



Appendix B

General Biological Resources Assessment Report

Kimley»»Horn



Lear Avenue Solar Project

General Biological Resources Assessment

prepared for

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RINCON CONSULTANTS, INC. SINCE 1994

General Biological Resources Assessment for Lear Avenue Solar Project

Project Area Location

Sunfair United States Geological Service 7.5-minute topographic quadrangle, Township (T) T01N Range (R) 08E, Section (S) S16.

Assessor's Parcel Number

061213101

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Executive Summary

This document provides the findings of a General Biological Resources Assessment (GBRA) prepared by Rincon Consultants, Inc. (Rincon) for the proposed RPCA Lear Avenue Project (Project) near Twentynine Palms in unincorporated San Bernardino County, California. The report documents existing conditions on the parcel proposed for development of solar energy generation facilities and assesses potential impacts to sensitive biological resources based upon proposed Project plans, consistent with San Bernardino County's (County) guidelines for GBRA's. This document has also been prepared to satisfy the federal environmental compliance requirements, as the Project proponent intends to apply for funding from the United States Department of Agriculture (USDA).

The Project encompasses the construction of a single-axis tracker ground-mounted photovoltaic (PV) community solar and battery energy storage system (BESS) with up to 9.9 megawatts of alternating current (MWac) in capacity. The Project consists of solar modules, BESS, underground electrical conductors, Balance of System Equipment, access roads, and fencing. It would be interconnected to an existing electrical distribution system owned by Southern California Edison located along the western boundary of the Project site.

Project Setting

The Project would occupy 66 acres of an 80-acre privately owned parcel (County Assessor Parcel Number [APN] 0612-131-01) in the southern portion of the Mojave Desert in unincorporated San Bernardino County, California. It is located approximately 2.8 miles north of California State Route (SR)-62, 0.75 mile north of the City of Twentynine Palms, and 6 miles east of the unincorporated community of Sunfair. The Project site is immediately bounded to the north by Mesa Drive, to the east by Shoshone Valley Road, to the south by Cove View Road, and to the west by Lear Avenue. The Project site is relatively undisturbed and consists entirely of creosote bush scrub habitat (*Larrea tridentata* Shrubland Alliance). Adjacent land uses include sparsely distributed rural residential properties to the north and south, open space to the east and west, and a solar farm to the southwest.

The Area of Potential Effects (APE) for the Project includes the 80-acre parcel and an approximately 100-foot (ft) buffer beyond the limits of the Project footprint, where practicable, to address potential indirect Project effects, such as noise and dust.

Special-Status Plants and Wildlife

Rincon identified 25 special-status species as having potential to occur in the APE. No special-status species were identified as being present in the APE.

Rincon determined 11 special-status plant species have a low to moderate potential to occur in the APE, including various species with California Rare Plant Ranks (CRPR). None of these species are federally or state listed. A focused botanical survey for special-status plant species is recommended during the appropriate survey period(s) to determine their presence or absence in the APE prior to Project development.

Seven species are considered to have a moderate potential to occur within the APE:

Lear Avenue Solar Project

- California ayenia (*Ayenia compacta*, 2B.3)
- Joshua Tree poppy (*Eschscholzia androuxii*, 4.3)
- Death Valley sandmat (*Euphorbia vallis-mortae*, 4.2)
- Utah vine milkweed (*Funastrum utahense*, 4.2)
- Ribbed cryptantha (*Johnstonella costata*, 4.3)
- Little San Bernardino Mountains linanthus (*Linanthus maculatus*, 1B.2)
- Jackass-clover (*Wislizenia refracta ssp. refracta*, 2B.2)

Four species are considered to have a low potential to occur within the APE:

- Alverson's foxtail cactus (*Coryphantha alversonii*, 4.3)
- Spear-leaf matelea (*Matelea parvifolia*, 2B.3)
- Latimer's woodland-gilia (*Saltugilia latimeri*, 1B.2)
- Hall's tetracoccus (*Tetracoccus hallii*, 4.3)

Rincon determined 14 special-status wildlife species have potential to occur in the APE. One of these species is federally and state listed and one is propose for listing under the California Endangered Species Act (CESA) affording it the same protections as state-listed endangered or threatened species.

Eight special-status wildlife species are considered to have a moderate or high potential to occur in the APE based on their known distribution, documented presence in the general vicinity of the APE, and presence of suitable habitat within the APE:

- Golden eagle (foraging) (*Aquila chrysaetos*, Bald and Golden Eagle Protection Act [BGEPA], Fully Protected [FP])
- Loggerhead shrike (*Lanius ludovicianus*, California Department of Fish and Wildlife [CDFW] Species of Special Concern [SSC])
- Burrowing owl (*Athene cunicularia*, State Candidate Endangered, SCE)
- Bendire's thrasher (*Toxostoma bendirei*, SSC)
- Le Conte's thrasher (*Toxostoma lecontei*, SSC)
- American badger (*Taxidea taxus*, SSC)
- Prairie falcon (foraging) (*Falco mexicanus*, CDFW Watchlist [WL])
- Desert kit fox (*Vulpis macrotis arsipus*, California Fish and Game Code [CFG] Section 1400 *et seq.*)

Six species are considered to have a low potential to occur in the APE:

- Desert tortoise (*Gopherus agassizii*, Federally Threatened [FT], State Threatened [ST])
- Pallid bat (*Antrozous pallidus*, SSC)
- Spotted bat (*Euderma maculatum*, SSC)
- Western mastiff bat (*Eumops perotis californicus*, SSC)
- Western yellow bat (*Lasiurus xanthinus*, SSC)
- Big free-tailed bat (*Nyctinomops macrotis*, SSC)

Desert tortoise was initially considered to have moderate potential to occur in the APE based on the presence of suitable habitat and reported regional occurrences; however, the potential to occur has been reduced to low based on negative results from focused survey and camera survey conducted in the APE.

A variety of common bird species protected by the CFGC and the Federal Migratory Bird Treaty Act (MBTA), including most bird species that are not otherwise considered to have any special-status designation, may occur within the APE. Nesting opportunities in the APE are limited to creosote bush, burrows, utility poles, or ornamental vegetation on nearby private property.

Special-status plant and wildlife species and nesting birds that may occur in the APE could be affected directly (loss of individuals) or indirectly (construction noise, dust, and other human disturbances) as a result of Project development. Project development may affect Desert tortoise, and coordination with the United States Fish and Wildlife Service (USFWS) and CDFW regarding potential impacts to desert tortoise and the possible need for Incidental Take Permits to comply with the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) is recommended prior to Project development (Rincon 2024a). The Project may affect but will not adversely affect all other special-status species with implementation of mitigation measures proposed in *Section 6* of this report. Thus, potential impacts would be reduced to less-than-significant levels.

Jurisdictional Waters

Rincon evaluated the APE for potentially jurisdictional waters and wetlands that may be subject to regulation by the United States Army Corps of Engineers (USACE), CDFW, and/or Colorado River Basin Regional Water Quality Control Board (CRBRWQCB). The USFWS National Wetlands Inventory (NWI) (USFWS 2024c) does not map jurisdictional waters or wetlands within the APE; however, two ephemeral streams were observed in the northwestern portion of the APE. The streams only convey water flow during and immediately after precipitation events and it is likely that the streams do not meet the USACE's definition of a relatively permanent water (i.e., the stream flows seasonally, at least three months out of the year) and therefore are not likely to be considered non-wetland waters of the U.S. However, the lateral extent of the streams' Ordinary High Water Mark (OHWM) boundaries will likely be considered a non-wetland water of the State subject to the regulation of the CRRWQCB pursuant to the Porter-Cologne Water Quality Control Act. In addition, the streams meet the definition of a CDFW-jurisdictional streambed and the extent of the top of bank (since riparian habitat is absent) will likely be subject to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFGC. The resource agencies make final determinations regarding their jurisdictional areas however these potentially jurisdictional features are assumed to be jurisdictional for analysis of potential affects within the APE.

The Project will not directly affect these potentially jurisdictional features because Project development will avoid and establish a 50 ft buffer from potentially jurisdictional features present in the APE. However, indirect effects to jurisdictional features such as spilled materials or pollution of storm water runoff could result from Project development. Due to potential indirect impacts resulting from Project development, the Project has potential to affect jurisdictional waters. However, with the implementation of mitigation measures described in *Section 6*, impacts will be reduced to less-than-significant levels and jurisdictional waters will not be adversely affected.

1 Project and Property Description

1.1 Project Description

The proposed RPCA Lear Avenue project (Project) would include a single-axis tracker ground-mounted photovoltaic (PV) community solar and battery energy storage system (BESS) with up to 9.9 megawatts of alternating current (MWac) in capacity. The Project would consist of solar modules, BESS, underground electrical conductors, Balance of System Equipment, access roads, and fencing. The Project would be interconnected to an existing electrical distribution system owned by Southern California Edison located along the western boundary of the Project site. Project construction is anticipated to be completed over a period of approximately nine months, beginning as early as January 2025 and ending as early as October 2025. The first full year of facility operation is expected to be 2026. The Project would operate year-round, be unmanned, and no employees would report to the Project site daily. Typical operations and maintenance (O&M) activities during Project operations include, but are not limited to, facility monitoring, administration and reporting, remote operations of inverters, BESS system, and other equipment, repair and maintenance of solar facilities, landscape maintenance, and periodic panel and inverter washing. It is estimated that the Project will require six maintenance-related visits per year and up to four solar panel and inverter washing visits per year.

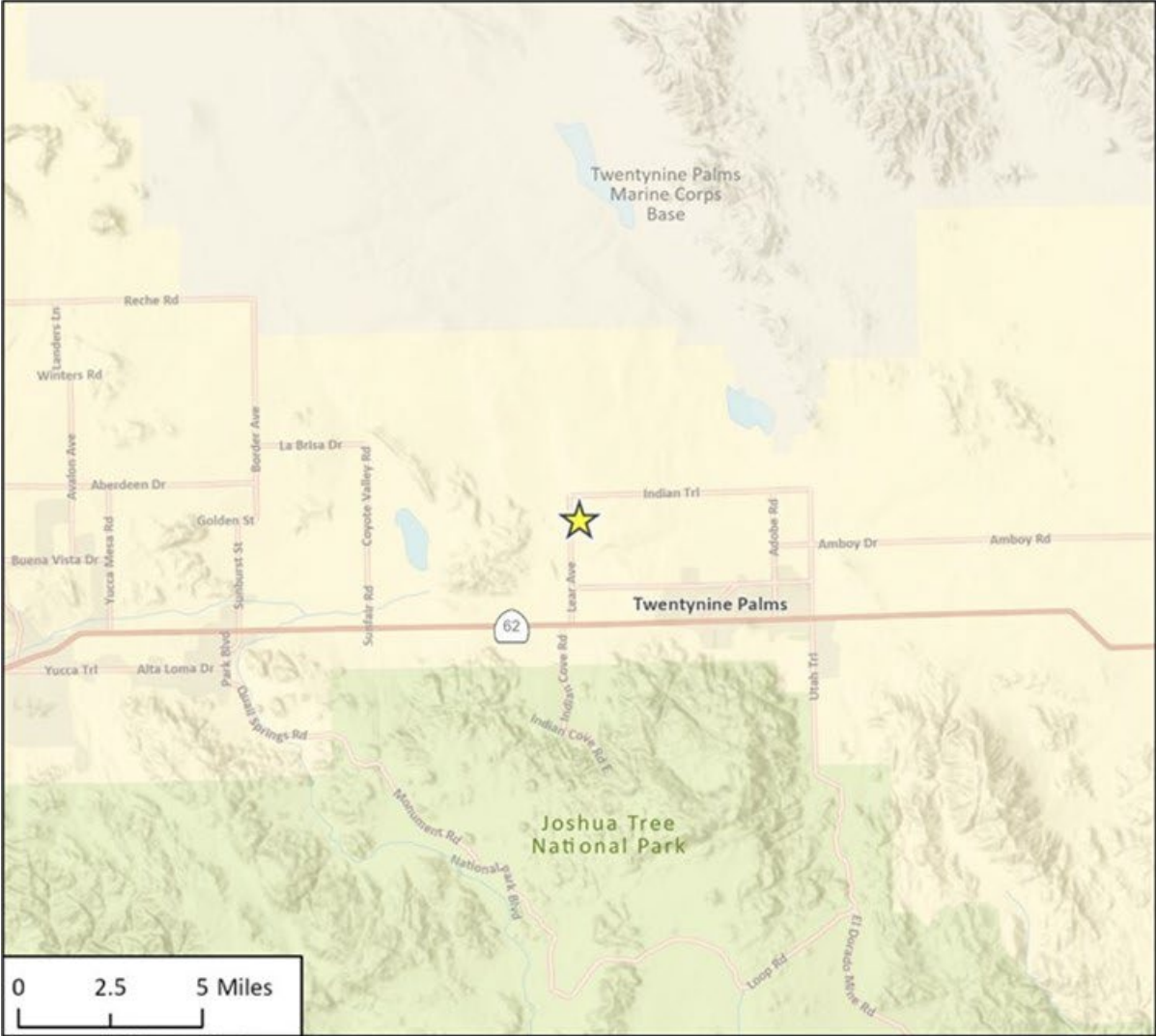
1.2 Project Location and Environmental Setting

The Project site encompasses 66 acres of an 80-acre privately owned parcel (County Assessor Parcel Number [APN] 0612-131-01) in the *Sunfair* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (quad) in the southern portion of the Mojave Desert. It is located in unincorporated San Bernardino County (County) approximately 2.8 miles north of California State Route (SR)-62, 0.75 mile northwest of the City of Twentynine Palms, and 6 miles east of the unincorporated community of Sunfair. The center point of the 80-acre parcel is located at 34°10'36.82"N 116° 8'44.04"W.

The Project site is located at the northeast corner of the intersection of Lear Avenue and Cove View Road and is immediately bounded to the north by Mesa Drive, to the east by Shoshone Valley Road, to the south by Cove View Road, and to the west by Lear Avenue. Adjacent land uses include sparsely distributed rural residential properties to the north and south, open space to the east and west, and a solar farm to the southwest.

The Area of Potential Effects (APE) for the Project includes the 80-acre parcel and a 100-foot (ft) buffer beyond the limits of the Project footprint, where practicable, to address potential indirect Project effects, such as noise and dust. Figure 1 below displays the regional location of the APE, and Figure 2 displays the APE. Figure 3 displays APN 0612-131-01, and the APE is depicted on the *Sunfair, California* USGS 7.5-minute topographic quadrangle map in Figure 4.

Figure 1 Regional Location Map



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23-13079 Lear BVO
Fig. 1 Regional Location Lear Site

★ Project Location

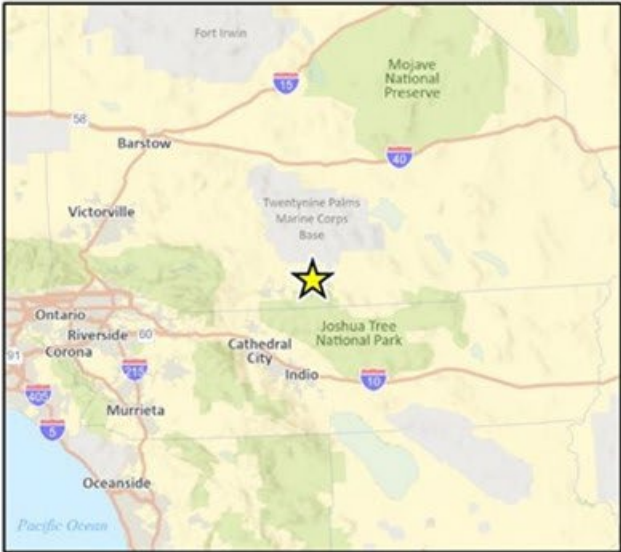
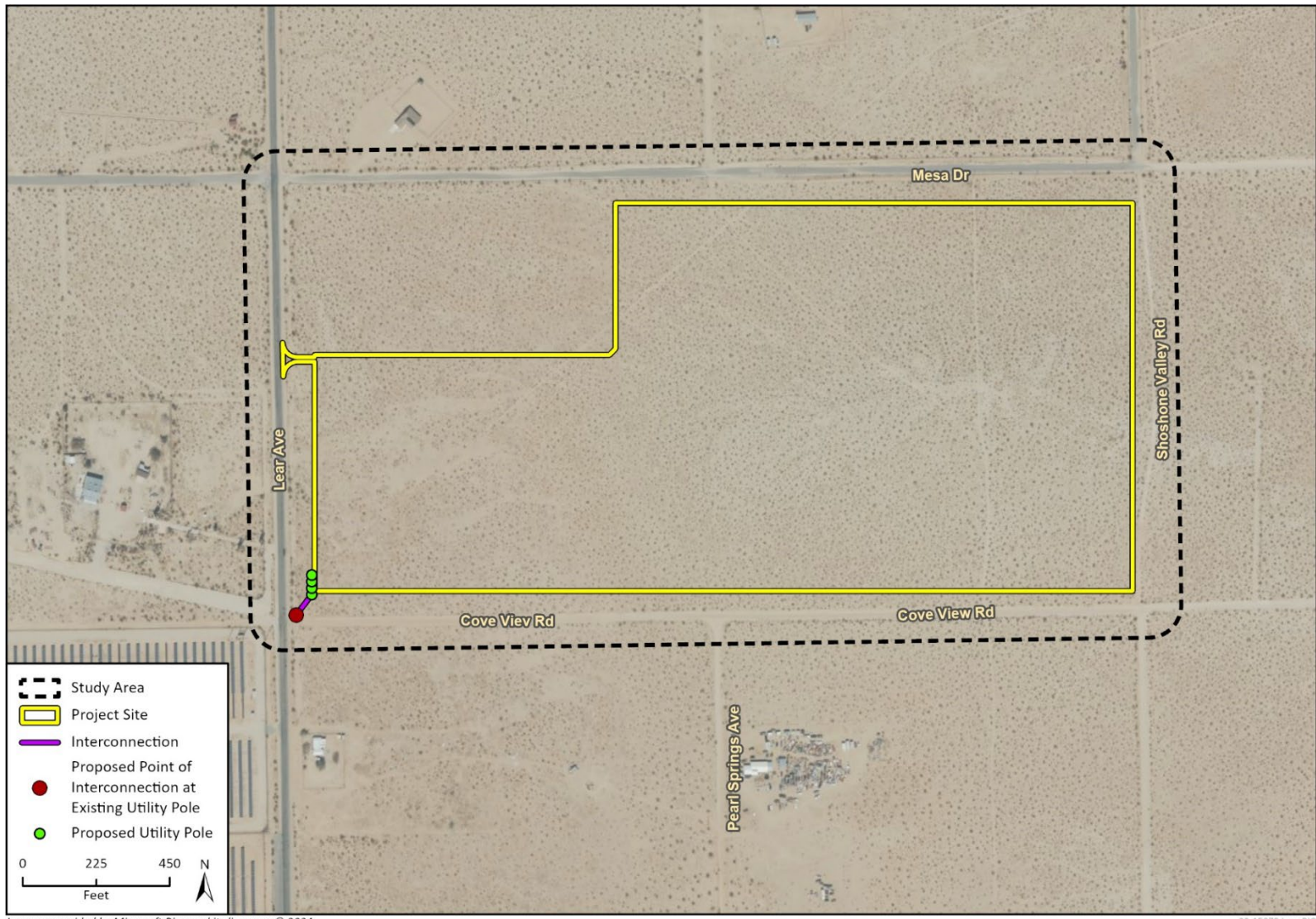


Figure 2 Area of Potential Effects (APE)



Imagery provided by Microsoft Bing and its licensors © 2024.

