Gas Emissions, power would be supplied to laydown yards from existing local distribution lines, as needed. If local distribution lines are not available, temporary power may be provided from a diesel-powered generator. All other energy required for the construction phase of the Project would be obtained from existing energy purveyors. As described previously, Project operation would not increase fuel consumption above the volumes currently consumed.

Regarding existing renewable and non-renewable energy, the Project involves reconductoring an existing subtransmission line and other related improvements. The Project would not and is not intended to interconnect any new sources of renewable or non-renewable energy.

5.6.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for energy.

5.6.5.1 Applicant Proposed Measures

5.6.5.1.1 Energy APMs

No applicant proposed measures (APMs) specific to energy have been developed to reduce an impact that has been identified in Section 5.6.4.1.

5.6.5.1.2 Cross-Referenced APMs

The following APM relevant to a different impact category would also reduce energy impacts associated with the Project:

- **NOI-1: Noise Control.** SCE shall employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction:
  - Construction activities shall be confined to daytime, weekday and weekend hours established by Section 9.52.020(h) of the Riverside County Code of Ordinances, which restricts temporary construction noise to between 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. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours.
  - Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
  - Stationary noise sources (e.g., generators, pumps) and staging areas shall be shielded by an enclosure, temporary sound walls, acoustic blankets, or other barrier where noise levels are above 80 A-weighted decibels (dBA) at sensitive receiver locations. Heights and specifications of noise barriers will be designed to reduce construction noise to below 80 dBA (Federal Transit Administration 2018).
  - Construction traffic and helicopter flight shall be routed away from residences and schools.
  - Unnecessary construction vehicle use and idling time shall be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off.

5.7 Geology, Soils, and Paleontological Resources

This section describes the geological, soils, and paleontological resources in the vicinity of the Eagle Mountain-Blythe 161 kiloVolt (kV) Transmission Line Rating Remediation Project (Project), as well as potential impacts that may result from construction and operation of the Project.

Research for this analysis involved a review of the following resources:

- California Department of Conservation's (DOC) reported California landslides map
- California Geological Society's (CGS) Seismic Hazards Program Liquefaction Zones Map
- Local agency planning documents
- United States Bureau of Reclamation's (USBR) Characteristics and Problems of Collapsible Soil information
- United States Department of Agriculture's (USDA) Understanding Soil Risks and Hazards Using Soil Survey to Identify Areas with Risks and Hazards to Human Life and Property document
- USDA Wind Erodibility Groups information
- United States Geological Survey's (USGS) Fault type online resource
- USGS Modeling Soil Moisture in the Mojave Desert resource
- Geotechnical Soilutions Inc. Geotechnical Investigation Report ("Geotechnical Investigation Report") (Geotechnical Soilutions Inc. 2023; Appendix K)

The discussion of paleontological resources contained within this section is based on information obtained through a desktop review of geologic maps, literature review, and a paleontological records search of the University of California at Berkeley Museum of Paleontology online database to identify the paleontological sensitivity of the geologic units crossed by the Project.

5.7.1 Environmental Setting

The Project is located in an existing right-of-way (ROW) that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management (BLM) or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas. The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe.

The Project is in the Victory Pass, East of Victory Pass, Corn Spring, Sidewinder Well, Aztec Mines, East of Aztec Mines, Hopkins Well, Roosevelt Mine, and Ripley 7.5-minute USGS topographic quadrangles. The following subsections describe the existing geologic setting near the Project.

5.7.1.1 Regional and Local Geologic Setting

The Project is located in the Mojave Desert and generally traverses alluvial plains, alluvial fans and pediments, hills, and the foothills of several mountain ranges, including the McCoy, Palen, Chuckwalla, and Eagle Mountains. A majority of the areas are underlain by Pliocene- to Holocene-age and Quaternary-age alluvium. The western end of the Project near the Eagle Mountain Substation is in an area consisting of Mesozoic granitic and Quaternary-age alluvium. From approximately one mile north of the Eagle Mountain Substation, the Project continues southeasterly through the Chuckwalla Valley toward the Palo Verde Mesa near Blythe. The Chuckwalla Valley is comprised of Quaternary-age alluvium, sand, and sand dunes. Mesozoic sandstone and Quaternary-age alluvium are located south of McCoy Mountain and just north of Interstate 10 (I-10). The geologic units within the Project have been mapped by Jennings (1967) and Stone (2006). According to these published maps, geologic units within the Project range from Precambrian to Holocene in age.

5.7.1.1.1 Physiography

The principal mountain and valley areas crossed by the Project are described below. The boundaries between these areas are not sharply defined, and the descriptions are general. The Project is within the Mojave Desert and the Chuckwalla Valley.

Mojave Desert

The Mojave Desert is an arid region in southeastern California and parts of Nevada, Arizona, and Utah. The desert occupies more than 25,000 square miles, ranging from below sea level to over 5,000 feet (1,524 meters) in elevation (USGS 2008). The Mojave Desert is a Cenozoic feature, assumed to have been formed during the Oligocene Epoch (about 40 million years ago) from movement along the San Andreas and Garlock Faults. The broad alluvial basins that dominate the region were formed by eroded materials from the adjacent mountain ranges.

Chuckwalla Valley

The Chuckwalla Valley is a broad, alluviated, and enclosed tectonic basin, which is an alluvium-filled internally drained structural depression with outlets blocked by alluvial divides. Four playas (dry lakes) are present in the Chuckwalla Valley near the Project and include Palen Lake, Ford Lake (which is closest to the Project), Hayfield Lake, and an unnamed playa between the McCoy Range and Mule Mountain. The eastern end of the Chuckwalla Valley is located on a drainage divide at the base of the Mule and McCoy mountains where the Palo Verde Mesa extends eastward. Alluvial fan deposits derived from these surrounding highlands fill the basin (Norris and Webb 1976).

5.7.1.2 Seismic Hazards

5.7.1.2.1 Faults and Seismicity

The time in which a fault was last known to have slipped, referred to as age, is directly linked to how active a fault is considered to be. The State of California considers a fault to be active if the fault is well-defined and if there is evidence of surface displacement along the fault during the Holocene epoch (i.e., within the past 11,000 years). In addition, potentially active faults are those that have demonstrated activity within the Quaternary period (i.e., approximately the past 1.6 million years). Fault type is defined by the angle of the fault with respect to the surface and the direction of slip. A normal (dip-slip) fault is an inclined fracture where the rock mass above an inclined fault moves down. Faults which move horizontally are known

as strike-slip faults and are classified as either right-lateral or left-lateral. Faults which show both dip-slip and strike-slip motion are known as oblique-slip faults. A normal fault is a fault in which the block above the fault has moved downward relative to the block below (USGS 2024).

As shown in Figure 5.7-1, no faults cross the Project. Faults within the vicinity of the Project include the following: Blue Cut, Blythe graben, Salton Creek, Aztec Mine Wash, and Hot Springs faults.

5.7.1.2.2 Surface Fault Rupture

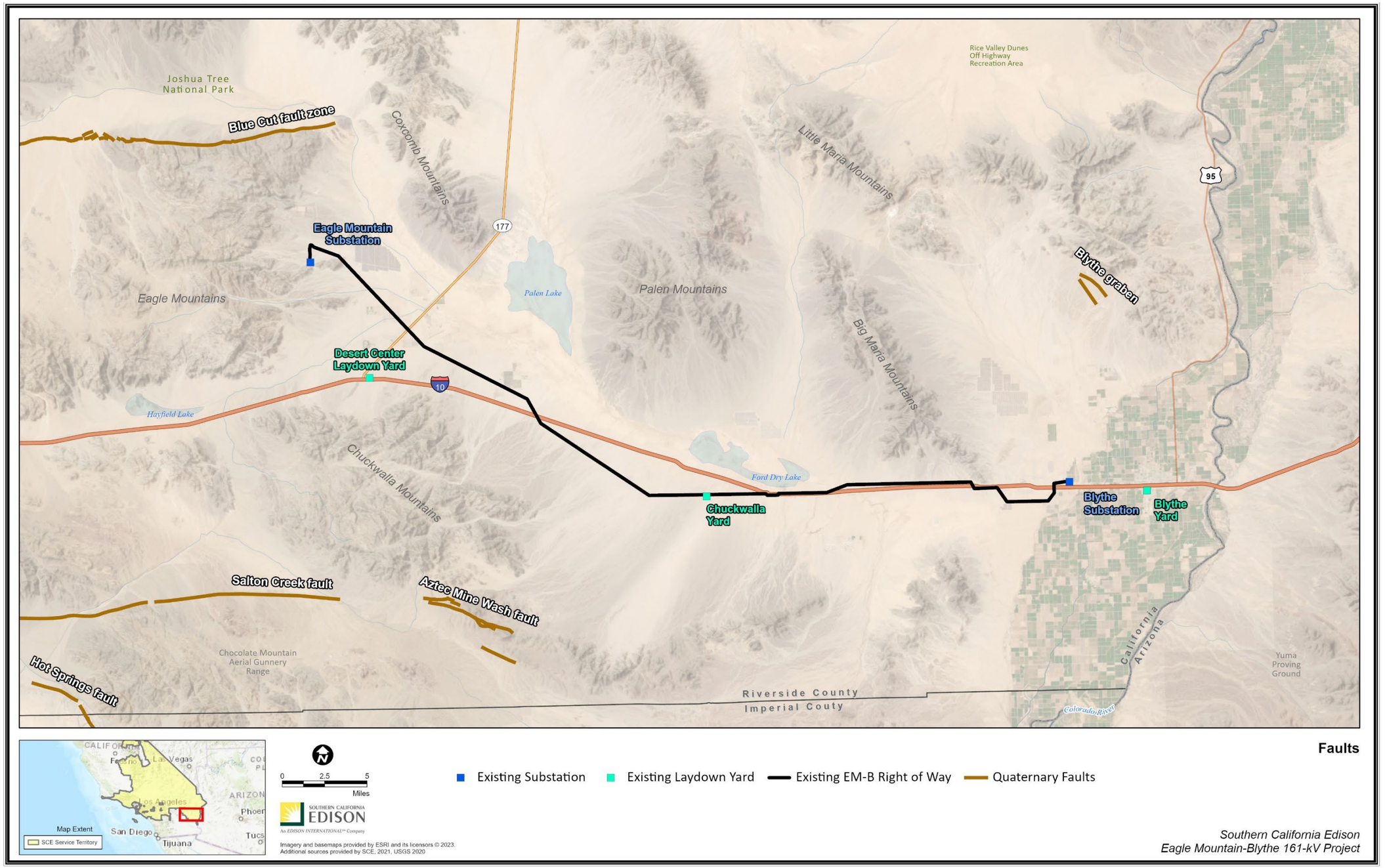
The State of California has established "Alquist-Priolo Special Studies Zones" in areas where Holocene faults pose a risk of surface displacement. The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates construction and development of buildings intended for human occupancy to avoid rupture hazards from surface faults. This act does not specifically regulate substations and power lines, but it does aid in defining areas where fault rupture is most likely to occur. The Project is not within an Alquist-Priolo Special Studies Zone. Therefore, there is no potential for surface rupture at the site due to fault plane displacement during the design life of the Project (Geotechnical Soilutions Inc. 2023; Appendix K).

5.7.1.2.3 Seismic Ground Shaking

Several factors influence how ground motion interacts with structures, making the impact hazard of ground shaking difficult to predict. Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves can vibrate in any direction and at different frequencies, depending on the frequency content of the earthquake, its rupture mechanism, the distance from the seismic epicenter, and the path and material through which the waves are propagating. Ground shaking due to nearby and distant earthquakes should be anticipated during the life of the Project.

An earthquake is commonly described by the amount of energy released, which has traditionally been quantified using the Richter scale. However, seismologists have recently begun using a Moment Magnitude scale because it provides a more accurate measurement of a major earthquake's size. Specifically, the Moment Magnitude is based on the measurement of maximum motion recorded by a seismograph. The Moment Magnitude and Richter scales are almost identical for earthquakes of less than magnitude 7.0. Moment Magnitude scale readings are slightly greater than a corresponding Richter scale reading for earthquakes with magnitudes greater than 7.0.

