Biological Technical Report City of Indio Avenue 50 Improvement Project

JUNE 2025

PREPARED FOR

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BIOLOGICAL TECHNICAL REPORT
CITY OF INDIO AVENUE 50 IMPROVEMENT PROJECT

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SWCA Project No. 75229

June 2025

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1 PROJECT DESCRIPTION AND LOCATION

The City of Indio Avenue 50 Improvement Project (Project) is located in Riverside County in the Cities of Indio and La Quinta in central Riverside County, California (Figure 1). The Project entails construction related to the expansion of Avenue 50, approximately from its intersection with Jefferson Street on the west to Botella Place on the east (Figure 2). The total roadway length expected to go under construction is about 2.5 miles.

This report presents the results of a biological assessment conducted by SWCA Environmental Consultants (SWCA) for the Project. For purposes of this biological assessment, the roadway expansion construction footprint follows the existing alignment of Avenue 50 with an additional 50-foot buffer on both sides of the road from centerline.

The Project area includes the alignment of Avenue 50. The Project area lies mostly on the Indio U.S. Geological Survey (USGS) 7.5-minute quadrangle and extends into the La Quinta USGS 7.5-minute quadrangle.

1.1 Site Characteristics

The Project area is within a designated rural section of the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). The region is characterized by arid conditions and high levels of disturbance and urbanization. The Project area ranges in elevation from about -20 to 80 feet above mean sea level (Google Earth 2024). Surrounding land uses include residential, rural residential, and public facilities, with pockets of undeveloped open space.

2 REGULATORY SETTING

The following sections summarize federal, state, and local laws, regulations, and policies relating to the plants, wildlife, and special-status habitats in the Project area. Only those regulations potentially applicable to the proposed project are included herein.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects endangered species and species threatened with extinction (federally listed species). The ESA operates in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Section 9 of the ESA prohibits the "take" of endangered or threatened wildlife species. The legal definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 United States Code [USC] 1532 [19]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] 17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR 17.3). Actions that result in take can result in civil or criminal penalties.

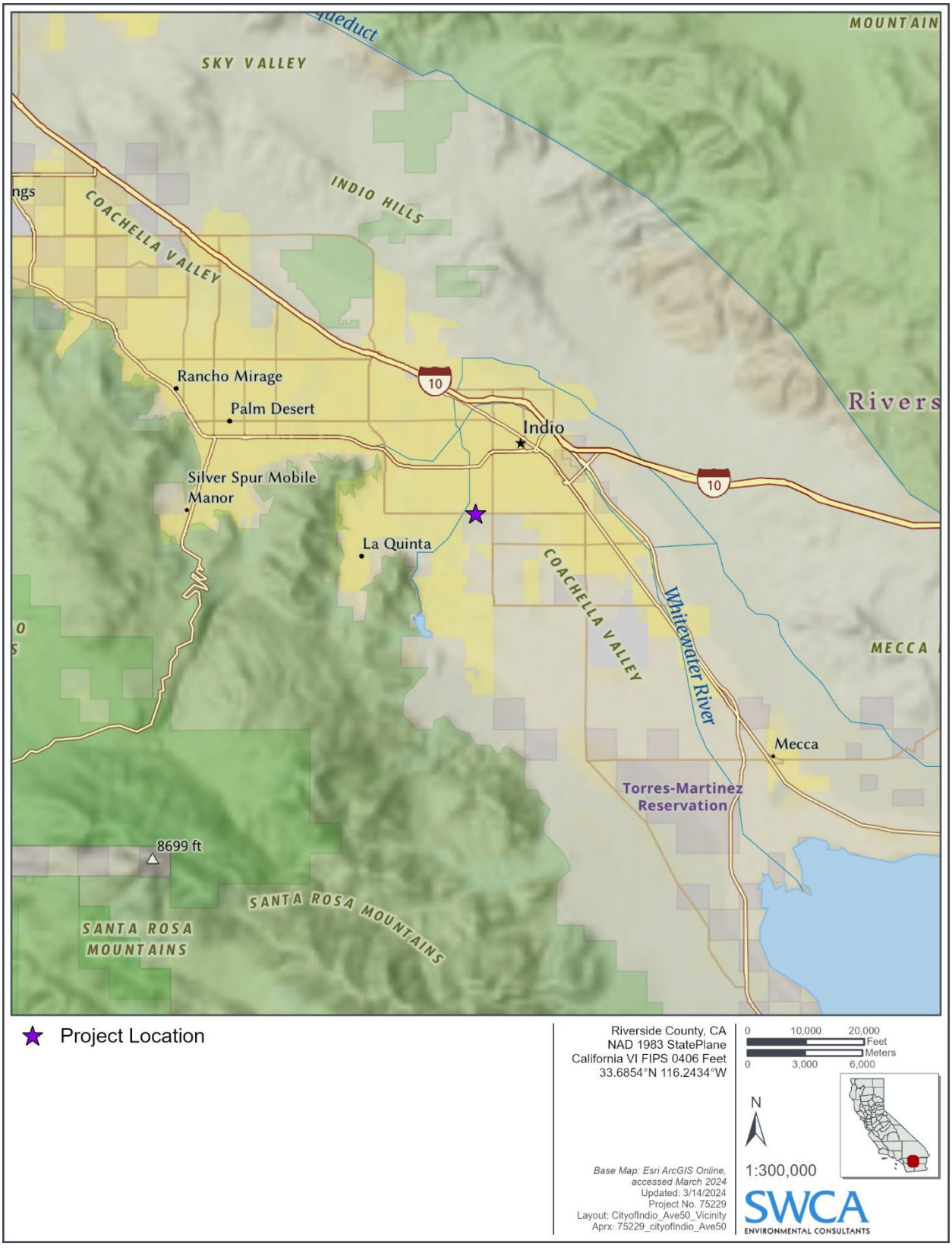


Figure 1. Project Vicinity.