23-15079 Lear BIO
Fig 2 Project Location

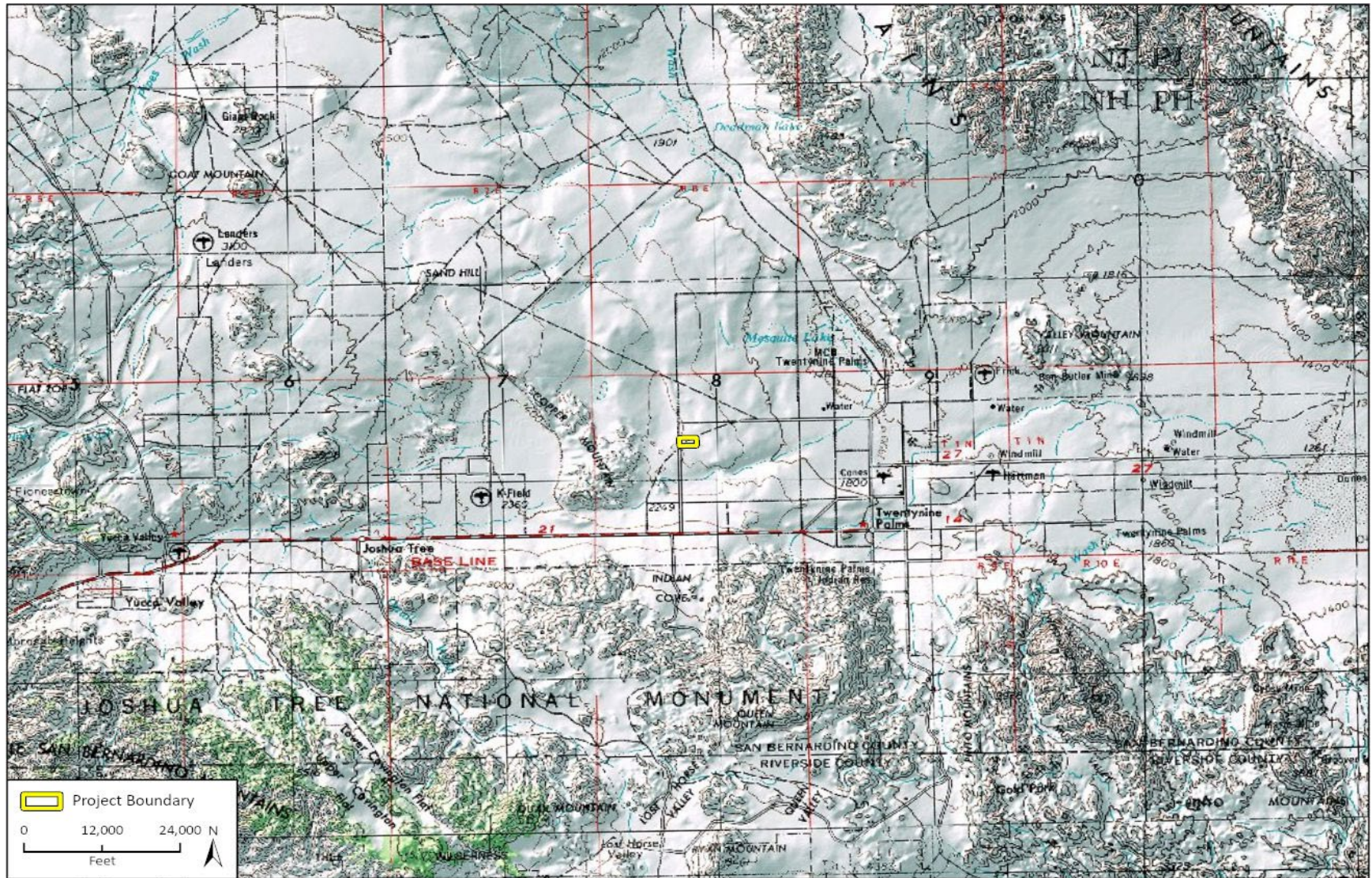
Figure 3 Parcel Map



Imagery provided by Microsoft Bing and its licensors © 2024.
Parcel data provided by San Bernardino County, 2023.

23-13079 Lear B10
Fig 2 Project Parcel - Lear Site

Figure 4 Project Location (Topographic Map)



Imagery provided by ESRI and its licensors © 2024.

23-15079 Jan 2024
Fig 3 Project Location Topo - Lear Site

1.2.1 Topography

The southern portion of the Mojave Desert exhibits typical mountain-and-basin topography. Mountain ranges near the APE include Copper Mountain approximately 3 miles to the southwest and the San Bernadino Mountains approximately 30 miles to the west. The APE is gently sloped and contains a hill in the eastern portion. The crest of the hill is the highest point in the APE and is approximately 2,265 ft above mean sea level (amsl). The hill contains soft slopes on all aspects with the greatest decrease in elevation occurring to the west, where the lowest elevation point in the APE is located at its northwestern boundary and is at 2,195 ft amsl.

1.2.2 Watershed and Drainages

The APE is located in the southeastern portion of the Copper Mountain Subwatershed (Hydrologic Unit Code [HUC] 12-181001001801; USGS 2024), which drains into the Twentynine Palms Valley Groundwater Basin. One ephemeral stream complex is present within the northwestern portion of the APE, and one isolated ephemeral stream is present within the southwestern portion of the APE. Both features likely only convey flow during and immediately after rainfall. The ephemeral streams flow from east to northwest down the soft slope of the APE's hill.

1.2.3 Soils

No United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) soil survey data is available for the APE or its vicinity. Therefore, the nearest soil map units in areas of similar topography, elevation, and landform were referenced in combination with site specific observations and the Project's geotechnical report (Salem 2023) to provide a summary of the soil observed on site. A formal soil survey was not conducted within the APE and the soil observations are on a broad scale, at surface level, and do not match the level of detail or refinement that a soil survey would provide.

The topsoil throughout the APE is a gravelly coarse sand that occurs on the flanks and crest of hills with mild slopes. The subsurface soil encountered during the Project's geotechnical surveys appears to be typical of those found in the geologic region of the site. In general, the subsurface soil contained silty sands to depths of approximately 10 to 15 feet below site grade (bsg) and was underlain by poorly graded silty sands to the maximum depth explored of 21.5 feet bsg (Salem 2023). Available water storage is likely very low, and the runoff class high. The soil does not appear to be prone to flooding or ponding, nor does it appear to be hydric. Additionally, a moderate degree of off-highway vehicle (OHV) disturbance is present along and adjacent to a few dirt roads that cross the Project site. Desert pavement, a surface of angular interlocking fragments of pebbles, gravel, or boulders, was also observed on the soil surface along the crest of the hill within the APE.

1.2.4 Climate

The southern portion of the Mojave Desert lies in a rain shadow formed by adjacent mountains to the west. This high desert ecological subregion is characterized as arid (low humidity/rainfall) with strong fluctuations in daily temperatures. The average rainfall is approximately 6 inches per year and occurs primarily between the months of January and March. Wind is also a strong feature of this climatic regime, with dry winds in excess of 25 miles per hour in the late winter and early spring. The Western Regional Climate Center (WRCC) has recorded weather conditions in nearby Twentynine Palms since 1948, and average high temperatures range from 63.1 degrees Fahrenheit

(°F) in January to 105.4°F in July, while average low temperatures range from 35.6 °F in January to 71.7°F in July (WRCC 2024).

1.2.5 Surrounding Land Uses

Adjacent land uses include sparsely distributed rural residential properties to the north and south, open space to the east and west, and a solar farm to the southwest. The APE is undeveloped except for the paved and unpaved roads that border the Project site. Disturbances present on site include the unapproved dumping of trash such as clothes and furniture at the eastern end of the Project site, a roadside memorial consisting of a wooden cross, flowers, and American flag at the western end, OHV tracks and trails/roads, and utility pole lines running along the western and northern perimeter of the Project site. Off-highway vehicle trails/roads are approximately 7 ft wide, lack vegetation, and are concentrated in the eastern portion of the APE.

2 Focus Study/Species of Concern

Rincon conducted a literature review including relevant lists from U.S. Fish and Wildlife Service (USFWS) and the California Natural Diversity Database (CNDDDB) for baseline information on biological resources potentially occurring in the APE and surrounding area. The review also included information available in peer-reviewed journals, standard reference materials, and applicable conservation plans. Details of this review are provided in Section 3 and the resulting list of potentially occurring species is provided in Appendix D. Rincon did not consult directly with any agencies or with any species experts outside of Rincon's own professional biological staff members prior to the preparation of this report.

3 Methodology

Biological conditions were evaluated by confirming applicable regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the APE and vicinity (within 9 quads for CDFW's California Natural Diversity Data Base [CNDDDB] and California Native Plant Society's [CNPS] Inventory of Rare and Endangered Plants); and conducting a field reconnaissance survey, desert tortoise (*Gopherus agassizii*) survey (Rincon 2024a), and jurisdictional delineation of the APE (Rincon 2024b). This assessment provides the existing biological conditions of the APE at the time of the literature review and field surveys. The methods employed are described in detail below, and the findings and opinions conveyed in this report are based on this methodology.

3.1 Regulatory Review

Regulated biological resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, USFWS-designated critical habitat, jurisdictional waters and wetlands, coastal zone, federally designated Wild and Scenic Rivers, Essential Fish Habitat, lands covered by the Coastal Barrier Resources System, invasive species, wildlife movement, and locally protected resources, such as protected trees. Potential impacts to biological resources were analyzed based on the following statutes as described further in Appendix A.

Federal

- Federal Endangered Species Act (FESA)
- Federal Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act (BGEPA)
- Coastal Zone Management Act
- Executive Order 11990 (Protection of Wetlands)
- Executive Order 11988 (Floodplain Management)
- Executive Orders 13112/13751 (Invasive Species/Safeguarding the Nation from Impacts of Invasive Species)
- Wild and Scenic Rivers Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Coastal Barrier Resources Act
- Fish and Wildlife Coordination Act

State

- California Environmental Quality Act (CEQA)
- California Endangered Species Act (CESA)
- California Fish and Game Code (CFGC)
- Porter-Cologne Water Quality Control Act

Local

- San Bernardino Countywide General Plan
- San Bernardino County Development Code

3.2 Literature Review

Prior to conducting the biological field survey of the APE, Rincon reviewed a variety of literature to obtain baseline information about the biological resources with potential to occur at the APE and in the surrounding areas. Rincon conducted queries of several relevant databases that provide information about occurrences of special-status biological resources:

- CDFW’s CNDDDB (CDFW 2024a)
- CDFW’s Biogeographic Information and Observation System (BIOS) (CDFW 2024b)
- USFWS Critical Habitat Mapper (USFWS 2024a)
- USFWS Information for Planning and Consultation (IPaC) query (USFWS 2024b)
- USFWS National Wetlands Inventory (NWI) (USFWS 2024c)
- Calflora’s What Grows Here (Calflora 2024)
- CNPS Online Inventory of Rare and Endangered Plants of California (CNPS 2024)
- California Energy Commission (CEC) Desert Renewable Energy Conservation Plan (DRECP) Species Distribution Models (DRECP 2024)
- Federal Emergency Management Agency (FEMA) Flood Maps (FEMA 2024)

Rincon biologists conducted a search and review of the CNDDDB for recorded occurrences of special-status plant taxa (species, varieties, and subspecies) and wildlife species prior to conducting field surveys to develop a list of potentially occurring species. The CNDDDB is based on recorded occurrences of special-status taxa and does not constitute an exhaustive inventory of biological resources for any given area. The list of potentially occurring special-status plants and wildlife was developed based on 9-quad radius searches of the CNPS Online Inventory of Rare and Endangered Plants of California and the CNDDDB. Quads in the database searches included *Sunfair*, *Deadman Lake SW*, *Deadman Lake SE*, *Twentynine Palms*, *Queen Mtn.*, *Indian Cove*, *Joshua Tree North*, *Joshua Tree South*, and *Goat Mountain*. The list also included search results of a query of the USFWS IPaC website (USFWS 2024b) for federally listed species occurring in San Bernardino County and DRECP species distribution models (DRECP 2024) to assess predicted distribution of listed species within the APE.

The list of special-status plants was cross-referenced with the CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2024d) to verify rarity status for each special-status plant with potential to occur on the site. Habitat requirements and flowering periods for special-status plant taxa were obtained from the CNPS online Inventory of Rare and Endangered Plants of California (CNPS 2024), *The Jepson Desert Manual* (Baldwin et al. 2002), *The Jepson Manual*, Second edition (Baldwin et al. 2012), and the Calflora Online Species Database (Calflora 2024). Based on the information contained within these databases and inventories, Rincon biologists conducted an evaluation of the potential for occurrence within the Project site based upon each species’ local distribution and habitat requirements (e.g., vegetation community type, soil type, elevation above mean sea level, etc.).

For the purposes of this report, special-status plant taxa are those that are: 1) listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the FESA; 2) listed or proposed for listing as rare, threatened, or endangered by the CDFW under the CESA; and/or 3) CNPS California Rare Plant Rank (CRPR) 1B and 2. Wildlife species are considered to have special status based on a State and/or Federal listing (or candidacy) under CESA and/or FESA, respectively, designation as a USFWS Bird of Conservation Concern (BCC) or California Species of Special Concern (SSC), are on a Watch List, or they are otherwise protected by CDFW Code (i.e. Fully Protected, protected furbearer), and/or they are considered sensitive or protected by the County through ordinance or local policy.

3.3 Field Reconnaissance Survey

On October 13, 2023, Rincon biologists conducted a field reconnaissance survey of the APE. The survey focused on documenting existing conditions and biological resources, evaluating the APE for potential to support special-status plant and wildlife species, and identifying sensitive vegetation communities and potentially jurisdictional resources. Prior to conducting the reconnaissance survey, Rincon biologists reviewed aerial photographs and database search results for special-status species records in the vicinity of the APE.

The survey consisted of walking the extent of the APE and documenting general site conditions and biological resources observed. Wildlife species were identified by direct observation, vocalization, or by sign (e.g., tracks, scat, burrows). The Project site was entirely accessible and surveyed on foot, and a 100-ft buffer of the APE and land adjacent to the APE were surveyed using 10x42 binoculars. Results of the surveys were used to identify suitable habitat for special-status species that may require focused protocol surveys or other more involved analyses, and to develop a research approach for evaluating existing biological resources in the APE.

Representative photographs were taken to document general site conditions, vegetation communities, species sign, or other notable observations (Appendix B). Compendia of plants and wildlife observed during surveys are included in Appendix C. Details of the survey (including date, staff, and weather conditions) are presented in Table 1 below. Survey methods are described in greater detail below in Section 3.3.1 and Section 3.3.2.

Table 1 Field Survey Summary

Survey	Date	Personnel	Time and Weather Conditions	
Field Reconnaissance Survey and Desert Tortoise Protocol Survey	10/13/23	A. Trost, N. Fager	Time:	0800-1500
			Temperature:	58-77°F
			Skies:	Partly Cloudy
			Wind:	4-5 mph
Desert Tortoise Camera Survey – Camera Set-up	10/14/2024	B. Reynolds, N. Fager	Time:	0845-1430
			Temperature:	70-95°F
			Skies:	Clear
			Wind:	3-9 mph
Desert Tortoise Camera Survey – Camera Check	10/21/2024	B. Reynolds	Time:	0915-1015
			Temperature:	72-76°F
			Skies:	Partly Cloudy
			Wind:	6-8 mph

Survey	Date	Personnel	Time and Weather Conditions	
Desert Tortoise Camera Survey – Camera Removal	10/28/2024	N. Fager	Time:	1030-1045
			Temperature:	79°F
			Skies:	Clear
			Wind:	4 mph

3.3.1 Vegetation

Meandering pedestrian transects were conducted throughout the APE during the field reconnaissance survey, which allowed for an assessment to distinguish plant species and vegetation communities present on the site. Natural vegetation communities were classified based on the classification system presented in *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009).

Identification of plant taxa was accomplished in the field through examination of morphological characteristics and reference of regional plant field guides. Species were identified to the level of determining rarity status. Taxonomic nomenclature used in species identification was based on Baldwin et al. (2002), Baldwin et al. (2012), and updates from the Jepson Online Interchange (University of California, Berkeley [UCB] 2024). A focused rare plant survey of the APE was not conducted during the October survey as the blooming season for most rare plants had passed.

3.3.2 Wildlife

General wildlife surveys were conducted through incidental observations made during the field reconnaissance survey. Wildlife species observed directly or detected from vocalizations or by sign were documented. Zoological nomenclature for birds is in accordance with American Ornithologists' Union (AOU) Checklist of North American Birds (AOU 2024); for mammals is in accordance with Mammals of California (Wilson and Reeder 2005); and for amphibians and reptiles is in accordance with Society for the Study of Amphibians and Reptiles' (SSAR) Checklist of the Standard English & Scientific Names of Amphibians & Reptiles (SSAR 2017).

3.4 Desert Tortoise Protocol Survey

A desert tortoise protocol survey was conducted concurrently with the field reconnaissance survey of the APE on October 13, 2023 (Rincon 2024a). The survey adhered to the methodology described in *Preparing For Any Action That May Occur Within The Range Of The Mojave Desert Tortoise* (USFWS 2019). The biologists walked line transects within the Project site spaced at 10 meters (approximately 30 ft) to ensure 100 percent visibility of the suitable habitat, where accessible. The 100-ft buffer of the APE and land adjacent to the APE (i.e., private property) were visually inspected using 10x42 binoculars. Desert tortoise or their sign were mapped using ArcGIS Field Maps (Figure 6).