Figure 5.7-1 Faults Located in the Vicinity of the Project



5.7.1.2.4 Liquefaction

Liquefaction occurs where strong ground motions produce a rise in pore-water pressures that in turn causes granular material to briefly lose strength and liquefy. This can lead to settlement, lateral spreading, and damage to structures, even in areas of flat topography. Ground motions can potentially trigger liquefaction in areas of unconsolidated granular sediment and shallow groundwater. The risk of liquefaction is highest in areas with high predicted ground motions, unconsolidated sediments, and shallow groundwater.

Parts of Riverside County may be subject to liquefaction during seismic events due to high groundwater. However, the Project is not mapped within a known liquefaction zone on the CGS Seismic Hazards Program Liquefaction Zones Map (CGS 2024).

5.7.1.2.5 Slope Instability

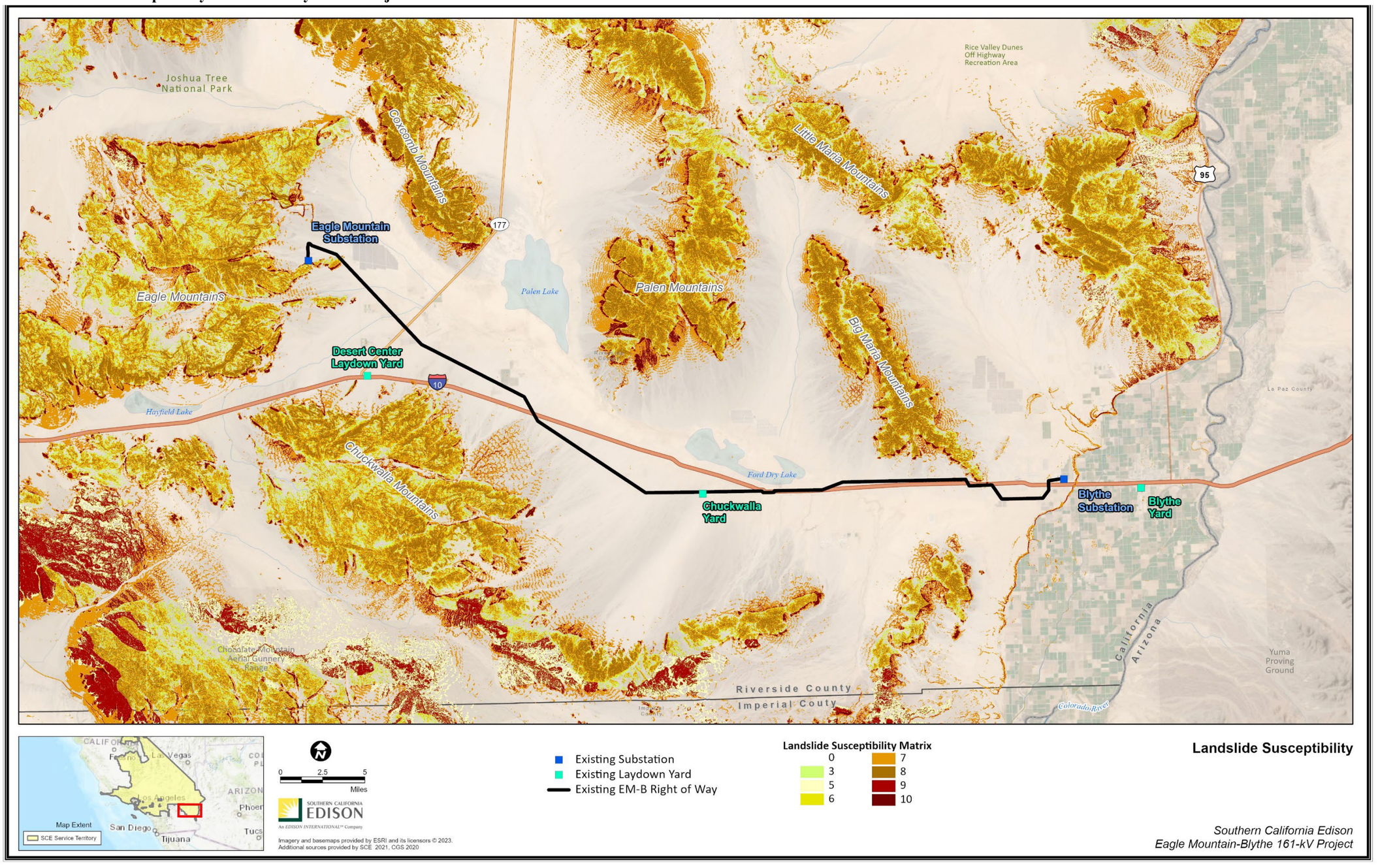
Landslides typically occur on moderate-to-steep slopes when masses of rock or earth move down a slope. Landslides can be caused by natural events (e.g., rainfall, earthquakes, and soil erosion) or human activities (e.g., grading) that can result in unstable fill slopes or excessive cuts. Important factors that affect slope stability include the steepness of the slope and the strength of rock or soil materials. Topography near the Project consists of gently sloping alluvial plains with a series of steep rock buttes and several arroyos. No records of major historical landslides were found along the Project. The closest historical landslide, which occurred in 2022, was approximately 75 miles to the west in Hemet (DOC 2024). Landslide susceptibility is shown on a scale of zero to 10, with zero representing land that has a very low susceptibility to landslides and 10 being land with the highest risk of landslides. Less than five percent of the total Project would cross over land with a landslide susceptibility greater than five. Figure 5.7-2 shows the landslide susceptibility near the Project.

5.7.1.2.6 Soil Erosion

Soil erosion is the naturally-occurring process involving soil detachment, movement, and deposition. The rate and magnitude of soil erosion by water is controlled by rainfall, runoff, and wind. The Project is predominantly undeveloped and is subject to two forms of water erosion – sheet erosion and rill erosion. Sheet erosion is the movement of soil from raindrop splash and runoff water. Rill erosion results when surface water runoff concentrates into small, well-defined channels.

Wind erosion is most prevalent in silty and fine sandy soils with sparse vegetation. Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion. Wind erodibility is rated on a scale of 0 to 310, with 0 being soils that are not susceptible to wind erosion due to coarse fragments or wetness and 310 being soils that are made up of very fine sand, fine sand, sand, or coarse sand that are highly susceptible to wind erosion. Sands of different textures vary from 160 to 310 but are often found together, so it assumed that soils made up of these groups will be somewhere within 160 to 310 range (USDA 2002). The Project is mapped as experiencing “moderate” and “high” wind erosion susceptibility (County of Riverside 2015).

Figure 5.7-2 Landslide Susceptibility in the Vicinity of the Project



5.7.1.2.7 Collapsible Soils

Collapsible soils are defined by the USBR as any unsaturated soil that goes through a radical rearrangement of particles and great decrease in volume upon wetting, additional loading, or both (USBR 1992). Collapse occurs as water enters the pores between the individual sand and silt grains and weakens the "bonding" of the clays or other binding agents. Overburden or applied weight causes soil particles to slide across one another (shear), filling voids and resulting in a reduction in the overall volume of the soil (USDA 2004). Soils susceptible to collapse typically contain a large amount of void space, low bulk density, geologically young age, clay content of less than 30 percent, and a large percentage of pore space, in the range of 40 to 60 percent. Local soils could be subject to collapse.

5.7.1.2.8 Expansive Soils

An expansive soil is any soil that is prone to large volume changes (shrinking and swelling) directly related to changing moisture conditions. The swelling capacity can cause heaving or lifting of structures whilst shrinkage can cause differential settlement. Linear extensibility percent is the linear expression of the volume difference of natural soil. Most of the soils underlying the Project are coarse-grained and not generally susceptible to expansion. In addition, because one boring taken in the Geotechnical Investigation Report conducted for the Project was in a location with sandy clay soil, an expansion index test was conducted for the soil at this site. The test indicated that the soil has a low expansion index. Soils with potential to be expansive were not found at any other geotechnical boring location for the Project (Appendix K).

5.7.1.2.9 Subsidence

Land subsidence is a type of ground failure that can be aggravated by ground shaking. It is most often caused by the withdrawal of large volumes of fluids from underground reservoirs, but it can also occur by the addition of surface water to certain types of soils. Subsidence has been previously recorded within Riverside County. No subsidence recordings within Riverside County have been reported in the vicinity of the Project. However, portions of the Project fall within areas identified as susceptible to subsidence (County of Riverside 2019).

5.7.1.3 Geologic Units

The following geologic units underly the Project Alignment or are within the vicinity of the Project:

- Qw - Alluvium of modern washes
- Qr - Alluvium of the modern Colorado River floodplain
- Qs - Eolian sand
- Q6 - Alluvial fan and valley deposits
- Qal – Alluvium
- Ql and Qp - Playa lake deposits
- Qa3 - Alluvial fan and valley deposits
- Qc - Nonmarine deposits
- Qpv - Alluvial deposits of Palo Verde Mesa
- QTmw - Alluvial deposits of the McCoy Wash area

- QTa2 - Alluvial fan and valley deposits
- Tv - Volcanic rocks
- Kml - McCoy Mountain Formation Member L
- Kmk - McCoy Mountain Formation Member K
- Kmj - McCoy Mountain Formation Member J
- Kmi - McCoy Mountain Formation Member I
- Kmh - McCoy Mountain Formation Member H
- Kmg- McCoy Mountain Formation Member G
- Kmf - McCoy Mountain Formation Member F
- KJma - McCoy Mountain Formation Member A
- KJa - Andesite
- Jv - Volcanic Rocks
- gr - granite
- bi - Basic Intrusive rocks
- pCg - Granitic rocks

Figure 5.7-3a though Figure 5.7-3d show the geologic units and the paleontological sensitivity in the vicinity of the Project. Issues related to landslide risk are discussed above under Section 5.7.1.2.5 and issues related to soil instability and seismic hazards are discussed throughout Section 5.7.1.2.

5.7.1.4 Soils

According to the Generalized Soil Map of California (Storie 1951), the predominant soil types near the Project include the following:

- Alluvial fan and flood plain soils of desert region - These soils are found in the desert and semi-desert areas of low rainfall (one to seven inches annually). These soils are low in organic matter content.
- Sandy, wind modified soils of low rainfall zone - These soils are found in the desert where the annual rainfall is low (zero to three inches annually). These soils are low in organic matter content and have a low water-holding capacity.
- Desert soils - These soils include desert terrace soils in the low rainfall zone (one to six inches annually). These soils are low in organic matter content.

5.7.1.5 Paleontological Report

In order to assess the potential for paleontological resources near the Project, a paleontological records search and literature review was conducted for a five-mile corridor study area centered on the Project (extending 2.5 miles on either side of the Project). The paleontological resources assessment was prepared in accordance with the Society of Vertebrate Paleontology (SVP) established guidelines and standard procedures (SVP 2010) and included a geologic map review, literature search, and paleontological locality search using the University of California at Berkeley Museum of Paleontology online database on May 14, 2020.