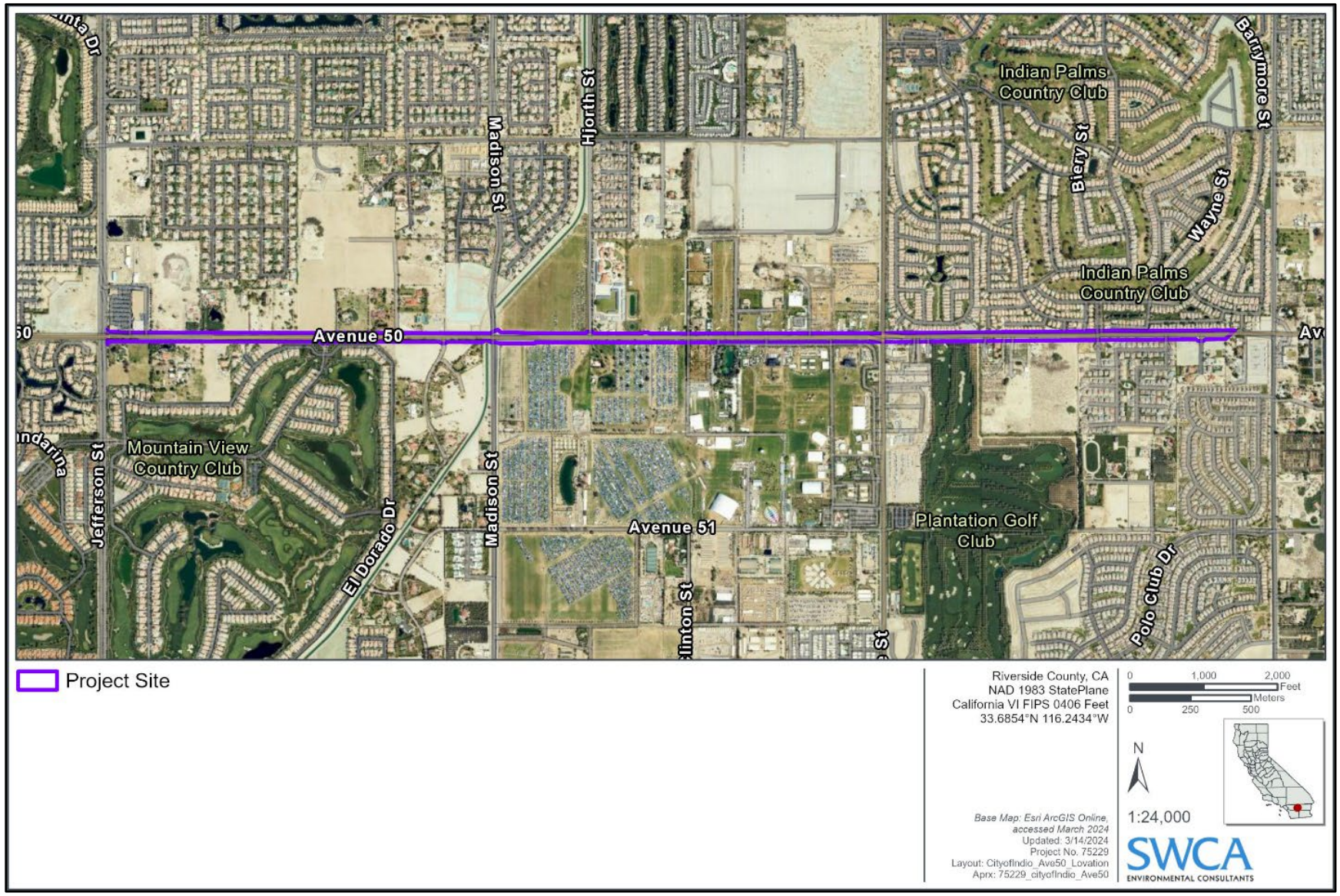


Figure 2. Project Location.

The U.S. Fish and Wildlife Service (USFWS) is authorized to issue permits under Sections 7 and 10 of the ESA. Section 7 mandates that all federal agencies consult with the USFWS for terrestrial species and/or National Marine Fisheries Service (NMFS) for marine species to ensure that federal agency actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. Any anticipated adverse effects require preparation of a biological assessment to determine potential effects of the project on listed species and critical habitat. If the project adversely affects a listed species or its habitat, the USFWS or NMFS prepares a Biological Opinion. The Biological Opinion may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat including "take" limits.

The ESA defines critical habitat as habitat deemed essential to the survival of a federally listed species. The ESA requires the federal government to designate "critical habitat" for any species it lists under the ESA. Under Section 7, all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its designated critical habitat. These complementary requirements apply only to federal agency actions, and the latter apply only to specifically designated habitat. A critical habitat designation does not set up a preserve or refuge, and applies only when federal funding, permits, or projects are involved (i.e., a federal nexus). Critical habitat requirements do not apply to activities on private land that do not involve a federal nexus.

Section 10 of the ESA includes provisions to authorize take that is incidental to, but not the purpose of, activities that are otherwise lawful. Under Section 10(a)(1)(B), the USFWS may issue permits (incidental take permits) for take of ESA-listed species if the take is incidental and does not jeopardize the survival and recovery of the species. To obtain an incidental take permit, an applicant must submit a habitat conservation plan outlining steps to minimize and mitigate permitted take impacts to listed species.