3.4.1 Desert Tortoise Camera Survey

Rincon biologists Bryant Reynolds and Nicholas Fager installed two wildlife cameras (Campark T20 Mini Trail Camera) and conducted a pedestrian survey of the project site on October 14, 2024, from 0845 to 1430 hours. Weather conditions during the desert tortoise camera survey included temperatures of 70 to 95°F, winds of 3 to 9 miles per hour, and clear skies. The pedestrian survey area included the project site and a 100-foot buffer. The biologists walked line transects spaced 20

meters apart to re-assess the site for desert tortoise, their sign, or new potential burrows. Areas of the 100-foot buffer that overlapped with adjacent private property were evaluated from within the project site visually using binoculars (8x42). The two wildlife cameras were installed approximately three feet northeast of one potential Class 4 burrow observed in the eastern portion of the Project site during the desert tortoise survey conducted on October 13, 2023 (Figure 6). Zip ties were used to fasten each camera to a t-post that was hammered approximately one-foot into the ground. The wildlife cameras were programmed to take motion-activated photographs at fifteen-second intervals. Photographs captured by the wildlife cameras were examined on October 21 and October 28, 2024. Both wildlife cameras were deconstructed and removed from the project site on October 28, 2024, from 0915 to 1015 hours. Weather conditions during camera removal activities included temperatures of 72 to 76°F, winds of 6 to 8 miles per hour, and partly cloudy skies. Details of the survey (including date, staff, and weather conditions) are presented in Table 1 above.

3.5 Western Joshua Tree Survey

A Western Joshua Tree (*Yucca brevifolia*) survey was conducted by a Rincon arborist and biologist on October 25, 2023 (Rincon 2023). The census was conducted in accordance with the CDFW Western Joshua Tree Census Instructions (CDFW 2024e). Rincon’s arborist and biologist walked uniform, parallel transects across the entire Project site routinely checking underneath shrubs and/or the base of any burned trees, if present. All Western Joshua Tree observations were to be recorded using a global positioning system (GPS) device capable of sub-meter accuracy. Details of the survey (including date, staff, and weather conditions) are presented in Table 2 below.

Table 2 Western Joshua Tree Survey Summary

Survey	Date	Personnel	Time and Weather Conditions	
Western Joshua Tree Survey	10/25/23	B. Reynolds, G. Watkins	Time:	0800-1500
			Temperature:	59°F
			Skies:	Clear
			Wind:	13 mph

3.6 Jurisdictional Delineation

As described in the Jurisdictional Delineation Report prepared for the Project (Rincon 2024b), a literature review and a field delineation were conducted to identify, describe, and map all potential jurisdictional waters within the APE. The literature review and field delineation were conducted in accordance with U.S. Army Corps of Engineers (USACE), Colorado River Basin Regional Water Quality Control Board (CRBRWQCB), and CDFW procedures.

Prior to the field delineation, Rincon reviewed aerial imagery of the APE. Additionally, the NWI (USFWS 2024c) and the National Hydrography Dataset (NHD; USGS 2024) were reviewed to determine if any potential jurisdictional waters were mapped within the APE.

On January 23, 2024, Rincon biologists surveyed the Project site on foot and surveyed the 100-ft buffer of the APE using binoculars to delineate potential jurisdictional waters. Current federal and State policies, methods, and guidelines were used to identify and delineate potential jurisdictional waters.

During the field delineation, general site characteristics were noted, and vegetation present on the site was documented. Data collection was focused on potential jurisdictional waters and sample points were taken in areas that best represented the conditions of that feature. The extent of potential jurisdictional waters and ordinary high water mark (OHWM) sample points were mapped in the field with the use of a Global Positioning System unit with sub-meter accuracy. The extent of the vegetation communities and land cover types were identified in the field and mapped using the most recent aerial photography (Google Earth 2024). Details of the survey (including date, staff, and weather conditions) are presented in Table 3 below.

Table 3 Jurisdictional Delineation Survey Summary

Survey	Date	Personnel	Time and Weather Conditions	
Jurisdictional Delineation	1/23/24	C. Clark, K. Gugerty	Time:	0800-1300
			Temperature:	50-65°F
			Skies:	Partly Cloudy
			Wind:	5-15 mph

4 General Biological Survey Results

Based on the database and literature review, in conjunction with Rincon knowledge and expertise, Rincon identified 37 special-status plant species and 23 special-status wildlife species within the 9-quad search area that required evaluation for potential to occur in the APE. Special-status plant and wildlife species recorded within the vicinity of the APE by the CNDDDB, CNPS, or otherwise known to occur, are listed in Appendix D.

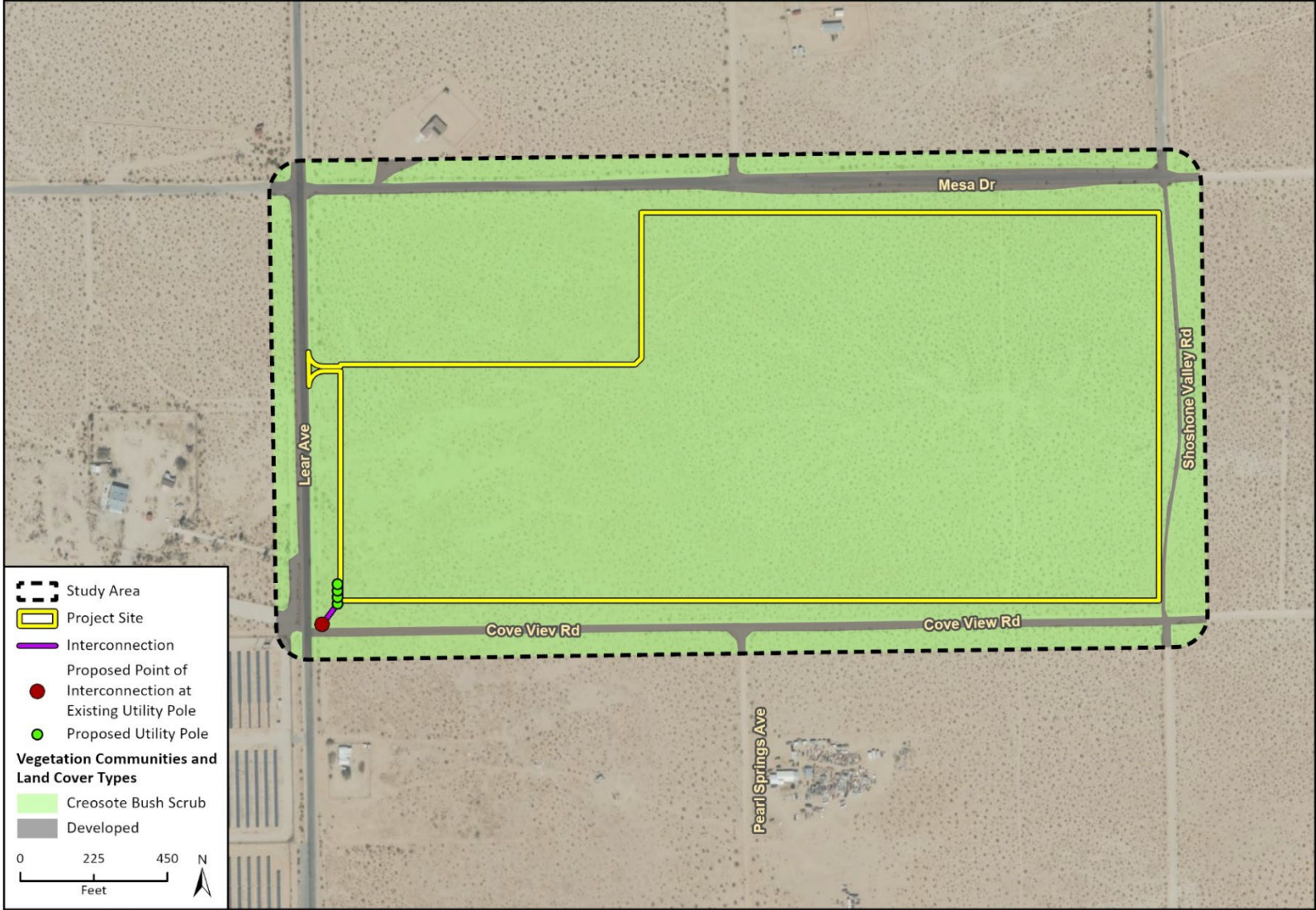
4.1 Vegetation

Vegetation types in the Mojave Desert are strongly influenced by arid climatic conditions and desert soils. Vegetation in the region includes a predominance of plant morphological adaptations to extreme aridity (e.g., waxy or resinous leaf cuticles, drought deciduous or succulent plants, woolly leaf pubescence, deep tap root systems, etc.) and saline-alkali soils (e.g., salt excretion, active transport systems, etc.). Vegetation structure is generally characterized by short-statured and widely spaced shrubs and arborescent shrubs resulting from a competition for soil water resources (Baldwin et al. 2012). Three vegetation types contribute to 75 percent of the land cover in the Mojave Desert region: Mojave creosote bush (*Larrea tridentata*) scrub (16,398 square miles), Mojave mixed woody scrub (Joshua tree woodland; 3,646 square miles), and desert saltbush (*Atriplex* spp.) scrub (1,510 square miles) (Davis et al. 1998). Other common vegetation types occurring in the region include desert and valley sink scrub, Mojave Desert wash scrub, and Mojave mixed steppe (Holland 1986). The primary disturbed or nonnative vegetation/land cover types within the Mojave Desert include annual grasslands, agricultural lands, and developed areas.

Desert-adapted plant species often show low resilience to disturbance, typically requiring long periods to recover. Often, full recovery to a natural community fails and the community follows successional pathways towards alternative stable states dominated by invasive species (Beisner et al. 2003; Chartier and Rostagno 2006). Portions of the Mojave Desert that were at one time cleared for agriculture or other development currently consist of moderate to highly degraded conditions, and often contain a high proportion of associated invasive, nonnative species (Thomas et al. 2004).

Rincon biologists documented one natural vegetation community (creosote bush scrub [*Larrea tridentata* Shrubland Alliance]) and one land cover type (developed) occurring throughout the APE. Figure 5 below depicts the vegetation community and land cover type throughout the APE. The distribution of vegetation throughout the APE ranges from sparse in the western portion to moderate in the eastern portion. Appendix C provides a list of all plant species observed during Rincon's surveys. Descriptions and analyses of the vegetation community and land cover type are provided below.

Figure 5 Vegetation Communities and Land Cover Types



23-15079 Lear BIO
Fig X Vegetation

4.1.1 Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance)

Creosote bush scrub is a desert scrub vegetation community that occurs on alluvial fans, bajadas, upland slopes, and minor intermittent washes. Soils are well drained and sometimes contain desert pavement. Creosote bush is the dominant species where it exceeds all other shrubs in cover and contains greater than three times the cover of white bursage (*Ambrosia dumosa*) or brittlebush (*Encelia farinosa*) if present. Other common associates include goldenheads (*Acamptopappus* spp.), saltbushes (*Atriplex* spp.), and Mormon teas (*Ephedra* spp.). The shrub canopy is generally open, and the herbaceous layer is open to intermittent and is typically dominated by annual invasive grasses, when present.

This vegetation community is located throughout the entirety of the APE. Creosote bush is the dominant species and white bursage (*Ambrosia dumosa*) is present as a common associate at less than three times the cover of creosote bush. Other common associates include white rhatany (*Krameria bicolor*) and pencil cholla (*Cylindropuntia ramosissima*). Desert pavement was observed throughout portions of the understory, along with open to sparse coverage of mediterranean grass (*Schismus* spp.) in the more disturbed portions of the APE.

4.1.2 Developed

Developed land includes areas that have been developed or otherwise physically altered to the extent that they no longer support most vegetation. Developed land is characterized by the presence of permanent or semi-permanent structures, gravel lots, pavement, dirt roads, and hardscape. This land cover type may also contain areas that are sparsely vegetated, primarily with ornamental and/or invasive species. This land cover type is located within the paved and unpaved roads that transect the APE.

4.2 General Wildlife

Desert scrub communities support a wide variety of reptiles, birds, and mammals. Common reptiles expected to occur in the APE include, but are not limited to, side-blotched lizard (*Uta stansburiana*), western whiptail (*Aspidoscelis tigris*), and Mojave green rattlesnake (*Crotalus scutulatus*). Common mammals expected to occur in the APE include, but are not limited to, black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), and coyote (*Canis latrans*). Various potential small mammal and reptile burrows were observed throughout the APE during the field reconnaissance survey and were predominately located at the base of creosote bush.

Avian nesting opportunities in the APE are limited to scrub, burrows, utility poles, or ornamental vegetation in adjacent private property. Bird species observed during field surveys include, but are not limited to, common raven (*Corvus corax*) and mourning dove (*Zenaida macroura*). A moderate amount of passerine activity was observed near the northern end of the APE due to a bird feeder located on nearby private property. Passerines such as house finch (*Haemorhous mexicanus*) and black phoebe (*Sayornis nigricans*) were often observed at or within the vicinity of the bird feeder. Appendix C provides a complete list of wildlife species observed during field surveys.

4.3 Sensitive Biological Resources

Local, State, and federal agencies regulate special-status species and generally require an assessment of their presence or potential presence to be conducted prior to the approval of a proposed project. This section evaluates the potential for the APE to support sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, the Project survey results, and species occurrence records from the CNDDDB, CNPS Online Inventory of Rare and Endangered Plants of California, reports from nearby projects, and other databases. The potential for each special-status species to occur in the APE was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the APE is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime). Species is not present in the vicinity of the site.
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the APE is unsuitable or of very poor quality. The species may occur in the region but is not very likely to be found in the APE.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the APE is unsuitable. The species is known to occur in the vicinity and has a moderate probability of being found in the APE.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the APE is highly suitable. The species has been recently documented in the vicinity and has a high probability of being found in the APE.
- **Present.** Species is observed in the APE or has been recorded (e.g., CNDDDB, other reports) in the APE recently (within the last 5 years).

Appendix D provides the complete list of all special-status species with records in the CNDDDB and CNPS Online Inventory of Rare and Endangered Plants of California within a 9-quad search radius of the APE or otherwise known to occur in the area based on the literature and database review.

4.3.1 Special-Status Plant Species

Based on the literature review, 37 special-status plant species have been documented in the regional vicinity of the APE. Twenty-six of these species were eliminated from the analysis due to a lack of habitat or soil requirements and/or known distribution and elevation ranges. Most of these 26 species are known to occur throughout Joshua Tree National Park to the south of the APE but are not expected to occur within the APE. No federally listed plant species have potential to occur in the APE. Eleven species have a low to moderate potential to occur in the natural scrub community present in the APE.

Seven species are considered to have a moderate potential to occur within the APE:

- California ayenia (*Ayenia compacta*, 2B.3)
- Joshua Tree poppy (*Eschscholzia androuxii*, 4.3)
- Death Valley sandmat (*Euphorbia vallis-mortae*, 4.2)
- Utah vine milkweed (*Funastrum utahense*, 4.2)
- Ribbed cryptantha (*Johnstonella costata*, 4.3)

Lear Avenue Solar Project

- Little San Bernardino Mountains linanthus (*Linanthus maculatus*, 1B.2)
- Jackass-clover (*Wislizenia refracta ssp. refracta*, 2B.2)

These species have moderate potential to occur given that their preferred habitat of sandy to gravelly substrates within Mojavean desert scrub is present throughout the APE.

Four species are considered to have a low potential to occur within the APE:

- Alverson's foxtail cactus (*Coryphantha alversonii*, 4.3)
- Spear-leaf matelea (*Matelea parvifolia*, 2B.3)
- Latimer's woodland-gilia (*Saltugilia latimeri*, 1B.2)
- Hall's tetracoccus (*Tetracoccus hallii*, 4.3)

These species have low potential to occur due to lack of recorded occurrences within recent decades and/or the absence of preferred microhabitat (i.e., rocky ledges) in the APE. No special-status plants were observed during the field surveys although they were not conducted at the optimal time of year for detection.

Western Joshua Tree

Rincon biologists did not observe any juvenile or adult Western Joshua Tree in the APE during the formal Joshua tree survey. Under the new ITP Guidelines related to the Western Joshua Tree Conservation Act, CDFW has indicated that the Western Joshua Tree census is generally considered valid for one year (Rincon 2023).

4.3.2 Special-Status Wildlife Species

Based on the literature review, Rincon evaluated 25 special-status wildlife species for their potential to occur within the APE. Ten of these wildlife species were eliminated from the analysis and are not expected to occur within the APE due to lack of preferred habitat and/or lack of recorded occurrences within recent decades.

Eight special-status wildlife species are considered to have a moderate or high potential to occur in the APE based on their known distribution, documented presence in the general vicinity of the APE, and presence of suitable habitat within the APE:

- Golden eagle (foraging) (*Aquila chrysaetos*, BGEPA, Fully Protected [FP])
- Loggerhead shrike (*Lanius ludovicianus*, Species of Special Concern [SSC])
- Burrowing owl (*Athene cunicularia*, SCESE)
- Bendire's thrasher (*Toxostoma bendirei*, SSC)
- Le Conte's thrasher (*Toxostoma lecontei*, SSC)
- American badger (*Taxidea taxus*, SSC)
- Prairie falcon (foraging) (*Falco mexicanus*, CDFW Watchlist [WL])
- Desert kit fox (*Vulpis macrotis arsipus*, CFGC Section 1400 *et seq.*)

Six special-status species are considered to have a low potential to occur in the APE:

- Pallid bat (*Antrozous pallidus*, SSC)
- Spotted bat (*Euderma maculatum*, SSC)

- Western mastiff bat (*Eumops perotis californicus*, SSC)
- Western yellow bat (*Lasiurus xanthinus*, SSC)
- Big free-tailed bat (*Nyctinomops macrotis*, SSC)

Desert tortoise was initially considered to have moderate potential to occur in the APE based on the presence of suitable habitat and reported regional occurrences; however, the potential to occur has been reduced to low based on negative results from focused survey and camera survey conducted in the APE.

Suitable foraging habitat for bat species with low potential to occur is present in the APE but roosting habitat is limited to a few ornamental palm trees on private property west of (but outside of) the Project site.

No special-status wildlife species or nesting birds were observed during the field surveys. Special-status species with a moderate to high potential to occur within the APE are described in detail below. Further, desert tortoise is also described in detail below due to the species initially being considered to have moderate potential to occur within the APE.