Figure 5.7-3a Project Regional Geology

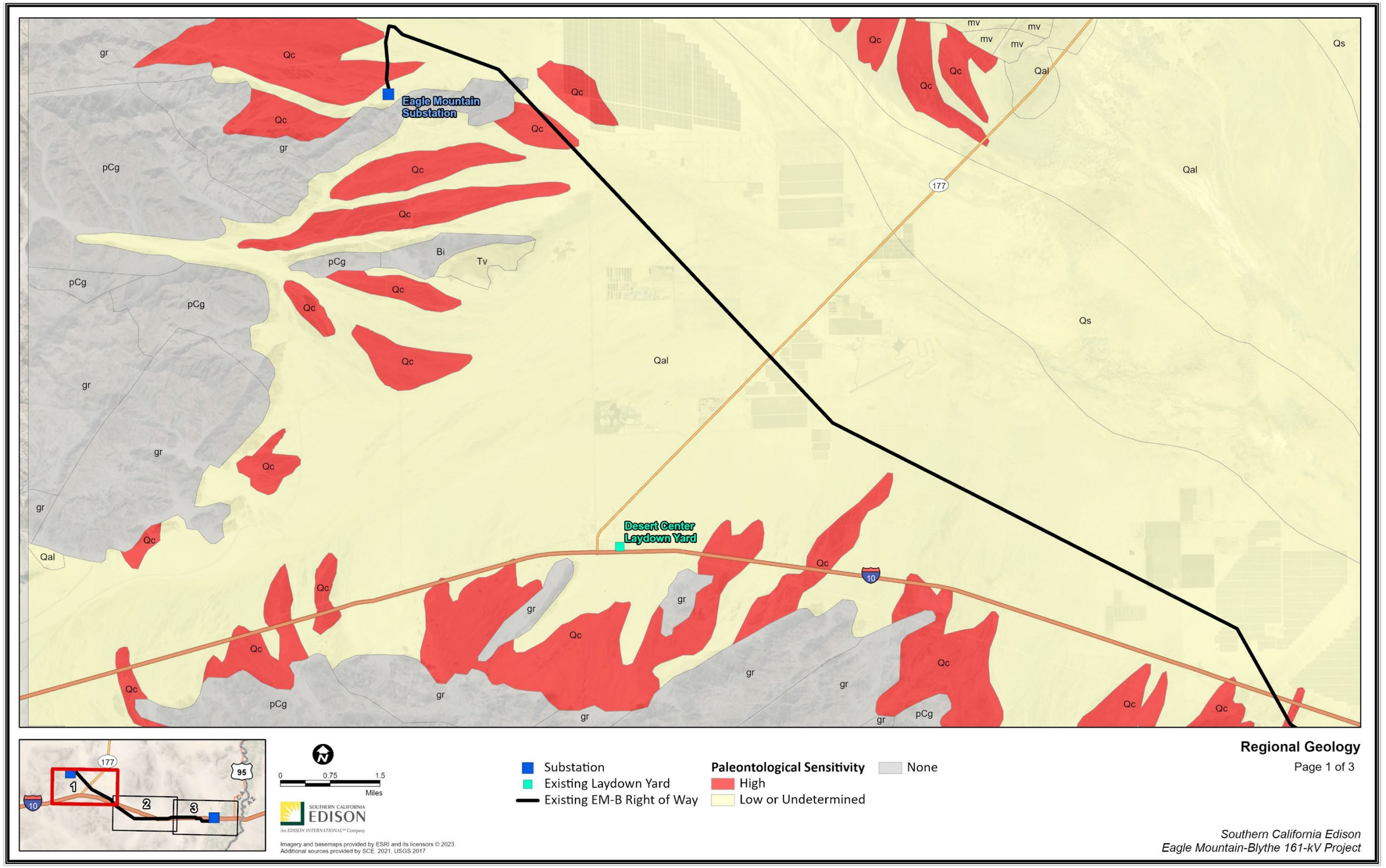


Figure 5.7-3b Project Regional Geology

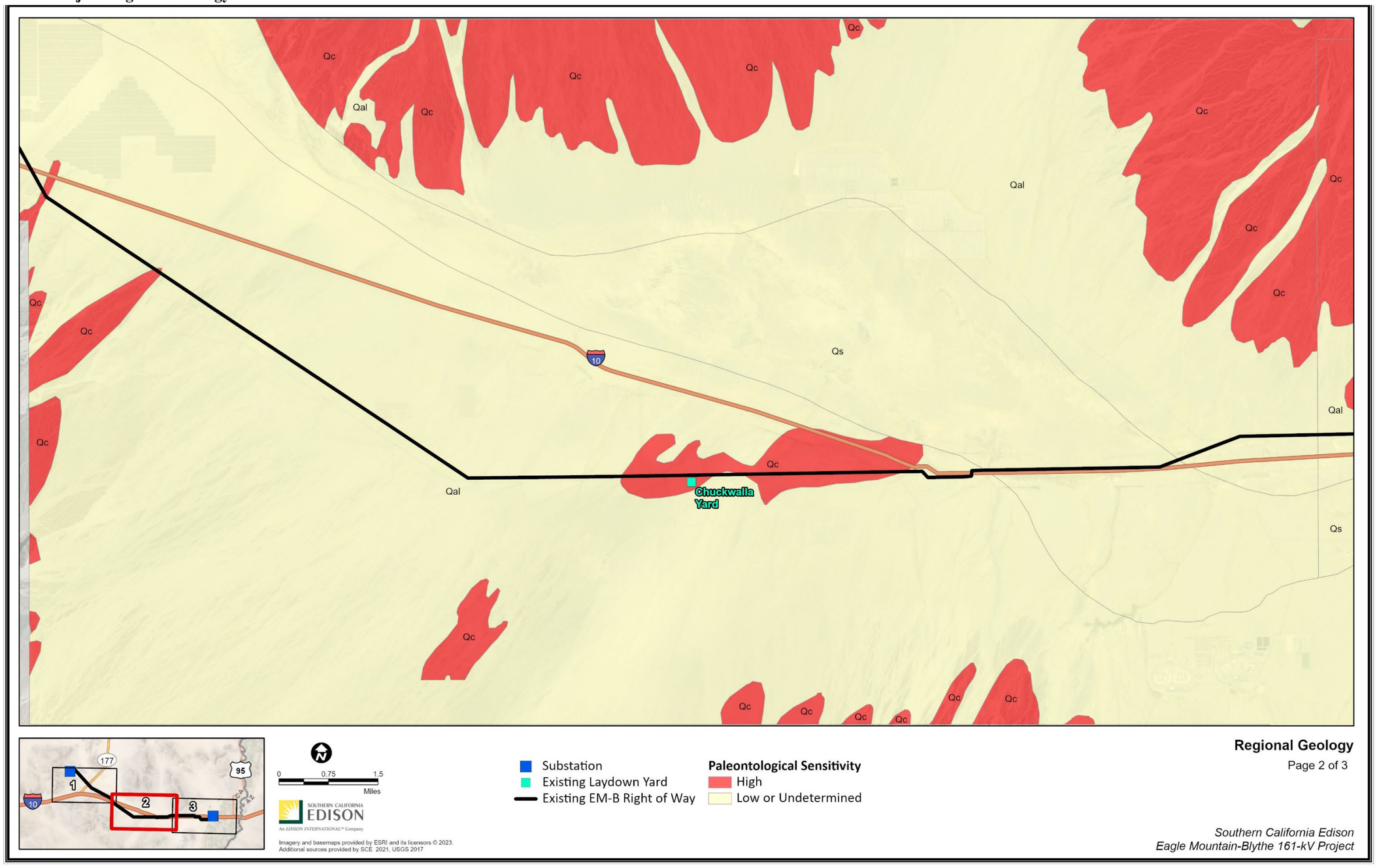


Figure 5.7-3c Project Regional Geology

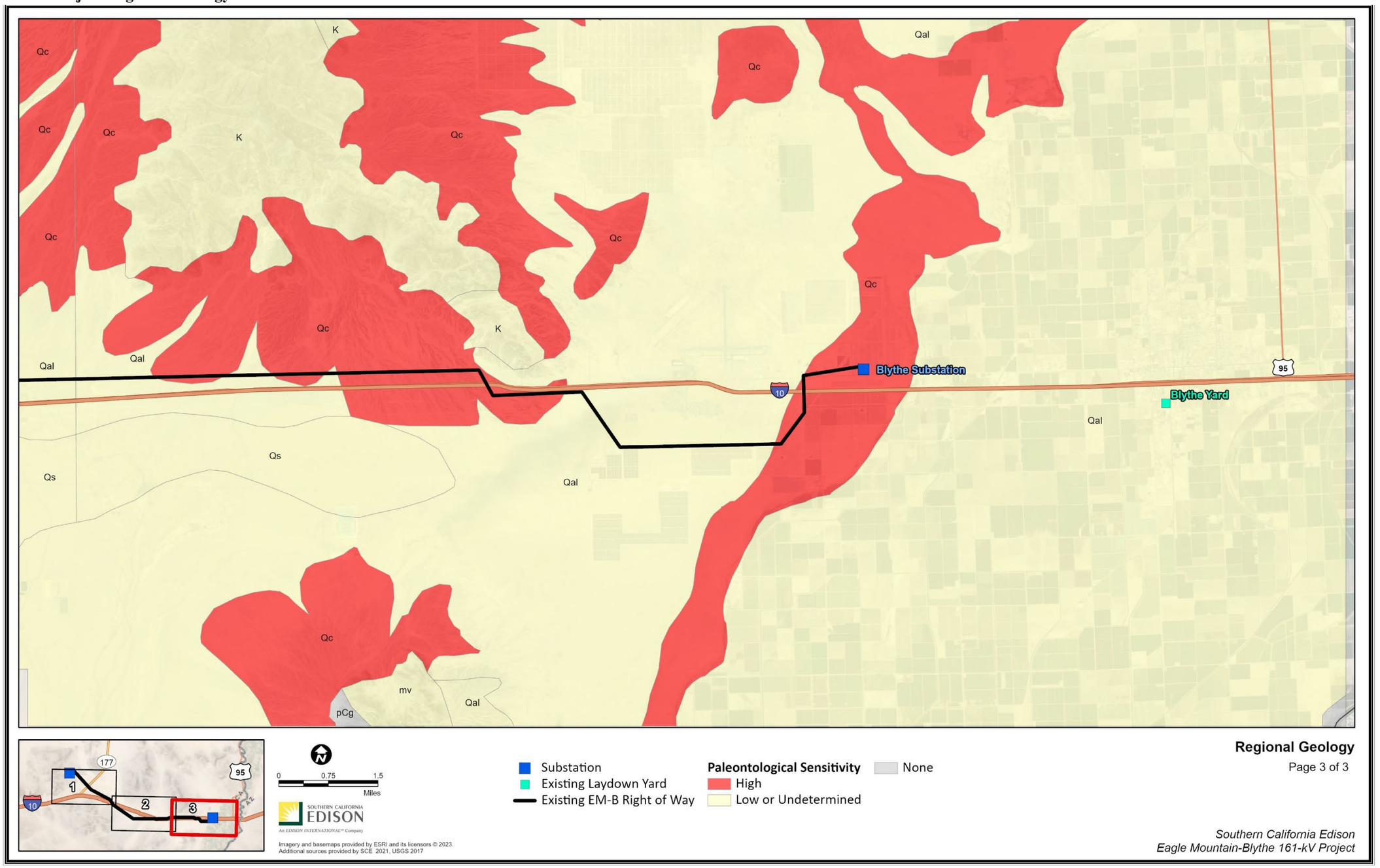
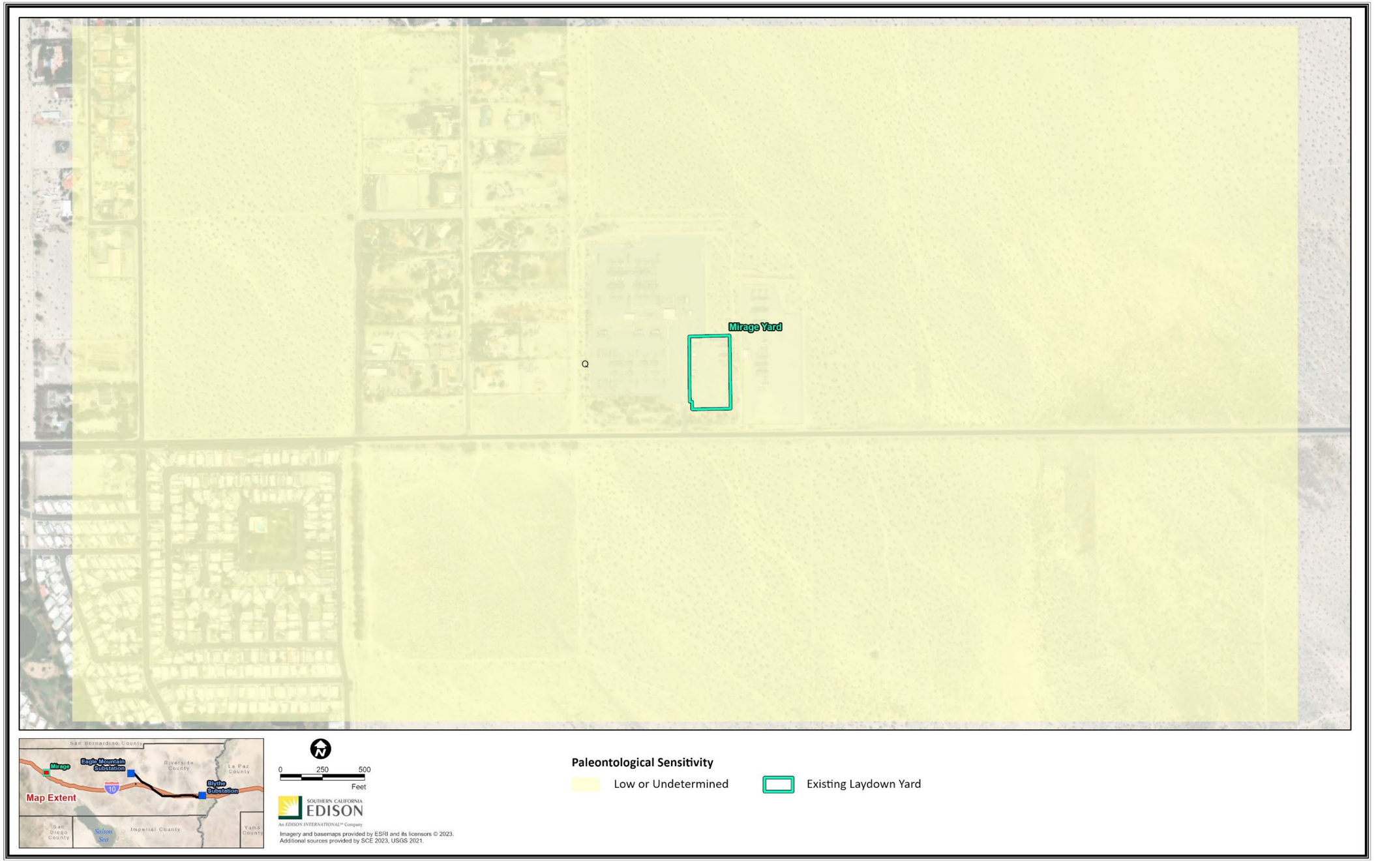