2.1.2 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits any person, unless permitted by regulations, to

> …pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention … for the protection of migratory birds . . . or any part, nest, or egg of any such bird. (16 USC 703)

The list of migratory birds includes nearly all bird species native to the United States. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the MBTA and excluded all nonnative species. Thus, it is illegal under the MBTA to directly kill or destroy a nest of nearly any native bird species.

2.1.3 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 USC 668–668c) prohibits anyone from "taking" bald eagles (*Haliaeetus leucocephalus*), including their parts, nests, or eggs, without a permit issued by the Secretary of the Interior. In 1962, Congress amended the act to cover golden eagles (*Aquila chrysaetos*). The BGEPA provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle . . . [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The BGEPA defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The 1962

amendments included a specific exemption for possession of eagles for religious purposes of Native American tribes; however, an Indian Religious Permit is required.

On November 10, 2009, the USFWS implemented new rules under the existing BGEPA, requiring USFWS permits for all activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity. Under USFWS rules (16 USC 22.3; 72 *Federal Register* 31,132, June 5, 2007), "disturb" means "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits and causes injury, death, or nest abandonment.

2.2 State Regulations

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the "taking" of listed species except as otherwise provided in state law. Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Under certain circumstances, the CESA applies these take prohibitions to species petitioned for listing (state candidates). Pursuant to the requirements of the CESA, state lead agencies (as defined under California Environmental Quality Act [CEQA] Public Resources Code Section 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFW encourages informal consultation on any proposed project that may impact a candidate species. The CESA requires the CDFW to maintain a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing under the CESA.

2.2.2 Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 5050 lists protected amphibians and reptiles, and Section 3515 prohibits take of fully protected fish species. Eggs and nests of fully protected birds are protected under Section 3511. Migratory non-game birds are protected under Section 3800, and mammals are protected under Section 4700. Except for take related to scientific research, all take of fully protected species is prohibited.

2.2.3 Nesting Birds and Raptors

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 provides protection for all birds of prey, including their eggs and nests.

2.2.4 Migratory Bird Protection

Take or possession of any migratory non-game bird as designated in the MBTA is prohibited by Section 3513 of the Fish and Game Code.

2.2.5 Bats

Fish and Game Code Section 4150 prohibits the take of bats, regardless of their listing status.

2.2.6 California Environmental Quality Act

The CEQA applies to discretionary actions directly undertaken, financed, or permitted by state or local government lead agencies. CEQA requires that a project's effects on environmental resources must be analyzed and assessed using criteria determined by the lead agency. CEQA defines a rare species in a broader sense than the definitions of threatened, endangered, or California species of concern. Under this definition, the CDFW can request additional consideration of species not otherwise protected.

2.2.7 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protected endangered and rare plants from take. The NPPA thus includes measures to preserve, protect, and enhance rare and endangered native plants.

The CESA has largely superseded the NPPA for all plants designated as endangered by the NPPA. The NPPA nevertheless provides limitations on take of rare and endangered species as follows: ". . . no person will import into this state, or take, possess, or sell within this State" any rare or endangered native plant, except in compliance with provisions of the CESA. Individual landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

2.2.7.1 CALIFORNIA DESERT NATIVE PLANTS ACT

The California Desert Native Plants Act protects non-listed California desert native plants from unlawful harvesting on public and private lands in the counties of Riverside, San Bernardino, Imperial, Inyo, Kern, Los Angeles, Mono, and San Diego (California Food and Agriculture Code, Sections 80001–80006, Division 23). A wide range of desert plants is protected under this act, including all species in the agave and cactus families. Harvest, transport, sale, or possession of specific native desert plants is prohibited without a valid permit or wood receipt and the required tags and seals. Species listed as rare, endangered, or threatened under federal or state law or regulations are excluded from this provision.

2.3 Federal, Regional, and Local Conservation Plans

2.3.1 Coachella Valley Multiple Species Habitat Conservation Plan

The Project is located within the CVMSHCP plan area (Coachella Valley Conservation Commission [CVCC] 2024a). The CVMSHCP (CVCC 2024b) was developed to address current and future state and federal Endangered Species Act issues within the approximately 1.2-million-acre plan area, excluding about 69,000 acres which are Indian Reservation Lands. This leaves approximately 1.1 million acres

addressed by the plan. This plan includes much of Central Riverside County east of Cabazon and includes nine incorporated cities: Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage. The CVMSHCP aims to balance environmental protection of the covered species with economic development of local cities within the plan area.

The CVMSHCP functions as a Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the federal ESA, and as a Natural Community Conservation Plan (NCCP) pursuant to California's Natural Communities Conservation Planning Act. The CVMSHCP provides a framework for the USFWS and CDFW to grant take authorization (i.e., incidental take permits) for species covered by the MSHCP which are ESA- and/or CESA-listed as threatened or endangered; take of these species without a permit would be unlawful. The CVMSHCP covers 27 species, not all of which are ESA- or CESA-listed. However, mitigation for impacts to both listed and non-listed species may be required pursuant to CEQA or other regulatory processes, and the CVMSHCP's Conservation Area provides an avenue for this mitigation. Furthermore, should any of the non-listed covered species be subsequently ESA- or CESA-listed, take authorization may be granted through the CVMSHCP framework.