Desert Tortoise, FT, ST

The desert tortoise is a long-lived species that is slow growing with low reproductive rates. The species is found on flats, alluvial fans, bajadas, and rocky terrain throughout the Mojave Desert and in portions of the Sonoran Desert. This species has a suite of adaptations for survival in arid environments, and can regulate water, salt, and energy imbalances over short and long durations allowing individuals to meet annual energy requirements when water and food resource availability is unpredictable (Peterson 1996). Activity patterns of the desert tortoise are influenced by temperature, with daily activity patterns varying both among seasons and within seasons based on annual and daily variations in ambient temperature (Averill-Murray et al. 2002; Luckenbach 1982; Wilson et al. 1999). Plant species composition may be important for local distribution, but the communities of choice vary among populations of the species. In the Mojave Desert the species is often associated with creosote scrub habitat, Joshua tree woodland, and desert washes, as well as other communities (Baxter 1988; Germano et al. 1994). The desert tortoise is Federally and State-listed as threatened. Therefore, potential impacts to the species may require incidental take permits from both the USFWS and CDFW.

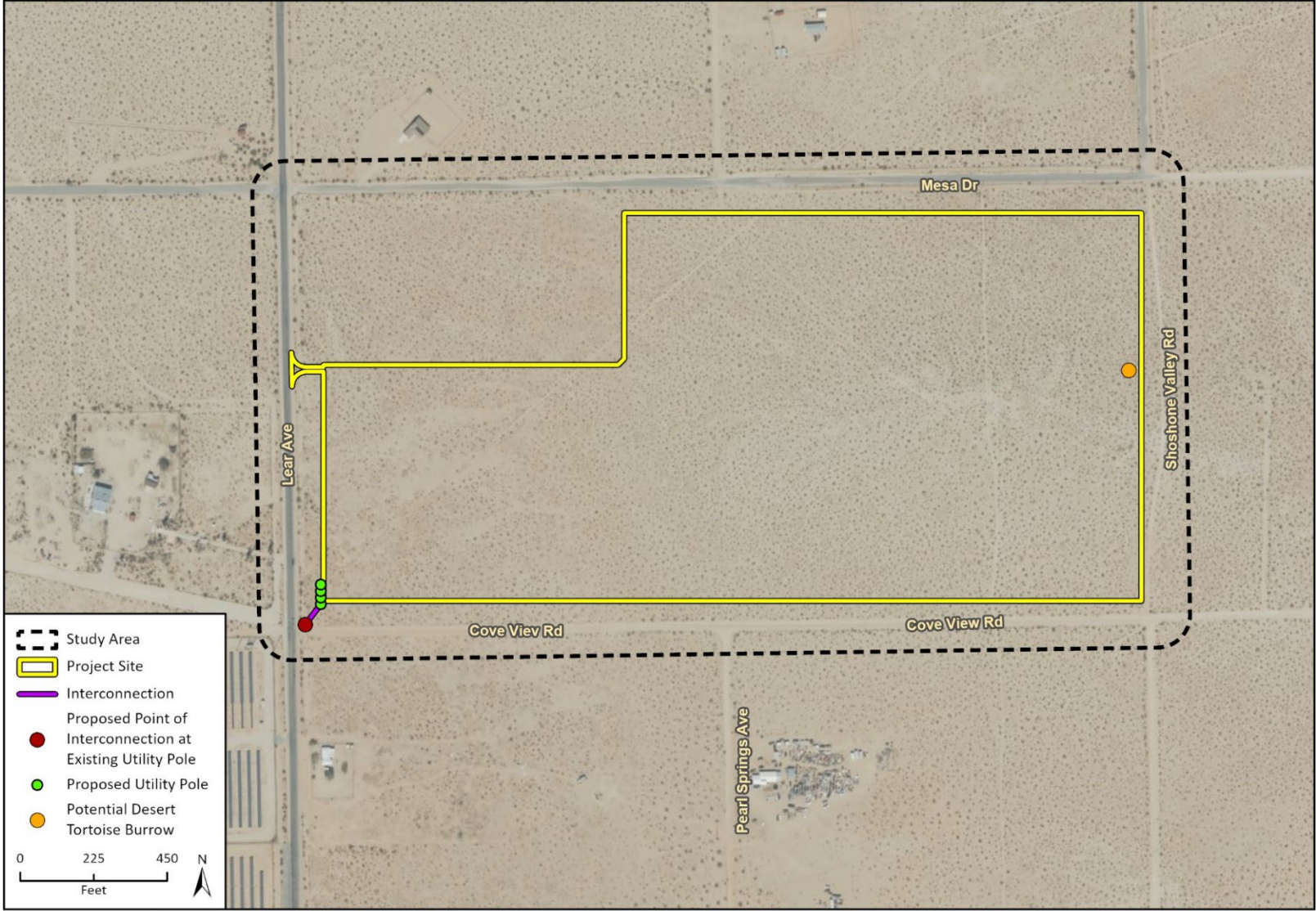
The APE contains relatively undisturbed natural desert scrub (e.g., creosote scrub habitat), which is suitable habitat for desert tortoise. The CNDDDB search provided 5 documented desert tortoise occurrences within a 9-quad search around the APE (CDFW 2024a). An occurrence from 1991 (Occurrence No. 22) covers a non-specified area, but the notes indicate that tortoises were observed within Twentynine Palms Marine Corps Training Center and the Sandhill Tortoise Preserve, the boundaries of both areas are located at least 5 miles from the APE. Densities for that record were estimated at 20 to 50 tortoises per square mile. The remaining 4 occurrences date from 1991 (8.9 miles northeast), 2009 (2.6 miles southwest), 2008 (3.2 miles southwest), and 2018 (12.75 miles southwest).

One potential desert tortoise burrow was observed near the eastern perimeter of the APE, within the Project site, during the desert tortoise survey conducted on October 13, 2023; however, no tortoise or their sign were observed in the APE. The potential burrow was located near the base of a creosote shrub, half-dome shaped, and approximately 6 to 7 inches wide. The location of the potential burrow is depicted in Figure 6.

No desert tortoise, sign of desert tortoise, or new potential burrows were observed during the follow-up desert tortoise camera survey conducted from October 14 to October 28, 2024. The previously observed potential burrow appeared to have regressed in quality, as the burrow apron has partially filled with sand since it was first observed (Photograph 13). The burrow opening was observed to be approximately five inches wide, and the back of the burrow was not visible. Two wildlife species were photographed and identified during the desert tortoise camera survey: coyote and white-tailed antelope squirrel (*Ammospermophilus leucurus*). The white-tailed antelope squirrel was photographed on October 24, 2024, and was observed briefly (less than one minute) digging in the potential burrow; however, this was the only observation of the species and no other activity pertaining to the burrow was observed during the survey. Two occurrences of kangaroo rat (*Dipodomys sp.*) species were photographed on October 17 and 25, 2024, and the individuals were unable to be definitively identified to species due to low visibility. However, Rincon biologists determined the species were likely Merriam's kangaroo rat (*Dipodomys merriami*) or desert kangaroo rat (*Dipodomys deserti*) based on the individuals' discernable morphologies as well as the known range of the species. Although Merriam's kangaroo rat may have been observed on site, the site is not located within the known range of the federally and State-protected Merriam's kangaroo rat subspecies: San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*)

The Project site has was initially considered to have a moderate potential to support desert tortoise given its location within the species known range. Suitable habitat for desert tortoise and one burrow of suitable size and shape occurs in the study area; however, no desert tortoise or sign of desert tortoise were observed during the surveys and there is a lack of recent known occurrences of the species within one mile of the study area. The quality of the potential burrow on site has degraded over the last year, indicating that it has not likely been occupied, and camera survey results were negative for desert tortoise. Further, desert tortoise activity may be deterred by the use of off-road recreational vehicles that was observed throughout the Project site and in the vicinity of the study area during the surveys (Photograph 5). Thus, the potential for desert tortoise occurrence on the Project site has been reduced to low given these additional evaluations and negative survey results. The results of the desert tortoise survey are valid for the period of one year.

Figure 6 Desert Tortoise Survey Results



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Fig X. DT Survey Results

Burrowing Owl, SCE

The burrowing owl is a small owl found in dry, open areas with low vegetation in western North America. Preferred habitats include grasslands, rangelands, deserts, or agricultural areas. Burrowing owl are primarily insectivores but will also eat small mammals such as mice and voles. They rely on existing burrows of other species which they modify for their own use. The burrowing owl is a candidate for listing under the CESA and as such is afforded the same protection as CESA listed species in addition to being protected under CFGC Section 3503 et. seq. and the Federal MBTA.

Burrowing owl has a moderate potential to occur in the APE. Although the APE contains suitable foraging habitat for the species, burrows suitable for occupation by burrowing owl are dependent on small mammal activity which fluctuates temporally. Further, BUOW was not observed during the desert tortoise surveys conducted in 2023 and 2024. If present during this time frame, the species would have been detected as surveys included survey transects to achieve 100% site coverage and nighttime camera trapping at the only suitable burrow present on site. The CNDDDB includes four records of burrowing owl within 9 quads of the APE. All occurrences (Occurrence No. 965-968) were reported in 2005 and are located approximately 8 miles west of the APE.

Golden Eagle, BGEPA, FP

The Mojave Desert region provides habitat for several year-round resident and migratory raptor species, including golden eagle. Raptors are generally protected by CFGC Section 3503 et. seq. and the Federal MBTA. Specific legal protections are afforded to the golden eagle pursuant to BGEPA and CFGC Section 3511. Mitigation measures for potential Project impacts typically include nesting surveys and avoidance of active nests and surrounding buffers although loss of foraging habitat may also be considered within 10 miles of nest sites.

Golden eagle typically nest on cliffs and in tall trees able to support large platform nests that can be up to 10 ft in diameter. The species usually nests in rugged open habitats with canyons and escarpments. Golden eagle feed primarily on lagomorphs and other large rodents, but their diet can be highly variable and include other mammals, birds, and reptiles, as well as carrion. The species typically requires open terrain such as grasslands, deserts, and savannahs for foraging.

The CNDDDB contains one occurrence (Occurrence No.266) of golden eagle within 9 quads of the APE. This occurred approximately 10 miles south of the APE in 1980. Desert scrub within the APE provides suitable foraging habitat for this species. Based on the absence of suitable nesting habitat, there is no potential for the species to nest on site; however, this species has a moderate potential to forage within the APE. Based on a review of aerial photography, it appears that the closest potentially suitable areas for nesting are the mountain ranges located over five miles from the site.

Loggerhead Shrike, SSC

The loggerhead shrike is a USFWS BCC and CDFW SSC. This species can be found in lowlands and foothills throughout California. It is absent or rare in California's highest mountain ranges and the north coast. This species is a year-round resident in the southern deserts, parts of the south and central coasts, and the Central Valley, where numbers are augmented by migrants from November to February (Yosef 1996). Loggerhead shrike prefer open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches, and require impaling sites, such as thorns, sharp twigs, or barbed wire, for skewering and manipulating their prey. The species nests in densely foliated trees or shrubs and feeds on "arthropods, amphibians, small to medium-sized reptiles, small mammals and birds" (Yosef 1996).

Suitable nesting habitat (predominantly desert scrub with shrub heights of 1 to 2 meters or more) is present in the APE. Although there are no CNDDDB records of loggerhead shrike within 9 quads of the APE, species observations are frequently recorded near the APE in citizen science applications and databases such as iNaturalist. Based on presence of potential nesting and foraging habitat and nearby observations, the species is considered to have high potential to occur within the APE.

Bendire's Thrasher, SSC

Bendire's thrasher is a migratory spring/summer resident in flat areas of the southern California desert. This species is found in sparse desert habitats such as sagebrush (*Artemisia* sp.) with scattered junipers (*Juniperus* sp.) at higher elevations. In the Mojave Desert, this species is primarily found in Joshua tree, cactus, or yucca habitats. Suitable nest species include cholla (*Cylindropuntia* sp.), yucca (*Yucca* sp.), paloverde (*Parkinsonia* sp.), thorny shrubs, or small trees. Bendire's thrasher is a USFWS BCC, CDFW SSC, and is protected by CFGC Section 3503 et. seq. and the Federal MBTA.

The CNDDDB contains four occurrences of Bendire's thrasher within 9 quads of the APE. These observations all occurred in either 1985 or 1986, more than 10 miles away from the APE. There are no observations of this species in the vicinity of the APE in citizen science applications and databases such as iNaturalist. However, desert scrub vegetation provides suitable nesting and foraging habitat in the APE. Therefore, there is moderate potential for this species to occur in the APE.

Le Conte's Thrasher, SSC

Specific breeding populations of Le Conte's thrasher are considered a CDFW SSC, and all populations are protected during nesting season under the MBTA and CFG Code 3503. This species typically inhabits sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills that have a high proportion of cholla cactus (*Cylindropuntia* spp.), or other desert habitats with similar structural profiles. Sparsely vegetated areas or areas lacking vegetation, and developed areas are generally avoided by the species. This species typically hunts insects on the ground and nests in saltbush shrubs. In their habitat, shrubs are well scattered with contiguous or closed cover usually less than 45 ft in any direction. Substrates are typically sandy and rarely composed of a large proportion of rock or of deep silty clays.

The CNDDDB includes four records of Le Conte's thrasher within 9 quads of the APE. Three of these occurrences were reported in 2010, with the nearest occurrence approximately 8 miles west of the APE. Species observations, three of which were reported in 2024, have been recorded within 10-12 miles east of the APE in citizen science applications and databases such as iNaturalist. Based on the presence of suitable foraging and nesting habitat, the species was determined to have a moderate potential to nest within suitable natural scrub habitat throughout the moderately-vegetated eastern portion of the APE.

American Badger, SSC

The American badger is a CDFW SSC. This species typically inhabits drier open stages of most shrub, forest, and herbaceous habitats with friable soils suitable for digging burrows. American badgers typically have multiple burrows, which are used for sleeping, hunting, giving birth, and storing food. Their diet primarily consists of burrowing rodents such as squirrels, rats, gophers, and mice.

The only CNDDDB occurrence (Occurrence No. 214) of American badger within the 9 quads search radius of the APE occurred approximately 4.5 miles to the south in 1951. However, records of this

species are often lacking in this database. There is moderate potential for this species to occur in the APE due to the presence of suitable foraging and burrowing habitat.

Prairie Falcon, WL

Prairie falcon are CDFW WL species. They are pale brown, medium sized raptors and occur in dry open habitats with cliffs or rocky bluffs for nesting. Adults may forage far afield over various habitat types including wetlands; however, this species primarily forages on grassland habitats. The only CNDDDB occurrence (Occurrence No. 134) of this species within the 9 quad search radius of the APE occurred in 1977 at an undisclosed location in the *Indian Cove* quadrant. Suitable foraging habitat occurs within the APE, and suitable nesting habitat is present in the mountains to the south and west of the APE. Therefore, there is a moderate potential for this species to forage, but it is not expected that this species would nest in the APE.

Desert Kit Fox

The desert kit fox is generally protected as a fur-bearing mammal by the CFGC Section 4000 et. seq., which limits take of this species. It is a widespread resident of the North American southwest, found in arid climates from southern Oregon and Idaho to Baja California and central Mexico. This species is about the size of a house cat, weighing 4 to 7 pounds and is about 30 inches in length. Its diet consists of black-tailed jackrabbits and desert cottontails, rodents and ground squirrels, insects, reptiles, birds, bird eggs, and vegetation. Desert kit foxes can be found in grasslands, open desert scrub, and occasionally in farmland. The species is locally common in portions of its range and is not listed as a Special Animal by the CDFW (CDFW 2024c).

Desert kit fox occurrences are not currently maintained by the CNDDDB; however, the APE is located in the DRECP predicted occupied habitat of the species and contains suitable habitat for the species (Conservation Biology Institute 2013). The species has a moderate potential to den within the natural scrub habitat APE and may also occur transiently (during dispersal and foraging).

Nesting Birds

Native bird nests are protected by CFGC Section 3503 and the MBTA. The nesting season generally occurs from February through September but can vary based upon species and annual climatic conditions. The APE contains suitable nesting habitat for a variety of native avian species common to desert scrub communities. Nesting opportunities in the APE are limited to scrub, burrows, utility poles, or ornamental vegetation in adjacent private property.

4.3.3 Sensitive Plant Communities and Critical Habitats

One sensitive natural community is recorded within the 9 quad search radius of the APE: desert fan palm oasis woodland. This sensitive natural community is native to the low, hot deserts of Southern California, requires a constant supply of water, and often occurs along fault lines where uplifted layers of impermeable rock force underground water to the surface. This sensitive natural community does not occur in the APE.

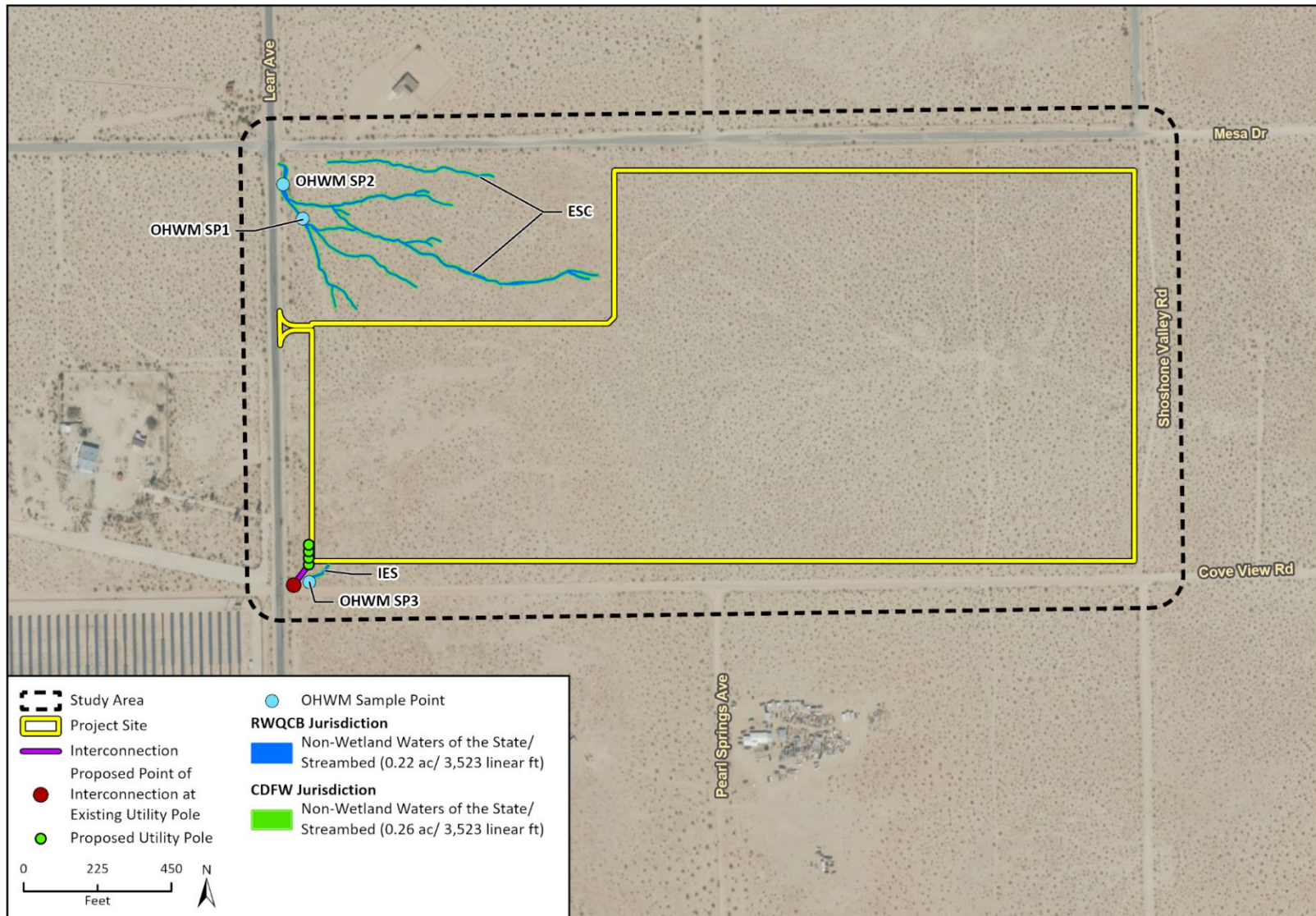
No federally designated critical habitats occur within the APE. Desert tortoise critical habitat is located approximately 4 miles south of the APE in Joshua Tree National Park.