Figure 5.7-3d Project Regional Geology



The geologic units within the study area have been mapped at a scale of 1:250,000 by Jennings (1967) and 1:100,000 by Stone (2006). According to these published maps, geologic units within the study area range from Precambrian to Holocene in age. These units, as mapped by Jennings (1967) and Stone (2006), are described from youngest to oldest below.

Table 5.7-1 lists the geologic units near the Project and their paleontological resources potential. Paleontological sensitivity ratings of the geological formations were assigned based on the findings of the database and literature review, and on the potential effects to nonrenewable paleontological resources from Project construction following SVP (2010) guidelines.

Table 5.7-1 Geologic Units of the Project

Geologic Unit	Geologic Age	Paleontological Sensitivity (SVP 2010)
Qw - Alluvium of modern washes	Holocene	Low
Qr - Alluvium of the modern Colorado River floodplain	Holocene	Low/Undetermined[1]
Qs - Eolian sand	Holocene	Low
Q6 - Alluvial fan and valley deposits	Holocene	Low/Undetermined
Qal – Alluvium	Holocene	Low/Undetermined
Ql and Qp - Playa lake deposits	Holocene and Pleistocene	High
Qa3 - Alluvial fan and valley deposits	Pleistocene	High
Qc - Nonmarine deposits	Pleistocene	High
Qpv - Alluvial deposits of Palo Verde Mesa	Pleistocene	High
QTmw - Alluvial deposits of the McCoy Wash area	Pleistocene and Pliocene	High
QTa2 - Alluvial fan and valley deposits	Pleistocene to Miocene	High
Tv - Volcanic rocks	Miocene	Low
Kml - McCoy Mountain Formation Member L	Cretaceous	Low
Kmk - McCoy Mountain Formation Member K	Cretaceous	Low
Kmj - McCoy Mountain Formation Member J	Cretaceous	Low
Kmi - McCoy Mountain Formation Member I	Cretaceous	Low
Kmh - McCoy Mountain Formation Member H	Cretaceous	Low
Kmg- McCoy Mountain Formation Member G	Cretaceous	Low
Kmf - McCoy Mountain Formation Member F	Cretaceous	Low
KJma - McCoy Mountain Formation Member A	Cretaceous or Jurassic	Low
KJa - Andesite	Cretaceous or Jurassic	Low
Jv - Volcanic Rocks	Jurassic	Low
gr - granite	Mesozoic	None
bi - Basic Intrusive rocks	Mesozoic	None
pCg - Granitic rocks	Precambrian	None

[1] These Holocene deposits can exist as a relatively thin veneer on top of older Plio-Pleistocene age sediments which have yielded scientifically significant fossil remains near the Project (Jefferson, 1991a and 1991b; Mcleod 2009). Surficial excavations (zero to five feet below grade) are unlikely to encounter paleontological resources, but deeper excavations have the potential to encounter significant fossil remains within the older Plio-Pleistocene deposits (likely present at depths of five feet or greater). Consequently, these Holocene units have been assigned a low paleontological resources potential from zero to five feet below ground surface (bgs), but at depths of five feet or greater are assigned an undetermined paleontological resources potential.

A description of each unit found near the Project is provided below.

- **Holocene alluvium of modern washes (Qw)** – Unconsolidated, angular to subangular gravel and sand derived from local mountain ranges. Boulder- and cobble-rich wash deposits proximal to mountain fronts grade downstream into pebbly and sandy distal deposits.
- **Holocene alluvium of the modern Colorado River (Qr)** – Unconsolidated clay, silt, and sand. Mostly covered with thick vegetation or converted to farmland.
- **Holocene eolian sand (Qs) -** Active dunes, stabilized dunes, and sand sheets.
- **Holocene alluvium (Qal)** - Alluvial gravel, sand, and silt in active washes on active and recently active fan surfaces. Includes small areas of talus, colluvium, and landslide gravel. Locally veneered by windblown sand.
- **Holocene alluvial fan and valley deposits (Qa6)** - Young alluvial-fan and alluvial-valley deposits characterized by a lack of desert varnish, generally fine grain size, and evidence of recent sediment transport. Consists mostly of sand, pebbly sand, and sandy pebble-gravel; forms very gently sloping to nearly flat valley floors marginal to older, varnished alluvial-fan deposits. Surfaces are covered by sparse to moderately dense vegetation and commonly are transected by shallow channels of active sediment transport. Thin accumulations of eolian sand are present locally. Near mountains, includes relatively coarse, youthful, unvarnished gravel.
- **Holocene and Pleistocene alluvial fan and valley deposits (Qa3)** – Alluvial-fan deposits of gravel and sand that form relatively old, dissected surfaces mostly characterized by smooth, varnished desert pavement. Typical pavements have little or no surface relief and are composed of tightly to moderately packed, angular to subangular rock fragments. Most surfaces have a dark brown to nearly black desert varnish, but some surfaces are lighter in color owing either to a relative abundance of unvarnished or lightly varnished granitic gravel or to vehicular or other human disturbances. Pavement surfaces are dissected and drained by dendritic networks of sandy channels; vegetation is typically dense in these channels but is sparse to absent on the pavement surfaces.
- **Holocene and Pleistocene Playa deposits (Qp and Ql)** – Partly gypsiferous silt and clay forming surfaces of playas and weakly consolidated, slightly dissected lake beds. Vegetative cover sparse.
- **Pleistocene alluvium and nonmarine deposits (Qc)** - Alluvial-fan deposits of fine to coarse gravel and sand that typically form relatively old, dissected surfaces extending away from mountain fronts. Some ridge crests are relatively flat, narrow plateaus that preserve small tracts of smooth desert pavement.
- **Pleistocene Alluvial deposits of the Palo Verde Mesa (Qpv)**- Unconsolidated to weakly consolidated deposits of sand, pebbly sand, silt, and clay that are locally well exposed along the scarp of Palo Verde Mesa, which bounds the flood plain of the Colorado River. The upper unit extends westward from the top of the scarp to form the surface of Palo Verde Mesa, which is composed of unconsolidated sand and pebbly sand containing a mixture of local and river pebbles. South of McCoy Wash, a prominent terrace is developed at a height of about 20 to 25 meters above the flood plain and about 20 meters below the upper surface of Palo Verde Mesa.
- **Pleistocene to Pliocene alluvial deposits of the McCoy Wash area (QTmw) -** Deposits of rounded river gravel and minor locally derived gravel that form several broad hills standing 15 to 25 meters above Palo Verde Mesa in the vicinity of McCoy Wash and the southeast side of the McCoy Mountains. Rare hillside exposures show that the surface gravels are underlain by brown, well consolidated calcareous or gypsiferous sandstone.
- **Pleistocene to Miocene alluvial fan and valley deposits (QTa2) -** Alluvial-fan deposits of fine to coarse, poorly sorted gravel and sand that typically form high, deeply dissected, narrow ridges extending away from mountain fronts. Some ridge crests are relatively flat, narrow plateaus that

preserve small tracts Miocene of smooth desert pavement, but most ridge crests are sharp to rounded and presumably have been eroded to a level below that of any preexisting alluvial surface.

- **Miocene volcanic rocks (undivided) (Tv)** - Rhyolite, andesite, basalt, and pyroclastic rocks.
- **Cretaceous McCoy Mountain Formation (member L) (Kml)** - Light-gray arkosic sandstone, conglomerate, and minor shale, all micaceous and phyllitic. Conglomerate clasts are quartzite, volcanic rocks, and granitic rocks.
- **Cretaceous McCoy Mountain Formation (member K) (Kmk)** - Dark-gray, fine-grained arkosic to volcanic-lithic sandstone, light gray phyllitic shale, and minor conglomerate containing clasts of volcanic and granitic rocks.
- **Cretaceous McCoy Mountain Formation (member J) (Kmj) -** —Dark-gray, medium- to coarse-grained arkosic to volcanic-lithic sandstone and conglomerate; lowermost part contains minor light-gray arkosic sandstone. Coarsens upward.
- **Cretaceous McCoy Mountain Formation (member I) (Kmi) -** Light-gray, medium- to coarse-grained arkosic and micaceous sandstone, conglomeratic sandstone, and conglomerate. Massive ledges of conglomerate are present at base.
- **Cretaceous McCoy Mountain Formation (member H) (Kmh) -** Light-gray, fine-grained arkosic sandstone, conglomeratic sandstone, and shale, all micaceous and phyllitic.
- **Cretaceous McCoy Mountain Formation (member G) (Kmg) -** Upper part consists of dark-greenish-gray, fine-grained arkosic to volcanic-lithic sandstone; lower part consists of light-gray to tan phyllitic and calcareous shale, tan calcareous sandstone, and conglomerate containing clasts of quartzite and carbonate rocks.
- **Cretaceous McCoy Mountain Formation (member F) (Kmf) -** Light- to medium-gray, fine- to coarse-grained arkosic sandstone and conglomerate interbedded with less abundant light-gray phyllitic shale. Dark-gray to dark-greenish-gray, very fine grained to fine-grained volcanic-lithic sandstone and siltstone present in upper part. Conglomerate clasts are granitic rocks, quartzite, volcanic rocks, and minor carbonate rocks. Grades upward from conglomerate and sandstone in lower part to very fine-grained sandstone and siltstone in upper part.
- **Cretaceous to Jurassic McCoy Mountain Formation (member A) (KJma) -** Tan, fine- to medium-grained quartzite and minor chert- and quartzite-clast conglomerate; interbedded with less abundant maroon mudstone and siltstone that commonly contain brown calcareous pods and lenses of unknown origin.
- **Cretaceous or Jurassic Andesite (KJa) -** Highly foliated, fine-grained, dark-green to black andesite interpreted as sills intrusive into member A of the McCoy Mountains Formation (KJma) at the south end of the McCoy Mountains.
- **Jurassic Volcanic Rocks (undivided) (Jv) –** Greenish-gray, rhyodacitic volcanic and metavolcanic rocks composed of a microcrystalline, felsic groundmass and phenocrysts of plagioclase, quartz, potassium feldspar, and minor biotite. Generally unbedded; commonly foliated and metamorphosed to greenschist and lower amphibolite facies. Interpreted to have originated as ash-flow tuff, flows, and hypabyssal porphyry. In McCoy Mountains, upper 50 meters includes volcanic sandstone, conglomerate composed of rhyodacite clasts, and highly altered, schistose metavolcanic rocks that may represent a metamorphosed paleosol.
- **Mesozoic granitic rocks (undivided) (gr**) – Granite, granodiorite, tonalite, and diorite.
- **Mesozoic basic intrusive rocks (undivided) (bi)** – Basic intrusive rocks.
- **Precambrian granitic rocks (undivided) (pCg)** – Undivided granitic rocks.