The proposed Project is located outside designated conservation areas of the CVMSHCP. The proposed Project is not listed as a planned "Covered Activity" under the published CVMSHCP but is still considered to be a current Covered Activity pursuant to Section 7.1 of the CVMSHCP. According to Section 7.1 of the CVMSHCP, take authorization will be provided for certain activities that take place outside of Conservation Areas including "new projects approved pursuant to county and city general plans, transportation improvement plans for roads in addition to those addressed in Section 7.2, master drainage plans, capital improvement plans, water and waste management plans, [Riverside] County's adopted Trails Master Plan, and other plans adopted by the Permittees." As a Covered Activity located outside designated conservation areas, construction of the proposed Project is expected to be consistent with the applicable avoidance, minimization, and mitigation measures described in Section 4.4 of the CVMSHCP.

With implementation of the applicable avoidance and minimization measures described in Section 5.1, the proposed Project would be fully consistent with the biological goals and objectives of the CVMSHCP.

2.3.2 City of Indio Tree Protection

Chapter 98.09 of the City of Indio Municipal Code protects city trees. "City trees" are defined by the city as trees that are located within any public park, city easement, or any other city-owned property. Indio Municipal Code Chapter 98.09 (Protection of City Trees) reads as follows:

> (A) It is unlawful for any person to cut, damage, carve, transplant, prune, root prune to remove any public tree, except pursuant to a permit issued under § 98.07 of this chapter. Tree topping, heading back, stubbing or pollarding of public trees is prohibited.
>
> (B) It is unlawful for any person to attach or keep attached to any public tree, or to the guard or stakes intended for the protection thereof, any rope, wire, nails, tacks, staples, advertising posters or any other contrivance whatsoever.
>
> (C) It is unlawful for any person to cause or allow any poison or any other substance harmful to tree life to lie, leak, pour, flow, or drip upon or into the soil within the dripline of any public tree, or set fire or permit any fire to burn when such fire or heat thereof will injure any portion of the public tree; or to operate any equipment, such as mechanical weeding devices, in such a manner as to cause damage to a public tree in any way.

(D) No person shall injure any public tree located within an easement or public right-of-way on his or her private property by neglecting to provide the necessary amount of water, as determined by the Tree Policy Manual and the terms of this chapter, required for said tree's continued good health and viability.

(E) No person shall, without written consent of the Director, pave the area with a city easement or deposit, store or maintain within the city easement or on any city-owned property any stone, brick, concrete, lumber, tile, pipe, or other material or park any vehicle that reasonably may be expected to damage the root system, compact the soil over the roots, or impede free passage of water, air, or fertilizer to the roots of any public tree.

(F) Special consideration shall be afforded public trees determined by the Community Services Commission to be heritage trees. Such trees shall be removed only when public interest served by removal outweighs the interest in preservation and heritage status.

(G) During the construction, repair, alteration, moving or removal of any building or structure or any other type of construction in the city, no person in control of such work shall leave any public tree, shrub or plant in the vicinity of such activity without sufficient guards or protectors as identified in the tree policy manual to prevent injury to the tree, shrub, or plant in connection with such construction, repair, or alteration, moving or removal. The costs of any such protection shall be borne by the person responsible for the improvement.

3 METHODOLOGY

3.1 Literature Review

The literature review consisted of reviewing publicly available spatial data from a variety of public agencies, geospatial data warehouses, and previously written reports related to the project site and surrounding nine-quadrangle buffer area to ensure that current and accurate data were integrated into the review. The nine USGS 7.5-minute topographic quadrangles queried in this search were Indio (site location), La Quinta (site location), Martinez Mountain, Mecca, Myoma, Rockhouse Canyon, Thermal Canyon, Valerie, and West Berdoo Canyon.

Pertinent sources reviewed included, but were not limited to, the following:

- CDFW California Natural Diversity Database (CNDDB) RAREFIND 5 (CDFW 2024)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2024a)
- National Wetlands Inventory (NWI) on-line wetlands mapper (USFWS 2024a)
- CVMSHCP
- USFWS Critical Habitat Mapper and File Data (USFWS 2024b)
- Consortium of California Herbaria (2024)
- eBird online database of bird distribution and abundance (eBird 2024)
- Google Earth aerial imagery (Google Earth 2024)
- CVMSHCP linkages and biological corridors and linkage transport areas (CVCC 2024c)
- CVMSHCP-modeled habitat

3.2 Field Surveys

SWCA biologists Marisol Sanchez and Danny Cuellar conducted two reconnaissance-level biological surveys of the Project area on March 4 and 5, 2024. The Project area included the approximately 2.5-mile stretch of Avenue 50. Photographs taken during the surveys are presented in Appendix A. Priority for field observations and photographs were placed on areas with potential for biological species occurrences. Outside of the undeveloped lots, the remainder of the project site is paved/developed, significantly reducing the potential for species occurrence. The biologists surveyed all areas of the Project, including the undeveloped lots and paved/developed areas, adjacent to Avenue 50.

Survey goals were to characterize the existing biological conditions, search for special-status plants, animals, and to map habitats and potentially jurisdictional aquatic resources. Existing biological conditions were recorded, and vegetation alliances were mapped based on *Manual of California Vegetation* (Sawyer et al. 2009) and *A Manual of California Vegetation Online* (CNPS 2024b). Comprehensive lists of identified plant and wildlife species were compiled, and photos were collected.