4.3.4 Jurisdictional Waters and Wetlands

Within the arid and semi-arid western United States, limited precipitation restricts wetland and riparian resources to 1 to 5 percent of the land surface, a relatively low proportion compared to other systems globally. The proportion of wetland resources is even lower (less than 1 percent) in extremely arid areas such as the Mojave Desert (USACE 2008).

No NHD or NWI features are mapped within the APE. However, one ephemeral stream complex (ESC) was observed within the northwestern portion of the APE and one isolated ephemeral stream (IES) was observed within the southwestern portion of the APE during the field delineation (Rincon 2024b). ESC and IES are potentially subject to the jurisdictions of the CRBRWQCB and the CDFW. Summaries of the ESC and IES and their potentially jurisdictional extents are provided below and Table 4 and depicted in Figure 7.

Figure 7 Jurisdictional Delineation Results



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Ephemeral Stream Complex

ESC is best characterized as an approximately 0.2-mile long and 500 ft wide (at its widest point) network of narrow and shallow single thread ephemeral streams that converge into a shallow compound channel in the northwestern corner of the APE. ESC likely only flows during and immediately following rain events. The single thread ephemeral streams are located within the northwestern quadrant of the APE where they convey flow from east to northwest down the soft slope of the APE's hill. All single thread ephemeral streams contain a continuous surface connection to the compound channel except for the most northern stream, which was discontinuous due to OHV disturbance. The single thread ephemeral streams' OHWMs were observable through a change in average sediment texture and a break in bank slope. The OHWM channel width of the single thread ephemeral streams ranged from 1 to 5 ft with 2 ft being the average and the average top of bank width of the streams extending out approximately 3 inches on either side. The average depth of the streams is 1 to 2 inches. The shallow compound channel is approximately 110 ft long, flows from south to north, and begins at the terminal convergence of the southern, continuous, ephemeral stream network. It is approximately 110 ft long and its OHWM channel width ranges from 3 to 12 ft wide with 6 ft being the average. The OHWM of the compound channel contained a low flow channel and an active floodplain. Both floodplain units contained a bed and bank, and the average sediment texture was sand. The top of bank of the compound channel extends 3 inches out on either side of the OHWM channel and the average depth of the compound channel was 3 to 4 inches. The compound channel travels along a dirt road, which likely introduces repetitive OHV use disturbance. The compound channel terminates at the intersection of Lear Avenue and Mesa Drive, where ESC also terminates. Water appears to sheet flow across the intersection and continues downslope along Mesa Drive where it continues along a non-definable berm and is eventually lost due to infiltration and evaporation. ESC does not support hydrophytic or wash endemic vegetation to any degree and the coverage within the complex was uniform with the coverage of the vegetation community on the adjacent upland slopes. Additionally, the vegetation growing within or adjacent to ESC was uniform in size to the vegetation growing within the adjacent uplands.

Since ESC only flows during and immediately following rain events, the stream does not meet the USACE's definition of a relatively permanent water (i.e., the stream flows seasonally, at least three months out of the year) and therefore is not likely to be considered a non-wetland water of the U.S. However, the lateral extent of the stream's OHWM boundaries will likely be considered a non-wetland water of the State subject to the regulation of the CRBRWQCB pursuant to the Porter-Cologne Water Quality Control Act. In addition, the stream meets the definition of a CDFW-jurisdictional streambed and the extent of the top of bank (since riparian habitat is absent) will likely be subject to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFGC.

Isolated Ephemeral Stream

IES is located within the southwestern corner of the APE and is a discontinuous ephemeral stream that only flows during and immediately following rain events. IES is approximately 110 ft long and flows from northeast to southwest down the soft slope of the APE's hill. The OHWM channel width of IES is 2 ft wide on average, only contains a low flow channel, and was observable through a break in bank slope and a change in average sediment texture. The top of bank extends approximately 3 inches out on either side of the OHWM channel and was therefore approximately 2.5 ft wide. The average depth of IES is 4 inches. The stream discontinues at Cove View Road where the water sheet flows onto the road and infiltrates into the soil and evaporates. IES does not support hydrophytic vegetation to any degree and the coverage within the complex was uniform with the coverage of

the vegetation community on the adjacent upland slopes. Additionally, the vegetation growing within or adjacent to ESC was uniform in size to the vegetation growing within the adjacent uplands.

Since IES only flows during and immediately following rain events, the stream does not meet the USACE’s definition of a relatively permanent water and therefore is not likely to be considered a non-wetland water of the U.S. However, the lateral extent of the stream’s OHWM boundaries will likely be considered a non-wetland water of the State subject to the regulation of the CRBRWQCB pursuant to the Porter-Cologne Water Quality Control Act. In addition, the stream meets the definition of a CDFW-jurisdictional streambed and the extent of the top of bank (since riparian habitat is absent) will likely be subject to CDFW jurisdiction pursuant to Section 1600 et seq. of the CFGC.

Table 4 Summary of Jurisdictional Areas

Jurisdictional Area	USACE Jurisdiction		RWQCB Jurisdiction		CDFW Jurisdiction
	Non-Wetland Waters of the U.S. (acres/lin. ft.)	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres/lin. ft.)	Wetland Waters of the State (acres)	CDFW Jurisdictional Streambed (acres/lin. ft.)
ESC	-/-	-/-	0.21/3,426	-/-	0.25/3,426
IES	-/-	-/-	0.009/97	-/-	0.01/97
Total	-/-	-/-	0.22/3,426	-/-	0.26/3,426

4.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein wildlife may periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young wildlife. A group of habitat linkages in an area can form a wildlife corridor network.

Habitats within a linkage are not necessarily the same as those being linked. Rather, the linkage needs only contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species during periods of movement among areas of suitable habitat. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending on the species, a linkage may require specific minimum physical characteristics (such as rock outcroppings, vernal pools, specific vegetation cover, etc.) to function as an effective wildlife corridor, and allow those species to traverse the linkage. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a relatively short period of time.

While the APE is not located within an identified wildlife movement corridor or linkage (CDFW 2024b; Spencer et al. 2010), it and the surrounding area contain expanses of open habitat with little to no development, and the APE lacks significant barriers to local wildlife movement. Local wildlife movement would be expected across the APE during foraging and dispersal. Various species are also expected to travel between and among surrounding areas of low disturbance.

4.5 Resources Protected by Local Policies and Ordinances

The San Bernardino Countywide Plan Policy Plan (Countywide Plan) includes a Renewable Energy and Conservation Element (RECE), which aims to maintain the natural and scenic values of the landscape while providing safe and reliable renewable energy sources for California. The RECE provides goals, policies, and implementation measures to encourage sustainable energy production and consumption while protecting the environmental resources of San Bernardino County.

In accordance with Chapter 88.01 of the San Bernardino County Development Code (plant protection and management), a permit is required where protected trees or plants are proposed for removal or relocation. Within the Desert Region, protected trees or plants requiring a Tree or Plant Removal permit include the following:

1. *Dalea spinosa* (smoketree), with stems 2 inches or greater in diameter or 6 ft or greater in height
2. All species of the genus *Prosopis* (mesquites), with stems 2 inches or greater in diameter or 6 ft or greater in height
3. All species of the family Agavaceae (century plants, nolinias, yuccas)
4. Creosote Rings, 10 ft or greater in diameter
5. All Joshua trees
6. Any part of any of the following species, whether living or dead:
 - a. *Olneya tesota* (desert ironwood)
 - b. All species of the genus *Prosopis* (mesquites)
 - c. All species of the genus *Cercidium* (palo verdes)

Chapter 88.01 also requires that removal actions of all plants protected or regulated by the Desert Native Plants Act (Food and Agricultural Code Sections 80001 *et seq.*) shall comply with the provisions of the Act before the issuance of a development permit or approval of a land use application. One plant species that is identified in the Desert Native Plants Act, pencil cholla, was observed in the APE during the field reconnaissance survey. No protected trees or other plants protected by the County were observed within the APE.

4.6 Consistency with Habitat Conservation Plans

The APE is located within the broader boundaries of the DRECP, a collaboration between the California Energy Commission, Bureau of Land Management (BLM), USFWS, and CDFW designed to streamline renewable energy development while conserving unique and valuable desert ecosystems and providing outdoor recreation opportunities. A phased approach to implementation of the conservation plan is currently underway. Phase I addresses conservation and development goals on public lands. BLM is responsible for the implementation of this phase through preparation of the Land Use Planning Amendment (LUPA), which was approved in September 2016. During Phase II, counties in the DRECP plan area, through the use of Renewable Energy Conservation Planning Grants, will develop or update rules and policies related to renewable energy resources on private lands. This phase will require agency coordination to develop the best options to protect and conserve desert ecosystems while promoting renewable energy. San Bernardino County has

completed Phase II and has revised the Countywide Plan Policy Plan to include a Renewable Energy and Conservation Element as of August 8, 2017. The Project is not subject to the DRECP, as the APE occurs on private land only, and the DRECP is implemented exclusively on BLM lands.

The APE is also located within the BLM West Mojave Plan. The West Mojave Plan is a habitat conservation plan and federal land use plan amendment that presents a comprehensive strategy to conserve and protect natural communities and sensitive species such as the desert tortoise and the Mohave ground squirrel. The BLM West Mojave Plan is a collaborative effort of cities, counties, state and federal agencies having jurisdiction over lands within the region. The Project is not subject to the BLM West Mojave Plan, as the APE occurs on private land only.

The APE is not located within any other local, regional, or State conservation planning areas.

4.7 Executive Order 13112, Executive Order 13751

Executive Orders 13112 and 13751 direct actions to prevent the introduction and spread of invasive species and to support efforts to eradicate and control invasive species that are established. The Project has potential to introduce and/or spread invasive species if standard Best Management Practices (BMPs) are not implemented during Project development.

4.8 Coastal Zone, Wild and Scenic Rivers, Essential Fish Habitat, Coastal Barrier Resources System, Executive Order 11988, Executive Order 11990

The APE is not located within the jurisdiction of, or contains features pertaining to, the Coastal Zone Boundary, Wild and Scenic Rivers Act, Essential Fish Habitat, or Coastal Barrier Resources System. Furthermore, Executive Orders 11988 and 11990 are not applicable to the Project because the APE is not located within a FEMA designated floodplain and does not contain wetland waters of the United States (FEMA 2024).

5 Impacts and Recommendations

Implementation of the proposed Project has potential to affect various special-status species. Impacts to jurisdictional waters are not expected because the Project proponent intends to avoid and establish a 50 ft buffer from all jurisdictional water features in the APE during Project activities. The following sections provide an analysis of potential Project effects to biological resources and recommendations for additional analyses that may be pertinent. The final determination of effects of significance and required mitigation measures for the Project will be made by the County.

5.1 Special-Status Species

The proposed Project would have a significant effect on biological resources if it would:

- a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

During the field surveys, no special-status plant or wildlife species were observed in the APE; however, the APE contains suitable habitat for special-status species. Direct impacts (i.e., injury or mortality of individuals) and indirect impacts (i.e., construction noise or dust, loss of habitat) to these species could result from Project development. With implementation of appropriate mitigation measures described in *Section 6*, the Project may affect but not adversely affect special-status species. Thus, impacts would be reduced to less-than-significant levels.

5.1.1 Special-Status Plant Species

Seven CRPR-ranked special-status plant species have moderate potential to occur in the APE. No federally or State listed plant species have potential to occur. This determination is based on prior land use, existing disturbances, and suitable habitat characteristics for each species (e.g., vegetation assemblage, soils, topography, and hydrology). Of these 7 species, 3 are CRPR 1B or 2B species and 4 are CRPR 4 species. CRPR 4 species are defined by the CNPS as having limited distributions in California generally but are more broadly distributed in California than federal or State listed species. Project development could result in direct impacts to these special-status plant species (from removal of individuals or crushing by heavy equipment) if present on the site. However, impacts to CRPR 4 species resulting from the proposed project would not represent a population-level impact that would result in a loss of, or risk to the entire regional population given the presence of potentially suitable habitat in the region surrounding the project site. Therefore, impacts to CRPR 4 species would be less than significant. CRPR 1 and 2 species are more limited in distribution and identified by CNPS as rare, threatened, or endangered in California, though their distributions may generally be more broad than federal or State listed species. Impacts to CRPR 1B and 2B species would be potentially significant but would be reduced to less than significant through a rare plant survey to document any CRPR 1B and 2B species on the site, establishment of buffers around those that can be avoided, and preparation and implementation of a translocation plan for any that cannot be avoided, as described in *Section 6*.

5.1.2 Special-Status Wildlife Species

There is potential for 14 special-status wildlife species to occur in the APE. This determination is based on prior land use, existing disturbances, and suitable habitat characteristics (i.e., friable soils and foraging opportunity). Project development will not result in impacts to special-status bat species due to the absence of roosting habitat in the Project site. The nearest potential roosting habitat to the Project site occurs approximately 100 ft to the west in private property and is considered marginal, which will not be affected by construction. Bat foraging would be expected to occur at night, when construction is not active. Project development could result in direct (i.e., mortality or loss of habitat) and indirect (i.e., noise or dust) impacts to special-status wildlife species with moderate or high potential to occur in the APE. With implementation of appropriate mitigation measures described in *Section 6*, the Project may affect but not adversely affect special-status species. Thus, impacts would be reduced to less-than-significant levels.

Desert Tortoise Impacts

A protocol survey was conducted for desert tortoise in accordance with the USFWS protocol (USFWS 2019) in October 2023 and 2024 (Rincon 2024a), and results of the survey are valid for the period of one year. One potential tortoise burrow was located on the eastern portion of the site; however, no activity pertaining to the burrow was observed during the desert tortoise camera survey conducted in October 2024. The creosote bush scrub distributed throughout the APE provides suitable habitat for the species. Project development could result in direct impacts such as loss of habitat and can potentially result in mortality if desert tortoise are present. Therefore, additional avoidance measures are recommended prior to Project development (Rincon 2024a).

The Project may affect desert tortoise. Implementation of general protective measures and species-specific mitigation measures as described in *Section 6* will minimize potential impacts to less-than-significant levels.

Desert Kit Fox, Burrowing Owl, American Badger

Project activities such as grading and/or vegetation removal have potential to directly (i.e., mortality or loss of habitat) or indirectly (i.e., noise or dust) affect special-status species that have moderate potential to occur in the APE such as desert kit fox, burrowing owl, and American badger. With implementation of mitigation measures proposed in *Section 6*, the Project may affect, but will not adversely affect these special-status species. Thus, impacts would be reduced to less-than-significant levels.

5.1.3 Avian Impacts

Common native bird species were observed in the APE. Native birds protected by the CFGC and the MBTA may nest on the site. Project development has the potential to directly (i.e., destroying a nest) or indirectly (i.e., causing an active nest to fail) impact nesting birds protected under the CFGC, MBTA, and/or those considered to be SSC. Project development could impact sensitive species known to nest in desert shrubs, such as Bendire's thrasher and Le Conte's thrasher, and/or lead to loss of foraging habitat for species such as loggerhead shrike. The APE also contains suitable foraging habitat for special-status birds of prey (e.g., golden eagle and prairie falcon). Loss of foraging habitat could be considered significant if it had substantial adverse effects to local populations of loggerhead shrike and special-status raptors protected under the CFGC, BGEPA, or the MBTA. However, Project development would not significantly impact foraging habitat for such

species considering the large expanses of open desert scrub habitat in the area surrounding the APE and distance of the site to potentially suitable nesting habitat for prairie falcon and golden eagle (mountain ranges over five miles away). Project development may affect but will not adversely affect nesting birds and raptors with implementation of mitigation measures described in *Section 6*. Thus, potential impacts would be reduced to less-than-significant levels.

5.2 Sensitive Plant Communities and Critical Habitats

The proposed Project would have a significant effect on biological resources if it would:

- b) *Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.*

No sensitive plant communities or USFWS designated critical habitats were observed in the APE (USFWS 2024a). Therefore, the proposed Project would have no effect on sensitive plant communities or critical habitats and no mitigation is recommended.

5.3 Jurisdictional Waters and Wetlands

The proposed Project would have a significant effect on biological resources if it would:

- c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

Ephemeral streams were observed within the APE and are potentially subject to CRRWQCB and CDFW jurisdiction. The USACE is not expected to assert jurisdiction over the ephemeral features. The Project will not directly affect these jurisdictional features because Project development will avoid and establish a 50 ft buffer from jurisdictional features present in the APE. However, indirect effects to jurisdictional features such as spilled materials or pollution of storm water runoff could result from Project development. Due to potential indirect impacts resulting from Project development, the Project has potential to affect jurisdictional waters. However, with the implementation of mitigation measures described in *Section 6*, jurisdictional waters will not be adversely affected. Thus, potential impacts would be reduced to less-than-significant levels.

5.4 Wildlife Movement

The proposed Project would have a significant effect on biological resources if it would:

- d) *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.*

The APE does not occur within a corridor that links between or among larger habitat areas on a regional basis and is not within any areas mapped as Essential Connectivity Areas by the California Essential Habitat Connectivity Project. Local wildlife movement has potential to be affected by Project development; however, this impact would not be significant due to the large expanses of open desert scrub habitat suitable for wildlife movement in the area surrounding the APE. Thus, the

Project would not have a significant effect on wildlife movement and no mitigation is recommended.