5.7.2 Regulatory Setting

5.7.2.1 Regulatory Setting

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

5.7.2.1.1 Federal

National Earthquake Hazards Reduction Act of 1977

The National Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) created the National Earthquake Hazards Reduction Program (NEHRP), establishing a long-term earthquake risk reduction program to better understand, predict, and mitigate risks associated with seismic events. Four federal agencies are responsible for coordinating activities under NEHRP: USGS; National Science Foundation (NSF); Federal Emergency Management Agency (FEMA); and National Institute of Standards and Technology (NIST). Since its inception, NEHRP has shifted its focus from earthquake prediction to hazard reduction. The current program objectives are as follows:

- Improve understanding of earthquake processes and impacts;
- Develop cost-effective measures to reduce earthquake impacts on individuals, the built environment, and society-at-larger; and
- Improve the earthquake resilience of communities nationwide (FEMA 2021).

Implementation of NEHRP objectives is accomplished primarily through original research, publications, and recommendations and guidelines for State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act (FLPMA) (43 United States Code [USC] 1701-1782) requires that public lands be managed in a manner that will protect the quality of their scientific values. Specifically, FLPMA was established as a public land policy to "provide for the management, protection, development, and enhancement of the public lands." FLPMA requires federal agencies to manage public lands so that environmental, historic, archeological, and scientific resources are preserved and protected, where appropriate. Though FLPMA does not refer specifically to fossils, the law does protect scientific resources such as significant fossils, including vertebrate remains. FLPMA regulates the "use and development of public lands and resources through easements, licenses, and permits." The law requires the public lands to be inventoried so that the data can be used to make informed land-use decisions, and requires permits for the use, occupancy, and development of the certain public lands, including the collection of significant fossils for scientific purposes (43 USC 1701 section 102, 302 [U.S. Department of the Interior et al. 2001]).

CFR Title 43

Under Title 43, Code of Federal Regulations (CFR) section 8365.1–5, the collection of scientific and paleontological resources, including vertebrate fossils, on federal land is prohibited. The collection of a "reasonable amount" of common invertebrate or plant fossils for noncommercial purposes is permissible (43 CFR 8365.1–5 [U.S. Government Printing Office 2014]). Archaeological and Paleontological Salvage (23 USC 305) Statute 23 USC 305 amends the Antiquities Act of 1906. Specifically, it states:

> "Funds authorized to be appropriated to carry out this title to the extent approved as necessary, by the highway department of any State, may be used for archaeological and paleontological salvage in that state in compliance with the Act entitled 'An Act for the preservation of American Antiquities,' approved June 8, 1906 (PL 59-209; 16 USC 431-433), and State laws where applicable."

This statute allows funding for mitigation of paleontological resources recovered pursuant to federal aid highway projects, provided that "excavated objects and information are to be used for public purposes without private gain to any individual or organization" (Federal Register 46(19): 9570).

Paleontological Resources Preservation Act of 2009

The Paleontological Resources Preservation Act (PRPA) is part of the Omnibus Public Land Management Act of 2009 (PL 111-011 Subtitle D). This act directs the Secretary of the Interior or the Secretary of Agriculture to manage and protect paleontological resources on federal land and to develop plans for inventorying, monitoring, and deriving the scientific and educational use of such resources. It prohibits the removal of paleontological resources from federal land without a permit issued under this act, establishes penalties for violation of this act, and creates a program to increase public awareness about these resources. A paleontological resource use permit is required to collect paleontological resources of scientific interest. The act requires that paleontological resources collected under a permit remain United States property, preserved for the public in an approved repository, and available for scientific research and public education. The act also requires that the nature and location of paleontological resources on public lands remain confidential as a means of protecting the resources from theft and vandalism. Section 6301 of the PRPA and Departmental Proposed Rule at 43 CFR Part 49 define a paleontological resource as:

> "Any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, except that the term does not include— (A) any materials associated with an archaeological resource… (B) any cultural item… (3) Resources determined in writing by the authorized officer to lack paleontological interest or not provide information about the history of life on earth, based on scientific and other management considerations."

Consistent with the definition of a paleontological resource under the PRPA, those paleontological resources that lack scientific interest (e.g., resources that are ubiquitous or do not provide information about the history of life on earth) are considered scientifically non-significant fossils.

Omnibus Public Lands Act

The Omnibus Public Lands Act (OPLA) directs the Secretaries of Interior and Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise." OPLA incorporates most of the recommendations of the report titled "Assessment of Fossil Management on Federal and Indian Lands" (United States Department of the Interior 2000) to formulate a consistent paleontological resources management framework. In passing the OPLA, 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. Title VI, Subtitle D on Paleontological Resources Preservation (OPLA-PRP) codifies existing policies of federal agencies and provides the following:

- Uniform criminal and civil penalties for illegal sale and transport, and theft and vandalism of fossils from federal lands;

- Uniform minimum requirements for paleontological resource-use permit issuance (terms, conditions, and qualifications of applicants);
- Uniform definitions for "paleontological resources" and "casual collecting"; and
- Uniform requirements for curation of federal fossils in approved repositories.

Federal legislative protections for scientifically significant fossils applies to projects that take place on federal lands (with certain exceptions such as the Department of Defense), involve federal funding, require a federal permit, or involve crossing State lines. Since a portion of the Project occurs on federal agency-managed lands, federal protections for paleontological resources for those areas apply under the National Environmental Policy Act, FLPMA, and OPLA-PRP. All paleontological work on federal agency lands must be approved and coordinated by the federal agency. All fossils collected from federal agency lands must be housed in a federally approved paleontological repository. The paleontological repository would be determined following lead agency coordination and the issuance of applicable permits for the Project.

5.7.2.1.2 State

California Building Code

The Project is subject to the applicable sections of Title 24, Part 2 of the California Building Code (CBC), which is administered by the California Building Standards Commission. Under State law, all building standards must be centralized in Title 24 to be enforceable. The CBC contains necessary California amendments, which are based on American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) Standards. The ASCE/SEI Standard provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads for inclusion into building codes. The earthquake design requirements take into account 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. Once a project is categorized according to an SDC, design specifications can be determined. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure—or any appurtenances connected or attached to such buildings or structures—throughout California.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted by the State in 1972 to mitigate the hazards of surface faulting on structures planned for human occupancy and other critical structures. The State has established regulatory zones, known as earthquake fault zones, around the surface traces of active faults. Earthquake fault zone maps have been issued for use by government agencies to plan and review new construction projects. In addition to residential projects, structures planned for human occupancy that are associated with industrial and commercial projects are also a concern near the Alquist-Priolo earthquake fault zones.

California Public Utilities Commission General Order 95

California Public Utilities Commission (CPUC) General Order (GO) 95 Rules for Overhead Line Construction provides general standards for the design and construction of overhead electric transmission lines.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that public agencies and private interests identify the potential environmental consequences of their projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] section 5020.1 [b]). Appendix G of the CEQA Guidelines provides an Environmental Checklist of questions that includes the following: "Would the project directly or indirectly destroy a unique paleontological resource or site?"

CEQA does not define "a unique paleontological resource or site." However, the SVP has provided guidance specifically designed to support State and federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP 2010, page 11):

> "Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years)."

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, and evolutionary rates. Even unidentifiable material can provide useful data for dating geologic units if radiocarbon dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (California PRC, Chapter 7.8, §2690-2699.6) directs the CGS to identify and map areas prone to liquefaction, earthquake induced landslides, and amplified ground shaking. The purpose of this program is to minimize the loss of life and property through the identification, evaluation, and mitigation of seismic hazards. Seismic Hazard Zone Maps that identify Zones of Required Investigation have been generated as a result of the program. Counties and cities are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Project is in an area that has not yet been mapped as part of the Seismic Hazards Mapping Act.

California Public Resources Code Section 5097.5

Section 5097.5 of the PRC states:

> "No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor."

As used in this PRC section, "public lands" means lands owned by, or under the jurisdiction of, the State or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public

agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

5.7.2.1.3 Local

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Project. Pursuant to CPUC GO 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties and city's regulations are not applicable as the counties and city do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

County of Riverside General Plan

The County of Riverside General Plan Multipurpose Open Space Element includes the following policies regarding paleontological resources (County of Riverside 2015).

Policy OS 19.6 Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

Policy OS 19.7 Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

Policy OS 19.8 Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

Policy OS 19.9 Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

The County of Riverside General Plan Safety Element includes the following policies regarding geology and soils (County of Riverside 2019).

Policy S 2.1 Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies: (AI 80, 91)

a. Require geologic studies or analyses for critical structures, and lifeline, high-occupancy, schools, and high-risk structures, within 0.5 miles of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map.

b. Require geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined and accepted by the Riverside County Engineering Geologist, is presented. The County of Riverside may require geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.

c. Require that lifelines be designed to resist, without failure, their crossing of a fault, should fault rupture occur.

d. Support efforts by the California Department of Conservation, California Geological Survey to develop geologic and engineering solutions in areas of ground deformation due to faulting and seismic activity, in those areas where a through-going fault cannot be reliably located.

e. Encourage and support efforts by the geologic research community to define better the locations and risks of Riverside County faults. Such efforts could include data sharing and database development with regional entities, other local governments, private organizations, utility agencies or companies, and local universities.

Policy S 2.2 Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landsliding or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory buildings. (AI 81).

Policy S 2.3 Require that a state-licensed professional investigate the potential for liquefaction in areas designated as underlain by "Susceptible Sediments" and "Shallow Ground Water" for all general construction projects, except for accessory buildings (Figure S-3).

Policy S 2.4 Require that a state-licensed professional investigate the potential for liquefaction in areas identified as underlain by "Susceptible Sediments" for all proposed critical facilities (Figure S-3).

Policy S 2.5 Require that engineered slopes be designed to resist seismically-induced failure. For lower-risk projects, slope design could be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For higher-risk projects, the stability analyses should

factor in the intensity of expected ground shaking, using a Newmark-type deformation analysis.

Policy S 2.6 Require that cut and fill transition lots be over-excavated to mitigate the potential of seismically-induced differential settlement.

Policy S 2.7 Require a 100% maximum variation of fill depths beneath structures to mitigate the potential of seismically-induced differential settlement.

Policy S 2.8 Encourage research into new foundation design systems that better resist Riverside County's climatic, geotechnical, and geological conditions (AI 104).

Policy S 3.1 Require the following in landslide potential hazard management zones, or when deemed necessary by the California Environmental Quality Act: (AI 104)

a. Preliminary geotechnical and geologic investigations.

b. Evaluations of site stability, including any possible impact on adjacent properties, before final project design is approved.

c. Consultant reports, investigations, and design recommendations required for grading permits, building permits, and subdivision applications be prepared by state-licensed professionals.

Policy S 3.2 Require that stabilized landslides be provided with redundant drainage systems. Provisions for the maintenance of subdrains must be designed into the system.