3.2.1 Assessment of Special-Status Species Potential

Special-status species are plants and animals within one or more of the following categories:

- Species listed or proposed for listing as threatened or endangered under the ESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the *Federal Register* [proposed species]).
- Species that are candidates for possible listing as threatened or endangered under the ESA (67 *Federal Register* 40657, June 13, 2002).
- Species listed or proposed for listing as threatened or endangered under the CESA (14 California Code of Regulations [CCR] 670.5).
- Species that meet the definitions of rare or endangered under the CEQA (State CEQA Guidelines Section 15380).
- Plants listed as rare under the California NPPA (California Department of Fish and Game Code Section 1900 et seq.).
- Plants considered by the CNPS to be “rare, threatened, or endangered in California” (Lists 1 and 2).
- Animals fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]).
- Animals listed on the California Special Animals List such as Species of Special Concern, Fully Protected, and for invertebrates, all species regardless of the reason for inclusion (CDFW 2024b).
- CVMSHCP-covered species

Potential for occurrence of special-status species within the project site and the immediate vicinity was assessed following the database searches and field surveys based on on-site habitat conditions. During the assessment, each species was assigned to one of the categories listed below:

- **Present:** The species has been documented within the project site by a reliable observer. The presence of bird species was distinguished further into those that 1) nest on the project site, 2) forage on the project site, and/or 3) occur on the project site only as transients during migratory flights or other dispersal events.

- **High Potential:** The species has been documented in the vicinity (within 5 miles of the project site (based on recent [within 20 years] CNDDB or other records or based on professional expertise specific to the area or species), and there is suitable habitat within the project site that makes the probability of the species occurring there high. Alternatively, there is suitable habitat within the project site and within the known range of the species. Bird species in this category were differentiated based on their occurrence within the project site as breeding, foraging only, and/or transients.
- **Moderate Potential:** The species is known to occur within the project site (based on non-historic [within 40 years] CNDDB or other records or based on professional expertise specific to the area or species), and there is moderate quality habitat at the project site that makes the probability of the species occurring there moderate. Alternatively, there is moderate quality habitat in the part of the project site that falls within the known range of the species.
- **Low Potential:** The project site is within the species' currently known range, but vegetation communities, soils, etc. do not resemble those known to be used by the species, or conditions appear suitable, but the project site is beyond the species' currently known range.
- **Absent:** There is no suitable habitat for the species within the project site, or the area is located well outside the known range of the species. Alternatively, a species was surveyed during the appropriate season with unequivocal negative results for species occurrence.

3.2.2 Special Status Plant Communities

Sensitive vegetation communities are defined by CDFW as "communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of Projects" (CDFW 2018). Vegetation communities with a State Rank of 1, 2, and 3 are considered special-status by CDFW.

4 RESULTS

The Project area is within a designated rural section of the CVMSHCP. However, no components of the Project are within Conservation Areas, Preserves, Cores, or Linkages as defined in the CVMSHCP. The region is characterized by arid conditions and high levels of disturbance and urbanization. The surrounding land uses include residential, rural residential, and public facilities, with pockets of undeveloped open space.

4.1 Vegetation

The proposed construction lies predominantly within the existing alignment of the Avenue 50 roadway and is mostly devoid of vegetation. Additionally, the project site is surrounded by urban developments, isolating it from regional wildlife corridors/linkages or natural areas that have long-term conservation value. Only one area met the natural vegetation community membership rules as defined by the CDFW and the CNPS's online Manual of California Vegetation (CNPS 2024b); the remainder of the site consisted of developed/disturbed land (regularly altered to exclude vegetation/or completely devoid of vegetation) or maintained ornamental landscaping. Those land cover types are described in descending order of relative abundance below. Although these land cover types were identified, they were not mapped. Appendix B lists the plants identified during the field surveys.

4.1.1 Developed/Disturbed

The developed/disturbed land cover type includes areas that have been permanently altered to exclude vegetation via pavement, buildings, infrastructure, or other permanent built environments (developed), or areas that support little to no vegetation or are exclusively composed of ornamental nonnative vegetation grown for the primary purpose of adding visually pleasing plants to the landscape. Ornamental plantings include gum trees (*Eucalyptus* spp.), oleander (*Nerium oleander*), orchid trees (*Bauhinia variegata*), date palms (*Phoenix dactylifera*), and orange trees (*Citrus x sinensis*).

Disturbed/ruderal communities, composed of mostly nonnative and invasive forbs and grasses, included the Provisional Herbaceous Semi-natural Alliance. Dominants observed include Saharan mustard (*Brassica tournefortii*), coastal heron's bill (*Erodium cicutarium*), cheeseweed (*Malva parviflora*), and prickly lettuce (*Lactuca serriola*).

4.1.2 Allscale Scrub Shrubland

One native plant cover type, Allscale Scrub Shrubland Alliance, occurs in the Project area. This cover type was found in one pocket on the south side of the eastern end of the Project area where cattle saltbush (*Atriplex polycarpa*) is dominant.

4.1.3 Special-Status Plant Communities

One special-status plant community, Desert Fan Palm Oasis Woodland, was identified during the desktop review within the Indio, La Quinta, Martinez Mountain, Mecca, Myoma, Rockhouse Canyon, Thermal Canyon, Valerie, and West Berdoo Canyon USGS 7.5-minute quadrangles, but not historically within the Project area. No special-status plant communities were identified during the March 2024 field surveys, and none were determined to have the potential to occur.

4.2 Wildlife

Several species of wildlife typically found in southern California urban-rural interfaces were observed during the field surveys. Birds observed included northern mockingbird (*Mimus polyglottos*), red-tailed hawk (*Buteo jamaicensis*), and verdin (*Auriparus flaviceps*). Three carcasses of unidentifiable small birds were found alongside sidewalk areas while conducting reconnaissance surveys. Three small mammal burrows were located during the field surveys. One was within the survey area while the other two were outside the perimeter (Figures 3a–3b). Appendix C provides a list of wildlife detected during the field surveys.