5.5 Local Policies and Ordinances

The proposed Project would have a significant effect on biological resources if it would:

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*

No trees protected under the County Development Code were observed by Rincon's arborist and biologist during the Western Joshua Tree survey on October 25th (Rincon 2023). Species protected under the Desert Native Plants Act will be surveyed during a rare plant survey at an appropriate time of the year to detect the species. These species include, but are not limited to, all species of the families Agavaceae, Cactaceae, and Fouquieriaceae. One species protected under the Desert Native Plants Act, pencil cholla, was observed in the APE during the field reconnaissance survey. Chapter 3 of the Desert Native Plants Act requires that prior to harvesting a protected species, a permit must be obtained by the commissioner or sheriff of the County in which the plant is growing. The proposed Project would require a development permit from the San Bernardino County Planning Department, and therefore would be designed in compliance with applicable San Bernardino County policies and ordinances. Trees protected by the County will not be impacted by Project development, and direct and indirect impacts to species protected under the Desert and Native Plants Act (if present) would be mitigated through the County permitting process, which includes the preparation of a native tree and plant removal plan, indicating exactly which protected trees or plants are proposed to be removed or relocated if present in the APE. Therefore, the proposed Project would not conflict with any local policies or ordinances.

5.6 Adopted or Approved Plans

The proposed Project would have a significant effect on biological resources if it would:

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

The APE is located within the boundaries of the DRECP, a collaboration between the California Energy Commission, BLM, USFWS, and CDFW. The APE is also within the boundaries of the BLM West Mojave Plan. Both plans are applicable to projects on public lands (i.e., BLM). The proposed Project occurs on private land and is not located within any other local, regional, or State conservation planning area. Therefore, the proposed Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plans.

5.7 Executive Order 13112, Executive Order 13751

Actions to adequately prevent the introduction and spread of invasive species during Project development are presented under the BMP mitigation measure in *Section 6*.

5.8 Coastal Zone, Wild and Scenic Rivers, Essential Fish Habitat, Coastal Barrier Resources System, Executive Order 11988, Executive Order 11990

The APE is not located within or adjacent to the Coastal Zone, federally designated Wild and Scenic Rivers, Essential Fish Habitat, lands covered by the Coastal Barrier Resources System, federally designated floodplains, or federally designated wetlands. As such, the Coastal Zone Management Act, Wild Scenic Rivers Act, Magnuson-Stevens Fishery Conservation and Management Act, Coastal Barrier Resources Act, Executive Order 11988, and Executive Order 11990 are not applicable to the proposed Project.

6 Proposed Mitigation Measures

6.1 Special-Status Species

As described in *Section 5.1*, implementation of the proposed Project could result in direct and indirect impacts to special-status plant and wildlife species. If focused rare plant surveys document the occurrence of rare plant species for which the loss of those plants would result in a substantial risk to the viability of a local or regional population of the species, the following mitigation measures are recommended and may be implemented to avoid potential impacts to special-status species.

BIO-1 Mitigation Measures for Special-Status Plant Species

BIO-1.1 Special-status Plant Surveys

A rare plant survey shall be conducted prior to initial project ground disturbing activities (including staging and mobilization) during the appropriate time of year when a positive identification can be made to confirm species and rarity status (i.e., during the blooming periods of target species). The rare plant survey shall be conducted following the guidelines established by CDFW and CNPS. Prior to the survey, reference sites shall be visited to document whether target species are detectable. The survey area shall include the Project impact area plus a 100-foot buffer and a 25-foot buffer from proposed construction access roads. The botanist(s) conducting the survey shall walk meandering transects within the survey area, ensuring 100 percent visual coverage utilizing the CDFW and CNPS survey protocols. Locations of special-status plants shall be mapped onto a site-specific aerial photograph and topographic map and included on the construction, grading, and landscape plans.

BIO-1.2 Special-status Plant Avoidance

If non-listed CRPR 1 or 2 species are documented during the focused botanical surveys within the rare plant survey area, the proposed Project shall be designed to reduce impacts to these species through the establishment of buffers, to the extent feasible. Buffer distances shall be determined by the Qualified Biologist, typically 50 ft or greater from an identified special-status plant species, unless the Qualified Biologist determines a reduced buffer would suffice to avoid impacts to the species. Special-status plant species that shall be avoided by construction activities (including those not in the project footprint, but within 50 ft of disturbance limits) shall be flagged and fenced off prior to construction activity start and to be confirmed by the Qualified Biologist. No incursion into fenced buffer areas shall occur unless at the discretion of the Qualified Biologist.

BIO-1.3 Special-status Plant Relocation Plan

The Rare Plant Relocation Plan shall include methods, monitoring, reporting, success criteria, adaptive management, and contingencies for achieving relocation success.

BIO-2 Mitigation Measures for Special-Status Wildlife Species

BIO-2.1 Biological Monitoring

Prior to the issuance of grading or building permits, the Project proponent shall retain a Lead Biologist(s) who meets the qualifications of an Authorized Biologist as defined by USFWS to oversee compliance with protection measures for all listed and other special-status species that may be affected by the construction, operation, and decommissioning of the Project. The contact information for the Lead Biologist(s) shall be provided in writing to the San Bernardino County Land Use Services Department. If State or Federally listed species or other special-status biological resources are identified in the Project site during protocol and/or pre-construction surveys, then the Lead Biologist and Qualified Biological Monitors may need to be approved by USFWS and/or CDFW as an authorized biologist for handling listed species. The Lead Biologist or Qualified Biological Monitors shall be on the Project site during initial grading, ground disturbance and vegetation removal activities to monitor construction activity that could directly or indirectly impact special-status biological resources. The Lead Biologist or Qualified Biological Monitors shall have the authority to halt all activities that are in violation of the special-status species protection measures. Work shall proceed only after potential hazards to special-status species are removed and the species is no longer at risk. The Lead Biologist or Qualified Biological Monitors shall have in her/his possession a copy of all the compliance measures while work is being conducted on the Project site. A report of biological monitoring activities and project compliance shall be prepared at the end of the construction period and submitted to the County for documentation.

BIO-2.2 Construction Worker Environmental Awareness Training and Education Program

Prior to any activity on site and for the duration of construction activities, all personnel at the Project site (including laydown areas and/or transmission routes) shall attend a Worker Environmental Awareness Program (WEAP) developed and presented by the Lead Biologist or Qualified Biological Monitors. New personnel shall receive WEAP training on the first day of work and prior to commencing work on the site. Any employee responsible for the operation and maintenance (O&M) of the Project facilities shall also attend WEAP training.

- The program shall include information on the life history of special-status species with potential to occur on the site, as well as other wildlife and plant species that may be encountered during construction activities.
- The program shall also discuss the legal protection status of each species, the definition of “take” under the Federal Endangered Species Act and California Endangered Species Act, measures the Project proponent is implementing to protect the species, reporting requirements, specific measures that each worker shall employ to avoid take of wildlife species, and penalties for violation of the Federal Endangered Species Act or California Endangered Species Act.
- The program shall provide information on how and where to bring injured wildlife for treatment in the case that any species are injured on the Project site.
- An acknowledgement form signed by each worker indicating that WEAP training has been completed shall be kept on record.

- A sticker shall be placed on hard hats indicating that the worker has completed the WEAP training. Construction workers shall not be permitted to operate equipment within the construction areas unless they have attended the WEAP training and are wearing hard hats with the required sticker. A copy of the training transcript and/or training video, as well as a list of the names of all personnel who attended the WEAP training and copies of the signed acknowledgement forms shall be submitted to the San Bernardino County Planning and Community Development Department upon the County's request.

BIO-3 Mitigation Measures for Desert Tortoise

BIO-3.1 Pre-construction Surveys

A pre-construction desert tortoise presence/absence survey shall be conducted by the Lead Biologist or Qualified Biological Monitors no more than 30 days in advance of Project development in accordance with USFWS survey protocols (USFWS 2009, USFWS 2019, USFWS 2020). A discussion of survey results, including negative findings, shall be provided to the County upon completion of the survey. If desert tortoise are not documented during the survey, no additional measures related to desert tortoise avoidance and minimization are recommended, and construction activities may begin. If desert tortoise are documented inhabiting the APE during presence/absence surveys, the following measure (BIO-3.2) shall be implemented.

BIO-3.2 Additional Measures for Desert Tortoise

Due to the presence of suitable habitat and desert tortoise occurrences documented in the Project vicinity, the following measure is recommended to reduce impacts to less than significant. Implementation of any measures that would result in the "take" of desert tortoise, including translocating of individuals, cannot be undertaken without formal authorization from CDFW and USFWS.

- Develop a plan for desert tortoise translocation and monitoring prior to Project construction in accordance with USFWS guidelines (USFWS 1994, 2020, 2024). The plan shall provide details on desert tortoise clearance surveys and translocation, disease testing protocols, disposition decision process, protocols for managing desert tortoises found during active versus inactive seasons, post-translocation monitoring requirements, if any, and shall be consistent with current USFWS guidelines. In addition, the plan shall provide the framework for implementing the following measures, or similar measures deemed sufficient and approved during agency consultation (Note: any desert tortoise translocation plan must be reviewed and approved by CDFW and USFWS):
 - If a tortoise-proof exclusion fence is practicable and installation approved by the USFWS, a fence shall be installed around all non-linear construction areas prior to the initiation of ground disturbing activities, in coordination with the Lead Biologist or Qualified Biological Monitors. The fence shall be constructed of 0.5-inch mesh hardware cloth and extend 18 inches above ground and 12 inches below ground. Where burial of the fence is not possible, the lower 12 inches shall be folded outward against the ground and fastened to the ground to prevent desert tortoise entry. The fence shall be supported sufficiently to maintain its integrity, be checked at least monthly during construction, operations, and decommissioning, and maintained when necessary by the Project proponent to ensure its integrity. Provisions shall be made for closing off the fence at the point of vehicle entry.

Common raven (*Corvus corax*) perching deterrents shall be installed as part of the fence construction.

- After fence installation, the Lead Biologist or Qualified Biological Monitors shall conduct a pre-construction survey in accordance with USFWS protocols for desert tortoise within the fenced construction site (USFWS 2020). Two surveys during the desert tortoise active periods (April through May or September through October) without finding any tortoises or new tortoise sign shall occur prior to declaring the site clear of tortoises.
- All burrows that could provide shelter for a desert tortoise shall be hand-excavated prior to ground-disturbing activities.
- The Lead Biologist or Qualified Biological Monitors shall remain on-site until all vegetation is cleared and, at a minimum, conduct site and fence inspections on a regular basis throughout construction in order to ensure Project compliance with mitigation measures.
- The Lead Biologist or Qualified Biological Monitors shall remain on-call throughout fencing and grading activities in the event a desert tortoise enters the Project site.
- Compensatory habitat mitigation shall be secured in the form of a conservation easement and/or purchase of mitigation bank credits to compensate for the loss of occupied desert tortoise habitat at a minimum ratio of 1:1, with habitat of equal or greater value. The proposed mitigation strategy shall be carried out in accordance with USFWS and CDFW authorizations.
- The plan shall include participation in the interagency Raven Monitoring and Management Program to address indirect impacts to the species related to the potential increase in the raven population. The plan shall discuss payment of appropriate fees and reduction of raven attraction and implementation of appropriate measures including removing trash daily, limiting available food and water subsidies, and inadvertently creating habitat (for example, creation of perch/roost sites and nest or denning sites) within the Project site.

BIO-4 Mitigation Measures for Desert Kit Fox, Burrowing Owl, and American Badger

Pre-construction surveys shall be conducted by the Lead Biologist or Qualified Biological Monitors for the presence of desert kit fox, burrowing owl, and American badger prior to commencement of construction activities. This survey shall be conducted no more than 30 days prior to ground disturbing activities. Surveys shall conform to CDFW guidelines for burrowing owl and to industry standards for desert kit fox and American badger. If burrowing owl are found on site acquisition of a 2081 Incidental Take Permit (ITP) from CDFW may be required and additional avoidance and mitigation measures will be necessary as described in BIO-4.2. These measures may include implementation of non-disturbance buffers, passive relocation during the non-breeding season if occupied burrows cannot be avoided, and compensatory habitat mitigation in consultation with CDFW.

A report of all pre-construction survey efforts shall be submitted to the County within 30 days of completion of the survey effort to document compliance. The report shall include the dates, times, weather conditions, and personnel involved in the survey(s) and monitoring. The report shall also include, if applicable, observations of the species or potential dens/burrows, the Universal Transverse Mercator (UTM) coordinates and habitat descriptions, and a description of any passive relocation if applicable. Biological monitoring and WEAP training as described in BIO-2 shall include these species. If desert kit fox, burrowing owl, and/or American badger observations are not

documented during the survey(s) or biological monitoring activities, no additional measures related the avoidance and minimization of the absent species are recommended.

BIO-4.1 Measures for Desert Kit Fox

- If potential desert kit fox dens are observed and avoidance is feasible, a non-disturbance buffer shall be established, demarcated using brightly colored flagging, and fenced-off prior to construction activity start and to be confirmed by the Lead Biologist or Qualified Biological Monitors. The buffer may only be reduced at the discretion of a Qualified Biologist and the removal of the buffer shall only occur if the Lead Biologist or Qualified Biological Monitors determines the potential den is inactive. Typical buffer distances for desert kit fox are:
 - Desert kit fox potential den: 50 ft
 - Desert kit fox active den: 100 ft
 - Desert kit fox natal den: 500 ft
- If avoidance of the potential desert kit fox dens is not feasible, the following measures are recommended to minimize potential adverse effects to the desert kit fox:
 - If the Lead Biologist or Qualified Biological Monitors determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel and collapse them to prevent desert kit foxes from re-using them during construction.
 - If the Lead Biologist or Qualified Biological Monitors determines that potential dens may be active, an on-site passive relocation program shall be implemented. This program shall only be implemented during the non-breeding season (September 1 through February 1) and consist of passive eviction of desert kit foxes from occupied burrows by installation of one-way doors at burrow entrances, monitoring of the burrow for seven days to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the Lead Biologist or Qualified Biological Monitors determines that desert kit foxes have stopped using active dens within the Project site, the dens shall be hand-excavated with a shovel and collapsed to prevent re-use during construction. Only non-natal dens shall be passively excluded, disturbance to natal dens shall be avoided until they are no longer active. If a natal den cannot be avoided by the project, consultation with the CDFW shall be necessary.

BIO-4.2 Measures for Burrowing Owl

- If burrowing owl are detected on-site, a non-disturbance buffer shall be established, restricting all ground-disturbing activities, such as vegetation clearance or grading, from occurring within the buffer. The buffer shall be demarcated using brightly colored flagging and the buffer may only be reduced at the discretion of the Lead Biologist or Qualified Biological Monitors. Removal of the buffer shall only occur if a Qualified Biologist determines burrowing owl are not present in the Project site and any potential burrows are inactive. Typical avoidance buffer distances for burrowing owl range from 100 meters (330 ft) to 250 meters (825 ft) depending on Project activity, line of sight, and local topography during the breeding season (February 1 to August 31). During the non-breeding (winter) season (September 1 to January 31), typical avoidance buffers range from 50 meters (165 ft) to 100 meters (330 ft) from the burrow. Depending on the level of disturbance, a smaller buffer may be established as determined by the Qualified Biologist based on the factors listed above and potential use of sound and visual barriers such as hay bales.

- If burrowing owl burrow avoidance is infeasible during the non-breeding season or during the breeding season (February 1 through August 31), where resident owls have not yet begun egg laying or incubation, or where the juveniles are foraging independently and capable of independent survival, the Lead Biologist or Qualified Biological Monitors shall implement a passive relocation program consistent with Appendix E1 (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) in consultation with CDFW under CESA. A 2081 ITP shall be obtained from CDFW prior to passive relocation of burrowing owl(s).
- A habitat mitigation plan shall be developed in coordination with the County and CDFW for loss of active burrowing owl burrow sites if implementation of a passive relocation plan is necessary and/or burrowing owl are documented to nest on site or within 500 feet of the project impact site. This shall be based upon the portion of the Project that overlaps with the owl(s) primary foraging area around the burrow site (approximately 500 foot buffer) to be replaced a minimum 1:1 ratio.

BIO-4.3 Measures for American Badger

- If the Lead Biologist or Qualified Biological Monitors determines that a potential American badger dens are present on-site but inactive, the Qualified Biologist shall excavate the dens by hand to prevent badgers from re-using them during construction.
- If the Lead Biologist or Qualified Biological Monitors determines that potential dens may be active, an on-site passive relocation program shall be implemented. This program shall consist of excluding badgers from occupied burrows by installation of one-way doors at burrow entrances, remote camera monitoring of the burrow for one week to confirm usage has been discontinued, and excavation and collapse of the burrow to prevent reoccupation. After the Lead Biologist or Qualified Biological Monitors determines that badgers have stopped using active dens within the Project site, the dens shall be hand-excavated to prevent re-use during construction.
- If a potential den is observed, a non-disturbance buffer no less than 30 ft. from the den shall be established, restricting all ground-disturbing activities, such as vegetation clearance or grading, from occurring within the buffer. The buffer shall be demarcated using brightly colored flagging and the buffer may only be reduced at the discretion of the Lead Biologist or Qualified Biological Monitors. Removal of the buffer shall only occur if the Lead Biologist or Qualified Biological Monitors determines the potential den is inactive.

BIO-5 Mitigation Measures for Nesting Birds and Raptors

BIO-5.1 Pre-construction Surveys

If construction is scheduled to commence during the non-breeding season (September 1 to January 31), no pre-construction surveys or additional measures with regard to nesting birds and other raptors are required. To avoid impacts to nesting birds in the Project site, the Lead Biologist or Qualified Biological Monitors shall conduct pre-construction surveys of all potential nesting habitat within the Project site for Project activities that are initiated during the breeding season (February 1 to August 31). The raptor survey shall focus on potential nest sites (i.e., utility poles and trees) within a 300 ft buffer around the Project site. These surveys shall be conducted no less than 7 days prior to ground-disturbing activities without prior agency approval. The Lead Biologist or Qualified

Biological Monitors must be able to determine the status and stage of nesting migratory birds and all locally breeding raptor species without causing intrusive disturbance.

BIO-5.2 Buffers

If active nests are found, a suitable buffer as determined by the Lead Biologist or Qualified Biological Monitors (e.g., 200-300 ft for common raptors; 30-50 ft for passerines, 0.5 mile for golden eagle) shall be established around active nests, and no construction within the buffer shall be allowed until the Lead Biologist or Qualified Biological Monitors has determined that the nest is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest). Buffers may be reduced at the discretion of the Lead Biologist or Qualified Biological Monitors based on Project activity, line of sight, tolerance of individuals, and stage of the nest.