Policy S 3.3 Before issuance of building permits, require certification regarding the stability of the site against adverse effects of rain, earthquakes, and subsidence.

Policy S 3.4 Require adequate mitigation of potential impacts from erosion, slope instability, or other hazardous slope conditions, or from loss of aesthetic resources for development occurring on slope and hillside areas.

Policy S 3.5 During permit review, identify and encourage mitigation of onsite and offsite slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements.

Policy S 3.6 Require grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, in order to assure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.

Policy S 3.7 Support mitigation on existing public and private property located on unstable hillside areas, especially slopes with recurring failures where Riverside County property or public right-of-way is threatened from slope instability, or where considered appropriate and urgent by the Riverside County Engineer, Fire, or Sheriff Department (AI 100).

Policy S 3.8 Require geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, as identified in Figure S-7 and the Technical Background Report, prior to the issuance of development permits. Within the documented subsidence zones of the Coachella, San Jacinto, and Elsinore valleys, the studies must address the potential for reactivation of these zones, consider the potential impact on the project, and provide adequate and acceptable mitigation measures.

Policy S 3.9 Develop a liaison program with all Riverside County water districts to prevent water extraction induced subsidence (AI 4).

Policy S 3.11 Require studies that address the potential of this hazard on proposed development within "High" and "Very High" wind erosion hazard zones as shown on Figure S-8, Wind Erosion Susceptibility Map.

Policy S 3.12 Include a disclosure about wind erosion susceptibility on property title for those properties located within "High" and "Very High" wind erosion hazard zones as shown on Figure S-8, Wind Erosion Susceptibility Map (AI 92).

Policy S 3.13 Require buildings to be designed to resist wind loads.

Policy S 3.14 Educate builders about the wind environment and encourage them to design projects accordingly (AI 93, 97, 98).

City of Blythe General Plan

The City of Blythe General Plan Open Space and Conservation Element includes the following policy regarding paleontological resources (City of Blythe 2007).

Policy 25 Protect archaeologic, historic, and palaeontologic resources for their aesthetic, scientific, educational, and cultural value.

The City of Blythe General Plan Safety Element includes the following policies regarding geology and soils (City of Blythe 2007).

Policy 5 Maintain and enforce appropriate building standards and codes to avoid and/or reduce all risks associated with geological constraints.

Policy 7 Educate the public about potential geologic hazards in Blythe and maintain emergency response policies.

5.7.3 Impact Questions

5.7.3.1 Geology, Soils, and Paleontological Resources Impact Questions

The thresholds of significance for assessing impacts come from the CEQA Environmental Checklist. For geology, soils, and paleontological resources, the CEQA Checklist asks, would the Project:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, or injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial

evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.); strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides?

- Result in substantial soil erosion or the loss of topsoil?
- 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?
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- 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?
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

5.7.3.2 Additional CEQA Questions

There are no CPUC-identified additional CEQA impact questions.

5.7.4 Impact Analysis

5.7.4.1 Geology, Soils, and Paleontological Resources Impact Analysis

5.7.4.1.1 Geology, Soils, and Paleontological Resources Methodology

Geology and soils impacts were evaluated based upon a desktop review of online resources from the DOC, USBR, USDA, USGS, and local planning documents to evaluate the potential for the Project to be subject to geologic and soil hazards.; the Geotechnical Investigation Report is included as Appendix K (Geotechnical Soilutions Inc. 2023).

As stated previously, a paleontological records search and literature review was conducted for a five-mile corridor study area centered on the Project (extending 2.5 miles on either side of the Project). The paleontological resources assessment was prepared in accordance with the SVP established guidelines and standard procedures (SVP 2010) and included a geologic map review, literature search, and paleontological locality search using the University of California at Berkeley Museum of Paleontology online database on May 14, 2020. Because geologic formations and units can be exposed over large geographic areas but contain similar lithologies and fossils, the literature review and fossil locality search included localities outside the Project within Riverside County.

5.7.4.1.2 Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42) or seismic-related ground failure, including liquefaction?

No Impact. The Project is within a geologically complex and seismically active region comprised of mountain ranges, desert valleys, and parallel northwest-southeast trending faults. Faults located within this region are generally left lateral strike-slip faults that parallel the southern branch of the San Andreas fault, which is located along the eastern side of the Salton Sea to the southwest of the western portion of the

Project. Figure 5.7-1 shows active Quaternary faults in the vicinity of the Project. As shown therein, the Blue Cut fault zone, Salton Creek fault, Aztec Mine Wash fault, and Blythe graben fault are the nearest Quaternary faults to the Project. These faults are located between 6.8 to 11.2 miles away from the Project. In addition, the Mirage Laydown Yard is located approximately 1.3 miles away from the San Andreas fault. According to the Geotechnical Investigation Report prepared for the Project, the Project is not within an Alquist-Priolo Earthquake Fault Zone or Riverside County fault zone and the potential for surface rupture along the Project due to fault plane displacement during the design life of the Project is considered negligible (Appendix K). Additionally, no known active or potentially active faults are mapped as crossing or in the immediate vicinity of the Project (County of Riverside 2015).

Liquefaction occurs primarily in saturated, loose, fine-to medium-grained soils in areas where the groundwater table is within approximately 50 feet of the surface. Seismic shaking causes the soils to lose strength and behave as liquid. Excess water pressure is exerted upward through fissures and soil cracks, and a water-soil slurry is formed. Liquefaction can result in settlement, lateral spreading, and other disruptions at the ground surface. Liquefaction susceptibility is determined by a combination of depth to groundwater and soil type. There are no liquefaction zones along the Project (CGS 2024). In addition, no groundwater was detected in any of the borings which ranged from 20 to 50 feet in depth during the Geotechnical Investigation Report conducted for the Project (Appendix K). Therefore, construction of the Project would not directly or indirectly cause potential substantial adverse effects involving rupture of a known earthquake fault or seismic-related ground failure, including liquefaction. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing operations and maintenance (O&M) activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.1.3 Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking or landslides?

Less Than Significant Impact. As discussed under Section 5.7.4.1.2, the Project is within a geologically complex and seismically active region; however, the nearest active fault is approximately 6.8 miles away from the Project. In addition, the Project would be designed and constructed to meet or exceed the standards to withstand potential ground shaking in accordance with CPUC's GO 95, the California Building Code (CBC), and SCE Transmission Overhead Construction Standards. Conformance to applicable design standards and requirements would reduce the threat of damage to the Project from ground shaking. In addition, according to Guidelines for Electrical Transmission Line Structural Loading (American Society of Civil Engineers 2015), "Subtransmission structures need not be designed for ground-induced vibrations caused by earthquake motion because, historically, transmission structures have performed well under earthquake events, and transmission structure loadings caused by wind/ice combinations and broken wire forces exceed earthquake loads." Subtransmission structures would be designed to meet or exceed strength standards based on wind loading, which typically exceed loading from seismic events. This design would reduce substantial adverse effects involving strong seismic ground shaking. Although the Project could be subjected to strong seismic ground shaking in the event of an earthquake, this hazard is common in Southern California and the impacts would be reduced with Project design and construction in conformance with latest version of the CBC.

According to the DOC, there are no landslide zones within the Project (DOC 2024). The Project is generally not located within an area susceptible to landslides and/or rock fall with the exception of two small areas.

These two locations consist of an approximately 0.25-mile segment where the Project traverses a hilly area east of Eagle Mountain Substation and an approximately 0.3-mile segment of the Project south of I-10 in the Black Rock area south of the McCoy Mountains. In these locations, the alignment passes through or is adjacent to areas mapped as having low to high susceptibility to seismically induced landslides and rockfalls (County of Riverside 2015). However, no structure removal or replacements are proposed in these areas; therefore, there would be no Project construction activities associated with installation of new structures that could result in or be affected by landslides in these areas. The remainder of Project is not located within an area susceptible to landslides, and the Project would not directly or indirectly cause potential substantial adverse effects involving landslides. Construction impacts related to strong seismic ground shaking and landslides would be less than significant, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.1.4 Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. Soil erosion is the naturally-occurring process involving soil detachment, movement, and deposition. The rate and magnitude of soil erosion by water is controlled by rainfall, runoff, and wind. The Project is predominantly undeveloped and is subject to two forms of water erosion – sheet erosion and rill erosion. Sheet erosion is the movement of soil from raindrop splash and runoff water. Rill erosion results when surface water runoff concentrates into small, well-defined channels. Susceptibility to sheet and rill erosion from water for soils underlying the Project ranges from low to moderate. Wind-induced soil movement results from wind forces exerted against the ground surface and includes suspension, saltation, and surface creep. Wind and wind-blown sand are prevalent in Riverside County. The Project is mapped as experiencing “moderate” and “high” wind erosion susceptibility (County of Riverside 2015).

Ground-disturbing activities would expose soils and elevate the potential for erosion at work areas along the Project. However, the Project would be subject to applicable requirements in South Coast Air Quality Management District Rule 403 and Mojave Desert Air Quality Management District Rule 403 to control fugitive dust emissions during construction, and best management practices (BMPs) would be implemented to minimize fugitive dust emissions from construction activities and thereby limit the potential for wind erosion of soils. In addition, because the Project exceeds one acre in disturbed area, the Project would require the development of a Storm Water Pollution Prevention Plan under the State’s National Pollutant Discharge Elimination System Construction General Permit (Order No. 2022-0057-DWQ), which would include BMPs to control and reduce the potential for erosion to occur during stormwater runoff events. Therefore, the Project would not result in substantial soil erosion or the loss of topsoil. Construction impacts would be less than significant, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.1.5 Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. As discussed above, no liquefaction zones are located along the Project, and no structure removal or replacements are proposed in the two small areas mapped as having low to high susceptibility to seismically induced landslides and rockfalls. According to the Geotechnical Investigation Report, although no testing was conducted to determine the collapse potential of the soil along the Project, the proposed TSP foundations would be constructed at a depth that would minimize adverse impacts as a result of collapsible soils occurring near the surface level (Appendix K). Furthermore, the Project would be designed and constructed to meet or exceed the standards to withstand potential ground shaking in accordance with CPUC's GO 95, the CBC, and SCE Transmission Overhead Construction Standards. As a result, conformance to applicable design standards and requirements would minimize the potential for the Project to result in the instability of geologic units or soils underlying the Project such that on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse would occur. Impacts would be less than significant, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

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

No Impact. Expansive soils are characterized by significant volume change (shrink and swell) due to changes to soil moisture content. The occurrence of these soils is often associated with geologic units/soils that are very fine grained with a high to very high percentage of clay. According to the Geotechnical Investigation Report, soil types occurring within the Project include sand, silty sand, sandy clay, and clayey sand (Appendix K). As such, most of the soils underlying the Project are coarse-grained and not generally susceptible to expansion. In addition, because one boring identified in the Geotechnical Investigation Report conducted for the Project was in a location with sandy clay soil, an expansion index test was conducted for the soil at this site. The test indicated that the soil has a low expansion index. Soils with potential to be expansive were not found at any other geotechnical boring location for the Project (Appendix K). Therefore, the Project would not be located on expansive soil and would not create substantial direct or indirect risks to life or property as a result of expansion soils. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.1.7 Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. Construction of the Project would not involve use of a septic tank or alternative wastewater disposal system. Wastewater generated at portable toilets during construction would be disposed of off-site at appropriate facilities. No impact would occur.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.1.8 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less Than Significant Impact with Mitigation. In order to assess the potential for paleontological resources in the Project Area, a paleontological records search and literature review were conducted for a five-mile corridor study area centered on the Project right-of-way (extending 2.5 miles on either side of the Project right-of-way). The paleontological resources assessment was prepared in accordance with the Society of Vertebrate Paleontology (SVP) established guidelines and standard procedures (SVP 2010) and included a geologic map review, literature search, and paleontological locality search using the University of California at Berkeley Museum of Paleontology online database on May 14, 2020. Because geologic formations and units can be exposed over large geographic areas but contain similar lithologies and fossils, the literature review and fossil locality search included localities outside the immediate Project Area within Riverside County. According to geologic mapping, literature review, and fossil locality inventory, the Project is underlain by geologic units with high, low, undetermined, and no paleontological potential, according to the SVP guidelines (SVP 2010). Table 5.7-1 lists the geologic units within the Project and their paleontological resources potential, and Figure 5.7-3a through Figure 5.7-3d show the paleontological resources potential of geologic units in relationship to the Project.