The nonnative shrubs and trees throughout the landscaped areas provide suitable nesting habitat for a wide array of bird species.

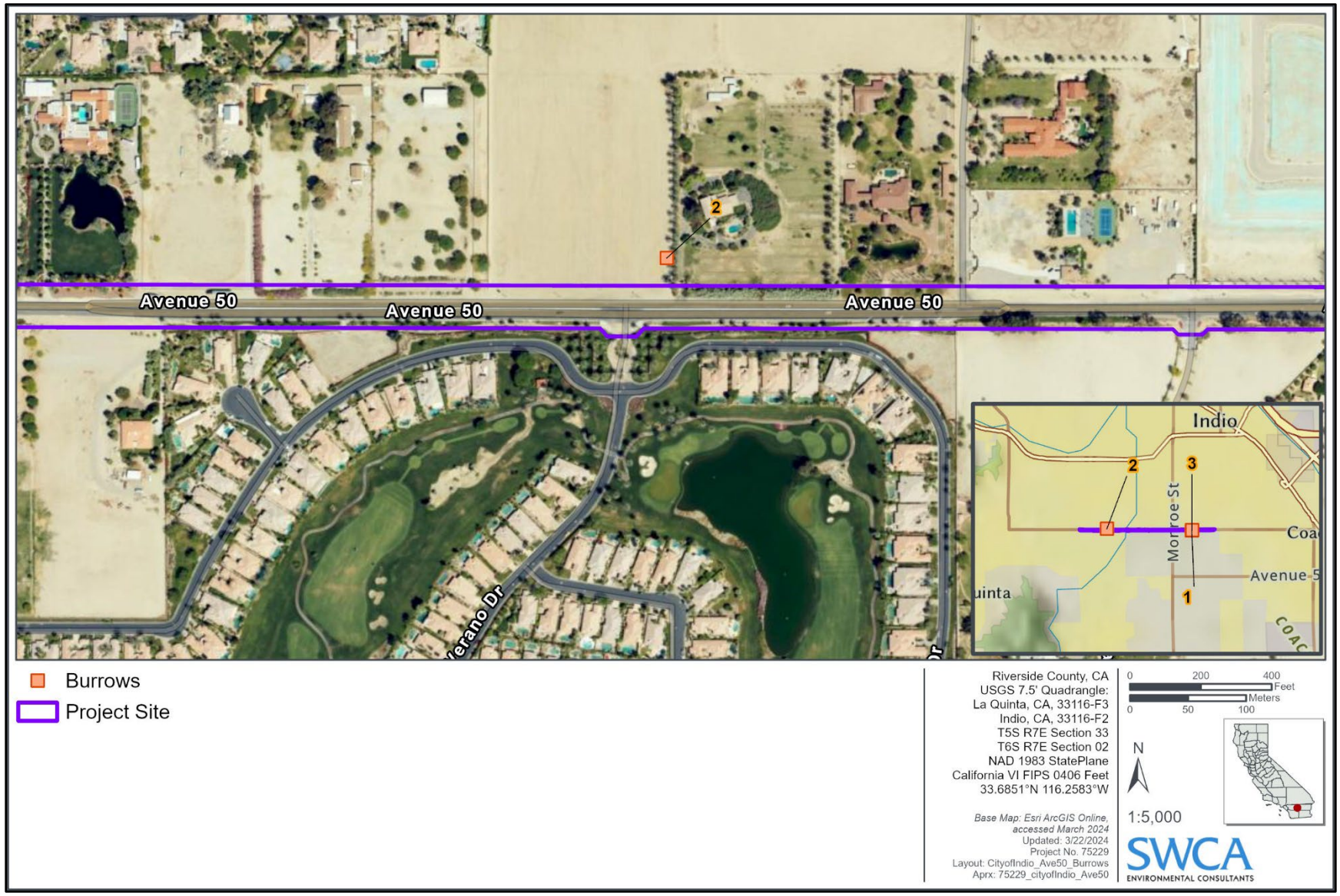


Figure 3a. Small Mammal Burrows Observed Within and Adjacent to the Project Area-1.