6.2 Sensitive Plant Communities and Critical Habitats

No sensitive plant communities or critical habitat is present in the APE; therefore, no mitigation is recommended.

6.3 Jurisdictional Waters and Wetlands

The proposed Project will avoid and implement a 50 ft buffer from potentially jurisdictional features. However, the proposed Project could result in indirect impacts to potentially protected waters. The following mitigation measure is recommended and may be implemented to avoid indirect impacts to potentially protected resources.

BIO-6 Mitigation Measures for Jurisdictional Waters

BIO-6.1 Avoidance and Minimization

Jurisdictional features within the APE shall be avoided during Project development, demarcated using brightly colored flagging, marked as Environmentally Sensitive Areas (ESAs), and fenced off. Construction personnel shall be instructed to avoid these areas and compliance with this measure shall be covered in the WEAP and biological monitoring and reporting. The following measures shall be implemented to prevent potential indirect impacts to jurisdictional features: (Note: any activities that would result in impacts to waters of the US and/or waters of the State would be required to receive issuance of regulatory permits from USACE, CDFW and/or CRRWQCB.)

- Any material/spoils generated from Project development shall be located away from jurisdictional areas or special-status habitat and protected from storm water run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 ft from the top of a bank.
- Any spillage of material shall be stopped if it can be done safely. The contaminated area shall be cleaned, and any contaminated materials properly disposed of. For all spills, the Project foreman or designated environmental representative shall be notified.

6.4 Wildlife Movement

The APE does not occur within a corridor that links between or among larger habitat areas on a regional basis and is not within any areas mapped as Essential Connectivity Areas by the California Essential Habitat Connectivity Project. Local wildlife movement has potential to be affected by Project development; however, this impact would not be significant due to the large expanses of open desert scrub habitat suitable for wildlife movement in the area surrounding the APE. Therefore, no mitigation is recommended.

6.5 Local Policies and Ordinances

The proposed Project would require a development permit from the San Bernardino County Planning Department, and therefore would be designed in compliance with applicable San Bernardino County policies and ordinances. The Project has no potential to impact trees protected by the County; therefore, the Project shall be compliant with the County Development Code. Mitigation of potential impacts to species protected under the Desert Native Plants Act is outlined in mitigation measure BIO-1. No further mitigation is recommended outside of adherence to previously described regulations and policies.

6.6 Adopted or Approved Plans

The proposed Project occurs on private land and is not subject to the DRECP or West Mojave Plan. The APE is not located within any other local, regional, or State conservation planning area. Therefore, no mitigation is recommended.

6.7 Executive Order 13112, Executive Order 13751

Executive Orders 13112 and 13751 were enacted to take steps to prevent the introduction and spread of invasive species and to support efforts to eradicate and control invasive species that are established. The following mitigation measure is recommended to maintain the general ecological integrity of the Project site and prevent the introduction and spread of invasive species.

BIO-7 Mitigation Measures for Best Management Practices

BIO-7.1 Invasive Weed Prevention

Prior to the start of Project development, an Invasive Weed Prevention and Management Program shall be developed by the Lead Biologist or Qualified Biological Monitors approved by the County to prevent, to the extent feasible, invasion of non-native plant species into the Project site. A list of target species shall be included, along with measures for early detection and eradication. All temporarily disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding or other soil amendments that discourage invasives shall occur where no construction activities have occurred within 6 weeks since ground disturbing activities ceased. If exotic species invade these areas, weed removal shall occur in consultation with the Lead Biologist or Qualified Biological Monitors.

BIO-7.2 Best Management Practices

General requirements that shall be followed by construction personnel are listed below.

- The contractor shall clearly delineate the construction limits and prohibit any construction related traffic outside these boundaries.
- Project-related vehicles shall observe a 15-mile-per-hour speed limit within unpaved roads.
- Project-related vehicles and construction equipment shall restrict off-road travel outside of the designated construction area. Cross-country travel is prohibited.
- Project-related vehicles and construction equipment shall be cleaned before exiting the Project site and track out controls shall be implemented at the entrance(s) and exit(s) of the Project site to minimize the amount of sediment, dirt, mud, etc. from being tracked out of the Project site.
- Project-related vehicles and construction equipment shall be cleaned before entering the Project site to prevent the potential spread of invasive species.
- All open trenches shall be fenced or sloped, and open pipes shall be capped or covered to prevent entrapment of wildlife species. Openings shall be inspected for the presence of wildlife species prior to fencing, sloping, capping, or covering.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during proposed Project construction shall be cleaned up daily and disposed of in closed containers only.
- No deliberate feeding of wildlife shall be allowed.
- No pets shall be allowed on the Project site.
- Except for authorized personnel, no firearms shall be allowed on the Project site.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas and greater than 50 ft from the jurisdictional aquatic resources.
- If construction must occur at night (between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife.
- All equipment used on site shall be properly maintained such that no leaks of oil, fuel, or residues will take place. Provisions shall be in place to remediate any accidental spills.
- Any observation of a dead, injured, or entrapped special-status species shall immediately be reported to the construction foreman and biological monitor. The observation shall be reported to all appropriate communications with the regulatory agencies.

6.8 Coastal Zone, Wild and Scenic Rivers, Essential Fish Habitat, Coastal Barrier Resources System, Executive Order 11988, Executive Order 11990

The APE is not located within or adjacent to the Coastal Zone, federally designated Wild and Scenic Rivers, Essential Fish Habitat, lands covered by the Coastal Barrier Resources System, federally designated floodplains, or federally designated wetlands. As such, the Coastal Zone Management Act, Wild Scenic Rivers Act, Magnuson-Stevens Fishery Conservation and Management Act, Coastal Barrier Resources Act, Executive Order 11988, and Executive Order 11990 are not applicable to the proposed Project and no mitigation is recommended.

7 Limitations, Assumptions, and Use Reliance

This General Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological and/or protocol surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, wildlife species could occupy the site on a transient basis or re-establish populations in the future. Field studies conducted were based on current industry practices which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are derived from field reconnaissance, jurisdictional areas, review of online databases, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDDB, may vary with regard to accuracy and completeness. In particular, the CNDDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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9 Certification

The report must include the certification statement within the body of the report as shown below.


CERTIFICATION: “I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a nondisclosure or consultant confidentiality agreement with the project applicant or applicant’s representative and that I have no financial interest in the project.”

Date: March 7, 2024 Signature: 
 Report Author: Nicholas Fager


Include names and signatures for those performing fieldwork.

1) Fieldwork Performed by:


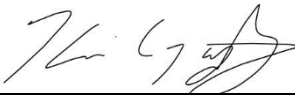
 Amy Leigh Trost, Biologist

2) Fieldwork Performed by:



 Nicholas Fager, Biologist

3) Fieldwork Performed by:



 Casey Clark, Biologist

4) Fieldwork Performed by:


 Kevin Gugerty, Biologist




 Bryant Reynolds, Biologist




 Genelle Watkins, Arborist

Check here if adding any additional names/signatures, below or on other side of page.



 Andrea Maben
 Biologist (Project Manager)



 Angie Harbin
 Director of Natural Resources

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Appendix A

Regulatory Setting

Regulatory Setting

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g., U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e., California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g., Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Executive orders and agencies with the responsibility for protection of biological resources with potential to occur in the Area of Potential Effects (APE) include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Colorado River Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes, state-listed species, Species of Special Concern, and nesting birds)
- San Bernardino County Development Code
- San Bernardino Countywide Plan Policy Plan

U.S. Army Corps of Engineers

The United States Army Corps of Engineers (USACE), under provisions of Section 404 of the Clean Water Act (CWA) and USACE implementing regulations, has jurisdiction over the placement of dredged or fill material into “waters of the United States.” Congress enacted the CWA “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” In practice, the boundaries of certain waters subject to USACE jurisdiction under Section 404 have not been fully defined. Previous regulations codified in 1986 defined “waters of the United States” as traditional navigable waters, interstate waters, all other waters that could affect interstate or foreign commerce, impoundments of waters of the United States, tributaries, the territorial seas, and adjacent wetlands.

USACE jurisdictional limits are typically identified by the Ordinary High-Water Mark (OHWM) or the landward edge of adjacent wetlands (where present). The OHWM is the “line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area” (33 CFR 328.3).

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). The USACE’s delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology.

Colorado River Basin Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Regional Water Quality Control Board (RWQCB) have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Colorado River Basin Regional Water Quality Control Board (CRBRWQCB) administers actions under this general order for isolated waters not subject to federal jurisdiction in the APE and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue capture, or kill. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an

Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated.

The CDFW also enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided.

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act. CDFW administers these requirements.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species in special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA's permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Perennial, intermittent, and ephemeral streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over activities that divert, obstruct, or alter the channel, bed, or bank of any river, stream or lake.

Executive Order 13112, Executive Order 13751

Executive Orders 13112 and 13751 direct actions to prevent the introduction and spread of invasive species and to support efforts to eradicate and control invasive species that are established. Executive Order 13112 created a coordinating body, the National Invasive Species Council (Council), to oversee implementation of the order, encourage proactive planning and action, develop recommendations for international cooperation, and take other steps to improve the federal response to invasive species. Executive Order 13751 amends Executive Order 13112 and directs actions to continue coordinated federal prevention and control efforts related to invasive species. This order expands the membership of the Council, clarifies the operations of the Council; incorporates considerations of human and environmental health, climate change, technological innovation, and other emerging priorities into federal efforts to address invasive species.

San Bernardino Countywide Development Code

Per Chapter 88.01 of the San Bernardino County Development Code (plant protection and management), a permit is required where protected trees or plants are proposed for removal or relocation. Chapter 88.01 also requires that removal actions of all plants protected or regulated by the Desert Native Plants Act (Food and Agricultural Code Sections 80001 *et seq.*) shall comply with the provisions of the Act before the issuance of a development permit or approval of a land use application.

San Bernardino Countywide Plan Policy Plan

The San Bernardino Countywide Plan Policy Plan (Countywide Plan) identifies the Federal, State, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by San Bernardino County (County) during the decision-making process for any project that could impact biological resources. The Countywide Plan includes a Renewable Energy and Conservation Element, which aims to maintain the natural and scenic values of the landscape while providing safe and reliable renewable energy sources for California. The element provides goals, policies, and implementation measures to encourage sustainable energy production and consumption while protecting the environmental resources of San Bernardino County.

Section IV – Environmental Compatibility

- **Policy 4.1:** Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.
- **Policy 4.4:** Encourage siting, construction and screening of RE generation facilities to avoid, minimize or mitigate significant changes to the visual environment including minimizing light and glare.
 - **4.4.1:** Reduce visual impacts through a combination of minimized reflective surfaces, context-sensitive color treatments, nature-oriented geometry, minimized vegetation clearing under and around arrays, conservation of pre-existing native plants, replanting of native plants as appropriate, maintenance of natural landscapes around the edges of facility complexes, and lighting design to minimize night-sky impacts, including attraction of and impact to nocturnal migratory birds.
- **Policy 4.7:** RE Project area selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation:
 - Avoid sensitive habitat, including wildlife corridors, when feasible, during through site selection and project design.
 - Where necessary and feasible, conduct mitigation on-site.
 - When on-site habitat mitigation is not possible or adequate, conduct establish mitigation off-site in an area designated for habitat conservation.
- **Policy 4.8:** Encourage mitigation for RE generation facility projects to locate habitat conservation offsets on public lands where suitable habitat is available.
 - **4.8.1:** Collaborate with appropriate state and Federal agencies to facilitate mitigation/habitat conservation activities on public lands.

- **Policy 4.9:** Encourage RE facility developers to design projects in ways that provide sanctuary (i.e., a safe place to nest, breed and/or feed) for native bees, butterflies and birds where feasible and appropriate, according to expert recommendations.

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Appendix B

Site Photographs



Photograph 1. View of Parcel 061213101 from the southwest corner, facing northeast.



Photograph 2. View of Parcel 061213101 from the southeast corner, facing northwest.



Photograph 3. View of Parcel 061213101 from the northeast corner, facing southwest.



Photograph 4 View of Parcel 061213101 from the northwest corner, facing southeast.



Photograph 5. Off-highway vehicle tracks in Parcel 061213101, facing northeast.



Photograph 6. Roadside memorial along western perimeter of Parcel 061213101, facing north.



Photograph 7. Off-highway vehicle road/trail in middle of Parcel 061213101, facing southeast.



Photograph 8. Utility pole line and off-highway vehicle tracks along western perimeter of Parcel 061213101, facing south.



Photograph 9. Trash and furniture dumped near eastern end of Parcel 061213101, facing east.



Photograph 10. Representative photograph of Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance) distribution in the middle portion of Parcel 061213101, facing south.



Photograph 11. Surface flow along western perimeter of Parcel 061213101, facing northwest.



Photograph 12. Potential desert tortoise burrow in northeastern portion of Parcel 061213101 in October 2023, facing south.



Photograph 13. Potential desert tortoise burrow in northeastern portion of Parcel 061213101 in October 2024, facing south.



Photograph 14. Potential desert tortoise burrow and wildlife cameras in northeastern portion of Parcel 061213101, facing south.

Appendix C

Floral and Faunal Compendium

Species Observed Within the Area of Potential Effects

Scientific Name	Common Name	Status	Native or Introduced
Plants			
<i>Ambrosia dumosa</i>	white bursage	–	Native
<i>Cylindropuntia ramosissima</i>	pencil cholla	–	Native
<i>Ephedra viridis</i>	Mormon tea	–	Native
<i>Larrea tridentata</i>	creosote bush	–	Native
<i>Pectis papposa</i>	common chinchweed	–	Native
<i>Schismus arabicus</i>	Mediterranean grass	–	Non-native
Wildlife			
Birds			
<i>Cathartes aura</i>	turkey vulture	–	Native
<i>Corvus corax</i>	common raven	–	Native
<i>Haemorhous mexicanus</i>	house finch	–	Native
<i>Sayornis nigricans</i>	black phoebe	–	Native
<i>Setophaga coronata</i>	yellow-rumped warbler	–	Native
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	–	Native
Mammals			
<i>Ammospermophilus leucurus</i>	white-tailed antelope squirrel	–	Native
<i>Canis latrans</i>	coyote	–	Native
Reptiles			
<i>Aspidoscelis tigris</i>	western whiptail lizard	–	Native
<i>Callisaurus draconoides</i>	Zebra-tailed lizard	–	Native

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Appendix D

Special-Status Species Evaluation Table

Special-Status Plant and Wildlife Species in the Regional Vicinity of the Area of Potential Effects

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
Plants and Lichens				
<i>Allium parishii</i> Parish's onion	None/4.3 G3/S3	Perennial bulbiferous herb. Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Rocky. Elevations: 2955-5695ft. (900-1735m.) Blooms Apr-May.	Not Expected	Preferred Mojavean desert scrub habitat is present in Area of Potential Effects (APE) but site lacks rocky conditions and is not within elevation range of species.
<i>Astragalus bernardinus</i> San Bernardino milk-vetch	None/1B.2 G3/S3	Perennial herb. Joshua tree woodland, pinyon and juniper woodland. Carbonate (often), granitic (often). Elevations: 2955-6560ft. (900-2000m.) Blooms Apr-Jun.	Not Expected	Preferred habitat is not present in APE and is not within elevation range of species.
<i>Astragalus tricarinatus</i> triple-ribbed milk-vetch	FE/1B.2 G2/S2	Perennial herb. Joshua tree woodland, sonoran desert scrub. Gravelly (sometimes), sandy (sometimes). Elevations: 1475-3905ft. (450-1190m.) Blooms Feb-May.	Not Expected	Preferred habitat is not present in APE. Species has been observed approximately 9 miles northeast of APE.
<i>Ayenia compacta</i> California ayenia	None/2B.3 G4/S3	Perennial herb. Mojavean desert scrub, sonoran desert scrub. Rocky. Elevations: 490-3595ft. (150-1095m.) Blooms Mar-Apr.	Moderate	Preferred Mojavean desert scrub habitat is present in APE. Only species observation within 9 quads of APE occurred approximately 8 miles southeast of APE at the base of Queen Mtn.
<i>Boechera dispar</i> pinyon rockcress	None/2B.3 G3/S3	Perennial herb. Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Granitic, gravelly. Elevations: 3935-8335ft. (1200-2540m.) Blooms Mar-Jun.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks gravelly conditions and is not within elevation range of species.
<i>Calochortus striatus</i> alkali mariposa-lily	None/1B.2 G3/S2S3	Perennial bulbiferous herb. Chaparral, chenopod scrub, meadows and seeps, Mojavean desert scrub. Alkaline, mesic. Elevations: 230-5235ft. (70-1595m.) Blooms Apr-Jun.	Not Expected	Preferred habitat is not present in APE. Most recent species observation occurred approximately 8 miles south of APE in 2014 in the Indian Cove quadrant.
<i>Castilleja montigena</i> Heckard's paintbrush	None/4.3 G3/S3	Perennial herb (hemiparasitic). Lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest. Elevations: 6400-9185ft. (1950-2800m.) Blooms May-Aug.	Not Expected	Preferred habitat is not present in APE and APE is not within elevation range of species.