As shown in Figure 5.7-3a through Figure 5.7-3d, portions of the Project are located on geologic units with a high paleontological potential. Construction activities in these areas would have the potential to disturb paleontological resources during earth moving activities. Correspondingly, there would be no potential to disturb paleontological resources during activities that do not involve ground disturbance. Direct adverse impacts on paleontological resources resulting from construction of the Project would be less than significant with implementation of Applicant Proposed Measures (APMs) PAL-1, PAL-2, and PAL-3. These measures include preparation of a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), construction personnel training on procedures to implement in the event of a discovery of paleontological materials, and paleontological monitoring in high sensitivity areas during Project construction. For the purposes of APM PAL-1, Holocene geologic units (Quaternary young [Holocene] alluvium, Quaternary young [Holocene] loose sand, Quaternary young [Holocene] clay and silt, and Quaternary young (Holocene) sand-covered clay and silt), should be treated as sediments of 'unknown sensitivity' and require part-time monitoring because although these units are likely too young (i.e., less than 5,000 years old) at the surface to preserve paleontological resources, they will become old enough to preserve such resources at an unknown depth in the subsurface.

The Project would not result in indirect impacts on paleontological resources during construction since it would not increase public access (potentially leading to increased illegal fossil collecting or vandalism) with implementation of APMs PAL-1, PAL-2, and PAL-3. With implementation of APMs, Project impacts to paleontological resources would be less than significant with mitigation.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.4.2 Geotechnical Requirements

A Geotechnical Investigation Report has been prepared for the Project (Geotechnical Soilutions Inc. 2023; Appendix K). SCE will design Project components to minimize the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse consistent with the findings of the Geotechnical Investigation Report.

5.7.4.3 Paleontological Resources

According to the County of Riverside's Paleontological Sensitivity Map, the Project consists of locations with high A (Ha), low, and undetermined paleontological potential. The majority of the Project is characterized by low paleontological potential, followed in acreage by Ha and undetermined paleontological potential. No locations of high B (Hb) paleontological potential are mapped within the Project (County of Riverside 2015).

As shown in Figure 5.7-3a through Figure 5.7-3d, portions of the Project are located on geologic units with a high paleontological potential. Construction activities in these areas would have the potential to disturb paleontological resources during earth moving activities. Correspondingly, there would be no potential to disturb paleontological resources during activities that do not involve ground disturbance. However, SCE would implement APMs PAL-1 through PAL-3, which involve preparation and implementation of a Paleontological Resource Mitigation and Monitoring Plan, construction personnel training on procedures to implement in the event of a discovery of paleontological materials, and paleontological monitoring in high sensitivity areas during Project construction. With implementation of APMs PAL-1 through PAL-3, Project impacts to paleontological resources would be less than significant with mitigation incorporated.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.7.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for Geology, Soils, and Paleontological resources.

5.7.5.1 Applicant Proposed Measures (APMs)

The following APM(s) would be implemented to reduce paleontological resources impacts associated with the Project:

- **PAL-1: Develop Paleontological Resource Mitigation and Monitoring Plan**. SCE shall prepare a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) to guide all paleontological management activities during project construction. The PRMMP shall be submitted to the CPUC and BLM for review and approval prior to the start of construction. The PRMMP shall be prepared by a qualified paleontologist, based on SVP (2010) guidelines, and meet all regulatory requirements. The qualified paleontologist shall have a Master's Degree or Ph.D. in paleontology, have local paleontology knowledge, and shall be familiar with paleontological procedures and techniques. The PRMMP will include, but not be limited to, the following sections:
    - Paleontological Resource Monitoring and Reporting: Detail monitoring procedures and methodologies, which shall require a qualified paleontological monitor for all construction-related ground disturbance that reach approximate depths for significant paleontological resources in

sediments with a high paleontological sensitivity (i.e, Quaternary older alluvium and Tropico Group [lower], granitic fanglomerate and sandstone). Sediments with no paleontological sensitivity (i.e., Saddleback Basalt and quartz monzonite) will not require monitoring. Paleontological monitors shall meet standard qualifications per the SVP (2010).

- Unanticipated Discovery Protocol: Detail procedures for temporarily halting construction, defining work stoppage zones, notifying stakeholders, and assessing the paleontological find for scientific significance. If indicators of potential microvertebrate fossils are found, screening of a test sample shall be carried out as outlined in SVP (2010).
- Data Analysis and Reporting: Detail methods for data recovery, analysis in a regional context, reporting of results within one year of completion of field studies, curation of all fossil specimens in an accredited museum repository approved by the CPUC and BLM and dissemination of reports to appropriate repositories.

- **PAL-2: Train Construction Personnel.** Prior to the initiation of construction, all construction personnel shall be trained, regarding the recognition of possible buried paleontological resources (i.e., fossils) and protection of all paleontological resources during construction. Training shall inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. All personnel shall be instructed that unauthorized removal or collection of fossils is a violation of federal and State laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) shall include clauses that require construction personnel to attend a Worker's Environmental Awareness Program (WEAP) training. The WEAP will include the project's potential for inadvertently exposing buried paleontological resources, how to operate adjacent to and avoid any potential Environmentally Sensitive Area, and procedures to treat unanticipated discoveries.
- **PAL-3: Conduct Paleontology Resources Construction Monitoring.** Paleontological monitoring shall be conducted by a qualified paleontologist familiar with the types of resources that could occur within the Project Area. Paleontological monitoring would be limited to areas of high paleontological sensitivity, as determined by the qualified paleontologist. Monitoring reports shall be submitted to the CPUC and BLM on a monthly basis.

5.8 Greenhouse Gas Emissions

This section describes the greenhouse gas (GHG) emissions in the area of the Eagle Mountain-Blythe (EM-B) 161 kiloVolt Transmission Line Rating Remediation Project (Project), as well as the potential impacts to GHG emissions from construction and operation of the Project.

GHGs refer to gases that trap heat in the earth's atmosphere, causing a greenhouse effect. GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF_6). Atmospheric concentrations of CO_2 and CH_4—two directly emitted, long-lived GHGs—are currently well above the range of atmospheric concentrations that occurred over the last 650,000 years. According to the Intergovernmental Panel on Climate Change (IPCC), increased atmospheric levels of CO_2 are correlated with rising temperatures and concentrations of CO_2 have increased by 31 percent above pre-industrial levels since the year 1750. Climate models show that temperatures would probably increase by anywhere from 1.4 degrees Celsius (°C) to 5.8 °C by the year 2100 (IPCC 2007).

Global warming potential (GWP) estimates how much a given mass of a specific GHG contributes to climate change. The term enables comparison of the warming effects of different gases. GWP uses a relative scale that compares the warming effect of the gas in question with that of the same mass of CO_2. The CO_2 equivalent (CO_2e) is a measure used to compare the effect of emissions of various GHGs based on their GWP, when projected over a specified time period (generally 100 years). CO_2e is commonly expressed as metric tons of CO_2 equivalents ($MTCO_2e$). The CO_2e for a gas is obtained by multiplying the mass of the gas (in tons) by its GWP.

Research for this analysis involved a review of local air district guidelines and rulebooks.

5.8.1 Environmental Setting

5.8.1.1 GHG Setting

The Project is located in an existing right-of-way that extends approximately 53 miles between the existing Eagle Mountain and Blythe Substations. Approximately 34.5 linear miles of the existing line traverses land managed by the Bureau of Land Management or the Metropolitan Water District (approximately 1 mile), and approximately 18.5 linear miles of the existing line traverses privately-owned lands. For the purposes of this analysis, the term "Project Site" (or "Project Area") refers to the EM-B subtransmission alignment, Eagle Mountain Substation, and Blythe Substation as well as associated Project work areas and laydown yards/staging areas.[1] The term "Project Alignment" refers specifically to the EM-B subtransmission alignment, between the Eagle Mountain and Blythe substations. The Project Site is generally located in the Chuckwalla Valley between Desert Center and Blythe within Riverside County, California. The majority of the Project Site is within unincorporated Riverside County with approximately 0.7 mile of its 53 linear miles located within the city limits of Blythe.

The Mojave Desert Air Basin (MDAB), which covers the entirety of the Project, contains approximately 27,300 square miles and includes eastern Kern County, northeast Los Angeles County, eastern Riverside County, and most of San Bernardino County. The MDAB is bounded by the Colorado River Valley to the south and east, and by mountains on its remaining sides. The MDAB covers most of California's high desert and is California's largest air basin. Within the MDAB, the Project is under the jurisdiction of the South

[1] The terms "laydown yard", "staging yard", and "staging area" may be used interchangeably throughout the document.

Coast Air Quality Management District (SCAQMD) and the Mojave Desert Air Quality Management District (MDAQMD).

5.8.2 Regulatory Setting

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

5.8.2.1 Federal

5.8.2.1.1 Federal Mandatory Reporting of Greenhouse Gases

The U.S. Environmental Protection Agency (USEPA) promulgated the Federal Mandatory Reporting of Greenhouse Gases rule in 2009 to require mandatory reporting of GHG from large GHG emissions sources in 31 source categories in the U.S (USEPA 2023). In general, the threshold for reporting is 25,000 metric tons or more of CO_2e. Reporting is at the facility level, except for certain suppliers of fossil fuels and industrial GHGs, along with vehicle and engine manufacturers, which report at the corporate level. Facilities and suppliers began collecting data on January 1, 2010. Manufacturers of vehicles and engines outside of the light-duty sector began reporting CO_2 for model year 2011 and other GHGs in subsequent model years as part of existing USEPA certification programs.

Since 2012, the USEPA and 40 Code of Federal Regulations Part 98, Subpart DD also require the reporting of SF_6 emissions from certain electrical facilities. SCE complies with these requirements. Furthermore, SCE has developed and implements SF_6 gas management guidelines as described in SCE's document entitled *An Asset Management Approach for EPA/CARB SF_6 Regulations*, dated April 2012. This document includes an overview of the tools and methods for complying with both the USEPA's Voluntary SF_6 Emission Reduction Partnership program and the California Air Resources Board's (CARB's) SF_6 Regulations. This guideline document identifies storage methods, disposal method alternatives, and recordkeeping requirements. Inventories are documented and annually reported to the USEPA and CARB.

5.8.2.2 State

5.8.2.2.1 Executive Order B-30-15

Executive Order B-30-15 establishes an interim GHG reduction target of 40 percent below 1990 levels and directs state agencies to take additional actions to prepare for the impacts of climate change. These actions are captured in the state's adaptation strategy, Safeguarding California (CARB 2018), which is to be updated every 3 years.

5.8.2.2.2 Executive Order B-55-18

Executive Order B-55-18 establishes a new statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The goal is in addition to the existing statewide targets of reducing GHG emissions.

5.8.2.2.3 Global Warming Solutions Act of 2006

The Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) charges the CARB with the responsibility of monitoring and regulating sources of GHG emissions in order to reduce GHGs. The CARB established a scoping plan in December 2008 for achieving reductions in GHG emissions and established and implemented regulations for reducing GHGs by the year 2020.

5.8.2.2.4 California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 (Senate Bill [SB] 32) expands upon AB 32 to reduce GHG emissions. The bill requires the CARB to reduce GHG emissions to 40 percent below 1990 levels by 2030. This bill gives the CARB the authority to adopt regulations in order to achieve the maximum technology feasible to be the most cost-efficient way to reduce GHG emissions.

5.8.2.2.5 Climate Change Scoping Plan

The CARB's Climate Change Scoping Plan was developed in response to Executive Order B-30-15 and SB 32. The plan establishes a path that would get California to its 2030 target.