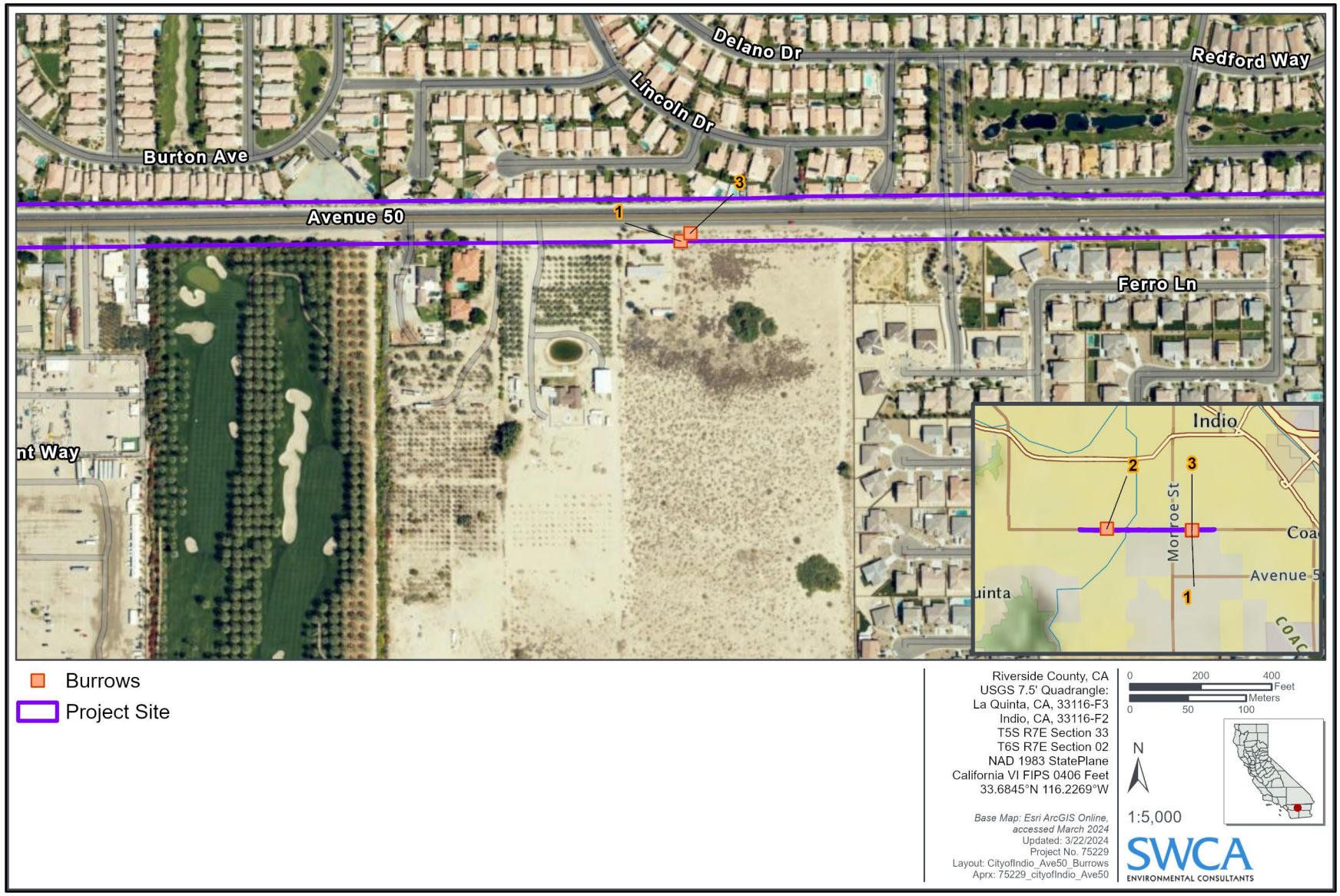


Figure 3b. Small Mammal Burrows Observed Within and Adjacent to the Project Area-2.

4.3 Special-Status Flora and Fauna

Appendix D lists the special-status plant and wildlife species reported to have occurrences on the Indio USGS quadrangle where the Project is located and the eight quadrangles surrounding it: La Quinta; Martinez Mountain; Mecca; Myoma; Rockhouse Canyon; Thermal Canyon; Valerie; and West Berdoo Canyon. The relative occurrence potential shown in the table (see Appendix D) is based on habitat suitability, current natural resource conditions of the area, general knowledge of the region, distance to known CNDDB and CNPS observation records, and the age of the records.

4.3.1 Special-Status Flora

Special-status flora in this report include taxa listed as endangered, threatened, candidate or proposed under the federal ESA, the CESA, or both. In addition, species covered under the CVMSHCP are evaluated. This term "special-status" also includes plant species listed by the State as rare and those species listed by the CNPS with a California Rare Plant Rank (CRPR) of 1 or 2 on the most current CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2024c; CNPS 2024a).

The literature search identified 28 special-status plant species within the Indio, Thermal Canyon, Rockhouse Canyon, West Berdoo Canyon, Myoma, La Quinta, Martinez Mountain, Valerie, and Mecca USGS 7.5-minute quadrangles. Appendix D lists the preliminary potential for occurrence within the project site for each special-status species.

No special-status plant species were identified during the March 2024 field surveys; however, late winter is not the optimal season for floristic surveys. No special-status flora were determined to have potential to occur in the immediate vicinity of the Project.

4.3.2 Special-Status Wildlife

Special-status wildlife include species or subspecies listed as endangered, threatened, or candidate for listing as endangered or threatened under the federal ESA, the CESA, or both. In addition, species covered under the CVMSHCP are evaluated. All wildlife species designated by the CDFW as Fully Protected, Species of Special Concern, as well as other wildlife included in the most current CDFW Special Animals list, are also included (CDFW 2024b).

The literature search identified 25 special-status wildlife species with occurrences within the Indio, Thermal Canyon, Rockhouse Canyon, West Berdoo Canyon, Myoma, La Quinta, Martinez Mountain, Valerie, and Mecca USGS 7.5-minute quadrangles. Appendix D lists the preliminary potential for occurrence within the project site for each special-status species.

No special-status wildlife species were found on-site during the March 2024 field surveys, and none have more than a low potential for occurrence in the project footprint or general vicinity of the Project. The two species with a low potential for occurrence are burrowing owl (*Athene cunicularia*) and Coachella Valley round-tailed ground squirrel (*Sermophilus tereticaudus chlorus*). Both species are known to overwinter within burrows.