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Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
<i>Coryphantha alversonii</i> Alverson's foxtail cactus	None/4.3 G3/S3	Perennial stem. Mojavean desert scrub, sonoran desert scrub. Sandy or rocky habitat; sites from gravelly slopes and dissected alluvial fans. Granite substrate. Elevations: 245-5005ft. (75-1525m.) Blooms Apr-Jun(Sep-Oct).	Low	Preferred desert scrub habitat is present within APE but site lacks gravelly slopes and granite substrate.
<i>Cymopterus multinervatus</i> purple-nerve cymopterus	None/2B.2 G4G5/S2	Perennial herb. Mojavean desert scrub, pinyon and juniper woodland. Sandy or gravelly places. Elevations: 2590-5905ft. (790-1800m.) Blooms Mar-Apr.	Not Expected	Preferred Mojavean desert scrub habitat is present but APE is not within elevation range of species. Only species observation within 9 quads of APE occurred approximately 9 miles south of APE on an unknown date.
<i>Erigeron parishii</i> Parish's daisy	FT/1B.1 G2/S2	Perennial herb. Mojavean desert scrub, pinyon and juniper woodland. Often on carbonate; limestone mountain slopes; often associated with drainages. Sometimes on granite. Elevations: 2625-6560ft. (800-2000m.) Blooms May-Aug.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site is not within elevation range of species. Species was last observed in 2011 near Quail Mtn. in Indian Cove quadrant.
<i>Eschscholzia androuxii</i> Joshua Tree poppy	None/4.3 G3/S3	Annual herb. Joshua tree woodland, Mojavean desert scrub. Desert washes, flats, and slopes. Sandy, gravelly, and/or rocky soils. Elevations: 1920-5530ft. (585-1685m.) Blooms Feb-May(Jun).	Moderate	Preferred Mojavean desert scrub habitat is present in APE. Nearest observation to APE occurred in Joshua Tree North quad.
<i>Euphorbia vallis-mortae</i> Death Valley sandmat	None/4.2 G3/S3	Perennial herb. Mojavean desert scrub. Sandy or gravelly sites. Elevations: 755-4790ft. (230-1460m.) Blooms May-Oct.	Moderate	Preferred Mojavean desert scrub habitat is present in APE. Nearest observation to APE occurred in Joshua Tree North quad.
<i>Funastrum utahense</i> Utah vine milkweed	None/4.2 G4/S4	Perennial herb. Mojavean desert scrub, Sonoran desert scrub. Sandy or gravelly sites in the desert. Elevations: 330-4710ft. (100-1435m.) Blooms (Mar)Apr-Jun(Sep-Oct).	Moderate	Preferred Mojavean desert scrub habitat is present in APE. Nearest observation to APE occurred in Joshua Tree North quad in 2008.
<i>Galium angustifolium ssp. gracillimum</i> slender bedstraw	None/4.2 G5T4/S4	Perennial herb. Joshua tree woodland, Sonoran desert scrub. Shaded places among granite boulders in canyons, and on outcrops. Elevations: 425-5085ft. (130-1550m.) Blooms Apr-Jun(Jul).	Not Expected	Preferred habitat is not present in APE.
<i>Galium munzii</i> Munz's bedstraw	None/4.3 G4G5/S4	Perennial herb. Great basin scrub, lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest. Dry, open, often rocky slopes; shady canyon bottoms. Elevations: 3610-10925ft. (1100-3330m.) Blooms May-Jul.	Not Expected	Preferred habitat is not present in APE and APE is not within elevation range of species.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
<i>Grusonia parishii</i> Parish's club-cholla	None/2B.2 G3G4/S2	Perennial stem. Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky sites. Elevations: 3013-5000ft. (300-1524m.) Blooms May-Jun(Jul).	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but APE is not within elevation range of species.
<i>Hulsea vestita ssp. parryi</i> Parry's hulsea	None/4.3 G5T4/S4	Perennial herb. Lower montane coniferous forest, pinyon and juniper woodland, upper montane coniferous forest. Rocky sites; limestone or granite; sagebrush to fir forest. Elevations: 4495-9500ft. (1370-2895m.) Blooms Apr-Aug.	Not Expected	Preferred habitat is not present in APE and APE is not within elevation range of species.
<i>Jaffueliobryum raii</i> Rau's jaffueliobryum moss	None/2B.3 G4/S2	Moss. Alpine dwarf scrub, chaparral, Mojavean desert scrub, Sonoran desert scrub. Dry openings, rock crevices. On dry sandstone or limestone. Elevations: 1610-6890ft. (490-2100m.)	Not Expected	Preferred dry sandstone or limestone crevices are not present in APE. Nearest observation to APE occurred in Indian Cove quad in 1981.
<i>Jaffueliobryum wrightii</i> Wright's jaffueliobryum moss	None/2B.3 G5/S2S3	Moss. Alpine dwarf scrub, Mojavean desert scrub, pinyon and juniper woodland. Dry openings, rock crevices, carbonate. Elevations: 525-8205ft. (160-2500m.)	Not Expected	Preferred dry openings and rock crevices are not present in APE. Nearest observation to APE occurred in Indian Cove quad in 2011.
<i>Johnstonella costata</i> ribbed cryptantha	None/4.3 G4G5/S4	Annual herb. Desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy and gravelly places. Elevations: -195-1640ft. (-60-500m.) Blooms Feb-May.	Moderate	Preferred habitat is present in APE.
<i>Lasthenia glabrata ssp. coulteri</i> Coulter's goldfields	None/1B.1 G4T2/S2	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	Not Expected	Preferred habitat is not present in APE.
<i>Linanthus maculatus ssp. maculatus</i> Little San Bernardino Mtns. linanthus	None/1B.2 G2T2/S2	Annual herb. Desert dunes, Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub. Sandy places. Usually in light-colored quartz sand; often in wash or bajada. Elevations: 460-4005ft. (140-1220m.) Blooms Mar-May.	Moderate	Preferred desert scrub habitat is present in APE. Nearest species observation to APE occurred approximately 4 miles to the southwest within Sunfair quadrant.
<i>Matelea parvifolia</i> spear-leaf matelea	None/2B.3 G5/S3	Perennial herb. Mojavean desert scrub, Sonoran desert scrub. Dry rocky ledges and slopes. Elevations: 1445-3595ft. (440-1095m.) Blooms Mar-May(Jul).	Low	Preferred Mojavean desert scrub habitat is present in APE but site lacks rocky ledges.

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Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
<i>Menodora spinescens</i> var. <i>mohavensis</i> Mojave menodora	None/1B.2 G4T2/S2	Perennial deciduous shrub. Mojavean desert scrub. Rocky hillsides, canyons. Andesite gravel. Elevations: 2265-6560ft. (690-2000m.) Blooms Apr-May.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks rocky hillsides and canyons and is not within elevation range of species.
<i>Monardella robisonii</i> Robison's monardella	None/1B.3 G3/S3	Perennial rhizomatous herb. Pinyon and juniper woodland. Rocky desert slopes, often among granitic boulders. Elevations: 2787-4920ft. (610-1500m.) Blooms (Feb)Apr-Sep(Oct).	Not Expected	Preferred habitat is not present in APE.
<i>Muhlenbergia appressa</i> appressed muhly	None/2B.2 G4/S3	Annual herb. Coastal scrub, Mojavean desert scrub, valley and foothill grassland. Rocky slopes, canyon bottoms. Elevations: 65-5250ft. (20-1600m.) Blooms Apr-May.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks rocky slopes and canyons.
<i>Muilla coronata</i> crowned muilla	None/4.2 G3/S3	Perennial bulbiferous herb. Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Mostly on barren flats and ridges in sandy, granitic soils. Elevations: 3280-6430ft. (670-1960m.) Blooms Mar-Apr(May).	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks barren flats and ridges and is not within elevation range of species.
<i>Penstemon clevelandii</i> var. <i>mohavensis</i> Mojave beardtongue	None/1B.2 G5T3?/S2	Mojavean desert scrub, pinyon and juniper woodland. Rocky, granitic (often). 3035-5315ft. (925-1620m.) Blooms Mar-May.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks rocky, granitic habitat and is not within elevation range of species.
<i>Penstemon thurberi</i> Thurber's beardtongue	None/4.2 G5/S3	Perennial herb. Chaparral, Joshua tree woodland, pinyon and juniper woodland, Sonoran desert scrub. Dry sandy washes. Elevations: 1640-4005ft. (500-1220m.) Blooms May-Jul.	Not Expected	Preferred habitat is not present in APE.
<i>Portulaca halimoides</i> desert portulaca	None/4.2 G5/S3	Annual herb. Joshua tree woodland. Sandy washes, flats. Elevations: 3280-3935ft. (1000-1200m.) Blooms Sep.	Not Expected	Preferred habitat is not present in APE and APE does not fall within elevation range of species.
<i>Saltugilia latimeri</i> Latimer's woodland-gilia	None/1B.2 G3/S3	Annual herb. Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. Elevations: 1310-6235ft. (400-1900m.) Blooms Mar-Jun.	Low	Preferred desert scrub habitat is present in APE. Most recent species observation occurred approximately 8 miles south of APE in 2014 in Queen Mtn. quadrant.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
<i>Sidalcea neomexicana</i> salt spring checkerbloom	None/2B.2 G4/S2	Perennial herb. Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas. Alkali springs and marshes. Elevations: 50-5020ft. (15-1530m.) Blooms Mar-Jun.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but site lacks alkali spring and marshes.
<i>Sphaeralcea rusbyi</i> var. <i>eremicola</i> Rusby's desert-mallow	None/1B.2 G4T2/S2	Perennial herb. Joshua tree woodland, Mojavean desert scrub. In creosote bush scrub, blackbush scrub, Joshua tree woodland; sometimes on carbonate; sometimes in washes. Elevations: 3200-5395ft. (975-1645m.) Blooms Mar-Jun.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE but APE does not fall within elevation range of species.
<i>Streptanthus bernardinus</i> Laguna Mountains jewelflower	None/4.3 G3G4/S3S4	Perennial herb. Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. Elevations: 2200-8205ft. (670-2500m.) Blooms May-Aug.	Not Expected	Preferred habitat is not present in APE.
<i>Tetracoccus hallii</i> Hall's tetracoccus	None/4.3 G4/S4	Perennial deciduous shrub. Mojavean desert scrub, Sonoran desert scrub. Elevations: 100-3935ft. (30-1200m.) Blooms Jan-May.	Low	Preferred desert scrub habitat is present in APE but nearest observation to APE occurred in 1941 more than 10 miles to the south.
<i>Wislizenia refracta</i> ssp. <i>refracta</i> jackass-clover	None/2B.2 G5T5?/S1	Annual herb. Desert dunes, Mojavean desert scrub, playas, Sonoran desert scrub. Sandy washes, roadsides, alkaline flats. Elevations: 1970-2625ft. (600-800m.) Blooms Apr-Nov.	Moderate	Preferred Mojavean desert scrub habitat is present in APE. Species was last observed within 9 quads of APE in 2018 approximately 6 miles southwest of APE in Twentynine Palms quadrant.
<i>Yucca brevifolia</i> Western Joshua Tree	None/SCT G3G4/SNR CBR	Perennial Broadleaf evergreen. Joshua tree woodland, montane chaparral, pinyon and juniper woodland, Sonoran and Mojavean desert scrub. Elevation:1600-7200ft (490-823m. Blooms Mar - May.	Not Expected	No species observations were recorded during surveys.
Wildlife				
Invertebrates				
<i>Rhopalolemma robertsi</i> Roberts' rhopalolemma bee	None/None G1/S1	Known only from the type locality 8 km south of Twentynine Palms.	Not Expected	Species observations are extremely rare. Only recorded observation of species within 9 quads of APE occurred in 1973 approximately 12 miles south of APE in Queen Mtn. quadrant.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
Reptiles				
<i>Anniella stebbinsi</i> Southern California legless lizard	None/SSC G3/S3	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Not Expected	APE lacks loose soils with a high moisture content. Only reported observations within 9 quads of APE occurred approximately 13 miles to the southeast in Joshua Tree National Park.
<i>Crotalus ruber</i> red-diamond rattlesnake	None/SSC G4/S3	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Not Expected	Preferred Mojavean desert scrub habitat is present in APE; however, APE lacks dense vegetation and rocky areas. Only observation of species within 9 quads of APE occurred in 1945 approximately 5 miles to the northeast.
<i>Gopherus agassizii</i> desert tortoise	FT/ST G3/S2S3	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Low	Suitable desert scrub habitat is present in APE. One potential burrow was observed during desert tortoise survey on-site.
<i>Uma scoparia</i> Mojave fringe-toed lizard	None/SSC G3G4/S3S4	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.	Not Expected	Preferred fine, wind-blown sand is not present in APE. Only observations of species within 9 quads of APE occurred in 1983 approximately 14 miles to the northwest and 10 miles to the northeast.
Birds				
<i>Aquila chrysaetos</i> golden eagle	FBGEPA/FP/ WL G5/S3	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Moderate (Foraging) None (Nesting)	Preferred desert habitat for foraging is present in APE. Only recorded species observation within 9 quads of APE occurred in 1980 approximately 10 miles south of the APE near Barker Dam.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
<i>Athene cunicularia</i> burrowing owl	None/SCE G4/S2	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Moderate	Preferred open desert habitat is present in APE. Species has often been observed approximately 8 miles west of APE in Joshua Tree North quadrant. No potential burrowing owl burrows were observed during surveys with the exception of the potential tortoise burrow.
<i>Falco mexicanus</i> prairie falcon	None/WL G5/S4	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Moderate (Foraging) None (Nesting)	Preferred foraging habitat is present in APE but nesting habitat is not present. Only species observation within 9 quads of APE occurred in the Indian Cove quadrant in 1977.
<i>Lanius ludovicianus</i> loggerhead shrike	None/SSC G4/S4	Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches, and require impaling sites, such as thorns, sharp twigs, or barbed wire, for skewering and manipulating their prey. Nests in densely foliated trees or shrubs	High	Preferred open foraging habitat is present in APE. Species has often been observed near APE in citizen science databases (iNaturalist).
<i>Toxostoma bendirei</i> Bendire's thrasher	None/SSC G4/S2	Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, palo verde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.	Moderate	Preferred habitat is present in APE. The most recent species observations within 9 quads of APE was recorded in 1986 in the Indian Cove quadrant.
<i>Toxostoma lecontei</i> Le Conte's thrasher	None/SSC G4/S3	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 2-8 feet above ground.	Moderate	Preferred desert scrub habitat is present in APE. Species was last observed within 9 quads of APE in 2010 approximately 8 miles west of APE.
<i>Vireo bellii pusillus</i> least Bell's vireo	FE/SE G5T2/S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Not Expected	Preferred riparian vegetation is not present in APE.
Mammals				
<i>Antrozous pallidus</i> pallid bat	None/SSC G4/S3	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for	Low (foraging) Not Expected (roosting)	Preferred foraging habitat is present but marginal roosting habitat occurs near APE.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
		roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.		
<i>Chaetodipus fallax pallidus</i> pallid San Diego pocket mouse	None/None G5T3T4/S3S4	Occurs in desert and arid coastal border areas in eastern San Diego, Riverside, and San Bernardino Counties. Habitats include desert wash, desert scrub, desert succulent scrub, and pinyon-juniper. Prefers sandy soils, usually with rocks or coarse gravel.	Not Expected	APE is not in predicted range of species. Nearest species observation to APE occurred in 1931 approximately 4.7 miles southeast of APE in Twentynine Palms quadrant. Most recent species observation occurred in 1950 in Joshua Tree South quadrant.
<i>Euderma maculatum</i> spotted bat	None/SSC G4/S3	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Typically forages in open terrain; over water and along washes. Feeds almost entirely on moths. Roosts in rock crevices in cliffs or caves. Occasionally roosts in buildings.	Low (foraging) Not Expected (roosting)	Preferred foraging habitat is present but marginal roosting habitat occurs near APE.
<i>Eumops perotis californicus</i> western mastiff bat	None/SSC G4G5T4/S3S4	Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground.	Low (foraging) Not Expected (roosting)	Preferred foraging habitat is present but marginal roosting habitat occurs near APE. Only recorded species observation within 9 quads of APE occurred in Indian Cove quadrant near Barker Dam in 1992.
<i>Lasiurus cinereus</i> hoary bat	None/None G3G4/S4	Typically roosts in trees in deciduous and coniferous forests and woodlands but occasionally roosts in rocks crevices. Forages in open areas, typically along riparian corridors or over water. Diet primarily consists of moths.	Not Expected	Roosting and foraging habitat is not present in APE.
<i>Lasiurus xanthinus</i> western yellow bat	None/SSC G4G5/S3	Occurs in arid regions of the southwestern United States. Typically found in riparian woodlands, oak or pinyon-juniper woodland, desert wash, palm oasis habitats, and urban or suburban areas. Roosts in trees, often between palm fronds.	Low (foraging) Not Expected (roosting)	Preferred foraging habitat is present but marginal roosting habitat occurs near APE.

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<i>Myotis thysanodes</i> fringed myotis	None/None G4/S3	Occurs in a variety of habitats including pinyon-juniper, valley foothill hardwood, and hardwood-coniferous forest. Roosts in caves, abandoned mines, buildings, and snags.	Not Expected	Preferred habitat is not present in APE.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	None/SSC G5/S3	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Not Expected	Preferred rocky areas with high cliffs are not present in APE.
<i>Nyctinomops macrotis</i> big free-tailed bat	None/SSC G5/S3	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Low (foraging) Not Expected (roosting)	Foraging habitat is present but roosting habitat is not present in APE.
<i>Ovis canadensis nelsoni</i> desert bighorn sheep	None/FP G4T3/S3	Widely distributed from the White Mtns in Mono Co. to the Chocolate Mtns in Imperial Co. Open, rocky, steep areas with available water and herbaceous forage.	Not Expected	Preferred habitat is not present in APE.
<i>Taxidea taxus</i> American badger	None/SSC G5/S3	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.	Moderate	Preferred habitat is present in APE; however, only recorded species observation within 9 quads of APE occurred in 1951 approximately 4.6 miles south of APE.
<i>Vulpis macrotis arsipus</i> desert kit fox	None/None G4/S4 CFGC Protected Furbearer	Widespread resident of the North American southwest, found in arid climates from southern Oregon and Idaho to Baja California and central Mexico. Can be found in grasslands, open desert scrub, and occasionally in farmland.	Moderate	Preferred habitat is present and species may den or occur transiently in APE.
Sensitive Natural Communities				
Desert Fan Palm Oasis Woodland	None/None G3/S3.2	Desert fan palm is native to the low, hot deserts of Southern California, where it can live for 80 to 90 years. Requires a constant supply of water so oases often occur along fault lines where uplifted layers of hard impermeable rock force underground water to the surface.	Not Expected	Natural community is not present in APE. APE consists of desert scrub and lacks trees

Scientific Name	Status	Habitat Requirements	Potential to Occur in Area of Potential Effects	Habitat Suitability/Observations
Regional Vicinity refers to within a 5- mile (CNDDDB) and 10-quad (CNPS) search radius of site.				
Status (Federal/State)		CRPR (CNPS California Rare Plant Rank)		
FE =	Federal Endangered	1B =	Rare, Threatened, or Endangered in California and elsewhere	
FT =	Federal Threatened	2A =	Presumed extirpated in California, but common elsewhere	
FC =	Federal Candidate	2B =	Rare, Threatened, or Endangered in California, but more common elsewhere	
FBGEPA = Federal Bald and Golden Eagle Protection Act				
SE =	State Endangered			
ST =	State Threatened	CRPR Threat Code Extension		
SCE =	State Candidate Endangered	.1 =	Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)	
SR =	State Rare	.2 =	Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)	
SSC =	CDFW Species of Special Concern	.3 =	Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)	
FP =	CDFW Fully Protected			
WL =	CDFW Watch List			
Other Statuses				
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			
GH or SH	Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery			
Additional notations may be provided as follows				
T –	Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)			
Q –	Questionable taxonomy that may reduce conservation priority			
? –	Inexact numeric rank			