5.8.2.2.6 California Mandatory Greenhouse Gas Reporting Regulation

Pursuant to AB 32, the CARB adopted the California Mandatory Greenhouse Gas Reporting Regulation (17 California Code of Regulations [CCR] §§ 95100-95133). The facilities that are required to annually report their GHG emissions include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 metric tons per year of CO_2 from stationary source combustion. In particular, retail providers of electricity are required to report fugitive emissions of SF_6 related to transmission and distribution systems, substations, and circuit breakers located in California that the retail provider or marketer is responsible for maintaining in proper working order.

5.8.2.2.7 Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

SF_6 is a commonly used insulator in electric transmission and distribution equipment. Because of its high GWP, CARB adopted the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (17 CCR §§ 95350-95359) in 2010. This regulation requires that gas-insulated switchgear owners not exceed the maximum annual SF_6 emission rate for active gas-insulated switchgear equipment and must establish and adhere to written procedures to track all gas containers as they are leaving and entering storage, calibrate and weigh all gas containers on a scale, establish and maintain a complete record of gas-insulated switchgear equipment inventory, and submit annual reports to the CARB Executive Officer for emissions that occurred during the previous calendar year.

In response to emerging technologies using lower or zero GWP insulators, the regulation was amended in 2021 and required emission rates for SF_6-insulated switchgear to not exceed 1 percent. The amended regulation also included a phase-out schedule for new SF_6-insulated equipment, coverage of other GHGs beyond SF_6 used in gas-insulated equipment, and other changes that enhance accuracy of emissions accounting and reporting.

5.8.2.2.8 Senate Bill 100

SB 100, signed into law in September 2018, amends the California Renewables Portfolio Standard (RPS) Program. The RPS Program requires the California Public Utilities Commission (CPUC) to establish a renewables portfolio standard requiring all retail sellers of electricity to procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt-hours of those products sold to their retail end-use customers achieve 25 percent of retail sales by December 31, 2016; 33 percent by December 31, 2020; 44 percent by December 31, 2024; 52 percent by December 31, 2027; and

60 percent by December 31, 2030. SB 100 also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales by 2045. Additionally, the RPS Program requires each local publicly owned electric utility to procure a minimum quantity of electricity products from eligible renewable energy resources to achieve the procurement requirements established by the program.

5.8.2.3 Local

The CPUC has sole and exclusive jurisdiction over the siting and design of the Project. Pursuant to CPUC General Order 131-D, Section XIV.B:

> "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters."

Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and city regulations are not applicable as the county and cities do not have jurisdiction over the Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.8.2.3.1 South Coast Air Quality Management District

In 2008, the SCAQMD adopted an interim GHG significance threshold for projects of 10,000 $MTCO_2e$ per year. This threshold includes construction emissions, amortized over 30 years, plus operational emissions.

5.8.2.3.2 Mojave Desert Air Quality Management District

The MDAQMD's California Environmental Quality Act (CEQA) Guidelines (MDAQMD 2020) include a significance threshold of 548,000 pounds per day and 100,000 tons, or 90,718.5 $MTCO_2e$. Because the Project's construction phase would last more than 1 year, the annual threshold would be used to determine the significance of GHG emissions.

5.8.2.3.3 Riverside County

In December 2019, Riverside County approved its 2019 Climate Action Plan Update, which builds upon the 2015 Climate Action Plan. The plan's purpose is to present the county's updated GHG inventory, identify how the plan would be implemented to comply with GHG reduction policies, and allow for streamlined CEQA compliance.

5.8.2.3.4 City of Blythe

The City of Blythe does not currently have any regulatory guidance related to GHG emissions.

5.8.3 Impact Questions

5.8.3.1 Greenhouse Gas Impact Questions

The thresholds of significance for assessing impacts come from the CEQA Environmental Checklist. For GHG emissions, the CEQA Checklist asks, would the project:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions?

5.8.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.8.4 Impact Analysis

5.8.4.1 Greenhouse Gas Impact Analysis

5.8.4.1.1 Greenhouse Gas Methodology

Impacts from GHG emissions associated with the Project were determined by comparing the anticipated emissions from the construction of the Project to applicable emissions thresholds established by the SCAQMD and MDAQMD. These emissions estimates were generated using the methods established in version 2022.1 of the California Emissions Estimator Model and CARB's Emission Factor model as documented in Appendix B.

After construction, ongoing and operation and maintenance (O&M) activities are not expected to increase above existing conditions; this includes no change in SF_6 emissions. Therefore, operational GHG emissions were not quantified.

In their *Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* (Association for Environmental Professionals [AEP] 2016), the AEP recommends methods for evaluating construction emissions in CEQA documents. One such method is to amortize construction emissions over the operational lifetime of a project. Following this approach, total construction emissions for all years of construction are identified, divided by the total years for the operation of the project, and combined with operational annual emissions to make a single significance determination. This approach has been utilized herein to allow combined construction and operation emissions to be compared to the annual thresholds established by the SCAQMD and MDAQMD, with a presumed operational life of 30 years (SCAQMD 2008).

5.8.4.1.2 Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. Construction of the Project would generate temporary GHG emissions primarily as a result of operation of construction equipment on site, as well as from vehicles transporting construction workers to and from the work areas, water trucks, and heavy trucks to transport materials to and from the work areas. Calculations of CO_2 and methane are provided to identify the magnitude of potential Project effects. GHG emissions generated by Project activities are summarized in Table 5.8-1. As shown therein, Project construction activities would generate approximately 67 $MTCO_2e$ per year when amortized over a 30-year period, which would not exceed the SCAQMD threshold of 10,000 $MTCO_2e$ per year. In addition, Project construction activities in the MDAQMD's jurisdiction would generate approximately 656 $MTCO_2e$, 875 $MTCO_2e$, and 219 $MTCO_2e$ in 2025, 2026, and 2027, respectively. The MDAQMD's threshold of 90,718.5 $MTCO_2e$ per year would not be exceeded during any year of construction. Construction is anticipated to generate approximately 1,482 $MTCO_2e$, 1,976 $MTCO_2e$, and

494 $MTCO_2e$ within Riverside County in 2025, 2026 and 2027, respectively. The county's threshold of 3,000 $MTCO_2e$ per year would not be exceeded during any year of construction. In order to reduce potential noise impacts during the construction phase of the Project, SCE would implement applicant proposed measure (APM) NOI-1. This measure would require all vehicles to minimize idling time to the extent practical. While this APM is not required to ensure GHG emissions are below applicable thresholds, it would further reduce emissions. Therefore, construction impacts would be less than significant, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

Table 5.8-1 Annual Change in GHG Emissions

Jurisdiction	Emissions
SCAQMD	
Construction Emissions in SCAQMD Jurisdiction ($MTCO_2e$ per year)[1]	67
SCAQMD Threshold ($MTCO_2e$ per year)	10,000
Exceed Threshold?	No
MDAQMD	
2025 Construction Emissions in MDAQMD Jurisdiction ($MTCO_2e$ per year)	656
2026 Construction Emissions in MDAQMD Jurisdiction ($MTCO_2e$ per year)	875
2027 Construction Emissions in MDAQMD Jurisdiction ($MTCO_2e$ per year)	219
MDAQMD Threshold ($MTCO_2e$ per year)	90,718.5
Exceed Threshold?	No
County of Riverside	
2025 Total Construction Emissions ($MTCO_2e$ per year)	1,482
2026 Total Construction Emissions ($MTCO_2e$ per year)	1,976
2027 Total Construction Emissions ($MTCO_2e$ per year)	494
County of Riverside Threshold ($MTCO_2e$ per year)	3,000
Exceed Threshold?	No

Sources: SCAQMD 2008, MDAQMD 2016, County of Riverside 2019a, and Appendix B

[1] All construction emissions amortized over a 30-year lifetime period in accordance with SCAQMD guidance (SCAQMD 2008).

5.8.4.1.3 Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. Several plans and policies have been adopted to reduce GHG emissions in the Project region, including the State's 2017 Climate Change Scoping Plan, the Southern California Association of Government's (SCAG's) 2020-2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) (SCAG's 2020), and the *County of Riverside Climate Action Plan* (2019a). SCE is not subject to the SCAG 2020-2045 RTP/SCS because this plan does not address GHG emissions generated by SCE's construction and operational activities. Therefore, the State's 2017 Scoping Plan, the related renewable energy targets established by SB 100 for the Renewables Portfolio Standard Program, and the *County of Riverside Climate Action Plan* (2019a) are the primary GHG emission reduction plans applicable to the Project.

The *County of Riverside Climate Action Plan* (2019a) states that the county has determined that small projects that do not generate more than 3,000 $MTCO_2e$ per year would have less than significant GHG emissions impacts if they include energy-efficient design measures matching or exceeding the Title 24 requirements in effect as of January 2017 and the water conservation measures that match the California Green Building Standards Code in effect as of January 2017. As shown in Table 5.8-1, Project construction activities be below all applicable thresholds. In addition, the energy-efficient design and water conservation measures contained in Title 24 and the California Green Building Standards Code would not apply to the Project because it is a utility project. Therefore, the Project would be considered a small project under the *County of Riverside Climate Action Plan* (County of Riverside 2019a) and would not conflict with its implementation.

The Project would support current and future transmission of renewable energy with updated electrical infrastructure and therefore contribute to the conservation of scarce or nonrenewable energy resources. Therefore, because the Project provides infrastructure to support renewable energy development and usage, the Project would be consistent with the 2017 Climate Change Scoping Plan and the related renewable energy targets established by SB 100 for the Renewables Portfolio Standard Program. Moreover, although this plan is not applicable to SCE activities, the Project would also support the goals and objectives of the SCAG 2020-2045 RTP/SCS related to increasing renewable energy usage. No impact would occur, and no mitigation is required.

Implementation of the Project would not change the requirement for existing O&M activities for the facilities along the Project Alignment; as a result, there would be no impacts to the Project Area from ongoing O&M activities.

5.8.4.2 GHG Emissions

A quantitative assessment of GHG emissions is presented previously in Section 5.8.4.1. As addressed in Section 5.3, Air Quality, the results of the quantitative assessment are presented in Appendix B; all calculations, presented in Microsoft Excel format, are provided to the CPUC under separate cover. A discussion of programs in place to reduce GHG emissions on a system-wide level is unnecessary because the Project does not include the installation of new GHG-emitting infrastructure, and because the Project is not anticipated to result in any significant impacts related to GHG emissions.

5.8.4.3 Natural Gas Storage Accident Conditions

The Project does not include natural gas storage; therefore, analysis of potential GHG emissions that could result in the event of a gas leak are not provided herein.

5.8.4.4 Natural Gas Storage Monitoring and Contingency Plan

The Project does not include natural gas storage; therefore, a comprehensive monitoring plan that would be implemented in the event of a gas leak is not included herein.

5.8.5 CPUC Draft Environmental Measures

The Project would result in less than significant impacts related to GHG; as such, no additional measures are required to reduce a potentially significant impact and no CPUC Draft Environmental Measures have been identified.

5.8.5.1 Applicant Proposed Measures

5.8.5.1.1 Greenhouse Gas APMs

No APMs specific to GHG have been developed to reduce an impact that has been identified in Section 5.8.4.

5.8.5.1.2 Cross-Referenced APMs

The following APM relevant to a different impact category would also reduce GHG impacts associated with the Project:

- **NOI-1: Noise Control.** SCE shall employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction:
  - Construction activities shall be confined to daytime, weekday and weekend hours established by Section 9.52.020(h) of the Riverside County Code of Ordinances, which restricts temporary construction noise to between 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. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours.
  - Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
  - Stationary noise sources (e.g., generators, pumps) and staging areas shall be shielded by an enclosure, temporary sound walls, acoustic blankets, or other barrier where noise levels are above 80 A-weighted decibels (dBA) at sensitive receiver locations. Heights and specifications of noise barriers will be designed to reduce construction noise to below 80 dBA (Federal Transit Administration 2018).
  - Construction traffic and helicopter flight shall be routed away from residences and schools.
  - Unnecessary construction vehicle use and idling time shall be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off.