4.3.2.1 BURROWING OWL

Burrowing owl (*Athene cunicularia*) is classified as a candidate for potential listing as a protected species under CESA by CDFW, is a species of special concern by CDFW, and is a CVMSHCP-covered species. This species occurs in a wide range of mostly open habitats in California, including grasslands, shrub-

steppe, deserts, pastures, and agricultural areas. The range of this species in California extends from Redding south to San Diego, east through the Mojave Desert and west to the coast. Breeding populations from the northern range of the species are apparently migratory, and southern California breeders are probably year-round residents (Thomsen 1971). Seasonal movements also occur in some parts of the southern range. Increases in winter population sizes within southern California are probably the result of immigration of owls from more northerly areas (Sheffield 1997). Male burrowing owls that reside year-round in southern California may overwinter in burrows within nesting areas, which allows them to retain possession of their burrows and territories, and to maintain the burrows (Johnsgard 2002).

Suitable habitat for burrowing owl includes short vegetation and, in the breeding season, the presence of small mammal burrows. The key characteristics of suitable habitat are moderately low and sparse vegetation; a prey base of small mammals, reptiles, and/or large insects during nesting; and burrows or similar sites for shelter. This species occurs at low densities throughout the Colorado Desert, where it is present in both the breeding and non-breeding seasons, as recorded in the CNDDB and eBird. The nearest CNDDB record of this species from 2003 is 2.5 miles to the northeast of the Project site. Burrowing owl is known to be associated with Coachella Valley round-tailed ground squirrel within the CVMHSCP plan area (CVCC 2024a).

4.3.2.2 COACHELLA VALLEY ROUND-TAILED GROUND SQUIRREL

Coachella Valley round-tailed ground squirrel is a CVMHSCP-covered species. This species is generally associated with open sandy fields and dunes, where sand hummocks can accumulate at the base of shrubs providing adequate cover and burrowing substrate (Bradley and Deacon 1971). This species is most closely associated with mesic and sand dune habitats and has historically been documented throughout much of San Bernardino County and areas covered under the CVMHSCP.

Coachella Valley round-tailed ground squirrel burrow entries are several inches across with generally shallow tunnels of 5-6 foot in length (Jaeger 1961). Coachella Valley round-tailed ground squirrel is known to be associated with burrowing owls within the CVMHSCP plan area (CVCC 2024a). The nearest CNDDB record of this species from 2002 is 2.6 miles to the northwest of the Project site.

4.3.2.3 NESTING BIRDS

The field surveys did not include a focused survey for nesting birds; however, nesting bird activity was incidentally observed within and adjacent to the Project area. A large inactive hawk or corvid nest was observed in a tree on a private property approximately 90 feet north of the Project area. Potentially suitable bird nesting habitat is present in the Project area within the trees, shrubs, and low vegetation.

4.3.2.4 WILDLIFE CORRIDORS AND LINKAGES

Habitat linkages serve as pathways between larger undeveloped habitats separated by developed areas. Wildlife corridors, akin to linkages, delineate specific pathways facilitating animal dispersal or migration between these regions. A wildlife corridor is defined as a linear landscape feature of sufficient width, which enables animal movement between relatively intact habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors play important roles in supporting dispersal, seasonal migration, breeding, and foraging activities. Additionally, open spaces function as buffers against human disturbances and fluctuations in natural resources.

The Project area does not occur within any regional wildlife corridors, linkages, or CVMSHCP conservation areas. The project site is isolated from wildlife corridors and linkages. There are no riparian

corridors, streams, or viable natural habitat connecting the project site to any CVMSHCP conservation areas. The development of the project site is not expected to impact wildlife movement opportunities in the region. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

5 POTENTIAL IMPACTS AND RECOMMENDATIONS

This section describes the anticipated direct and indirect impacts to biological resources that may result from implementation of the proposed Project. This analysis was based on the results of March 2024 biological resources surveys conducted at the Project area, information from literature, and database resource review.

5.1 General Avoidance and Minimization Measures

Project activities are within the existing alignment of the Avenue 50 roadway. Beyond the paved roadway consists of urban developments, isolating it from regional wildlife corridors/linkages or natural areas that have long-term conservation value. Project implementation is unlikely to result in the direct removal of habitat for special status species within the construction area. Although special-status plants and wildlife do not have more than a low potential for occurrence, it is recommended that the following general avoidance and minimization measures be followed during Project activities.

MM BIO-1: Worker Environmental Awareness Program. Prior to the onset of construction activities, the Project proponent shall provide a workers' environmental awareness program (WEAP) training. The WEAP shall be developed by a qualified biologist. Any employee responsible for the operation and maintenance of the completed facilities shall also attend the WEAP.

- The program shall include information on the life history of sensitive biological resources that may occur within the Project site and surrounding areas.
- The program shall discuss each species' legal protection status, the definitions of take under the CESA and federal ESA, measures the Project operator 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 CESA and ESA.
- The program shall provide information on how and where to bring injured animals for treatment in the case any animals are injured on the Project site during construction, and how to document animal mortalities and injuries.
- An acknowledgement form signed by each worker indicating that environmental training has been completed will be kept on record.
- A sticker shall be placed on worker hard hats upon the worker's successful environmental training completion. Construction workers shall not be permitted to operate vehicles or equipment within the construction areas unless they have attended the training and are wearing hard hats with the required sticker.
- The WEAP shall identify a point of contact (e.g., qualified biologist) if a protected species is observed on the Project site.

MM BIO-2: Best Management Practices. To reduce indirect impacts to special-status plants and wildlife that may occur in the Project site, best management practices (BMPs) shall be implemented to control dust pollution, prevent discharge of potentially harmful chemicals, and prevent changes in hydrology. BMPs may include the installation of erosion and sedimentation control devices, applying

water to control dust, placing drip pans under equipment when not in use, refueling in designated areas, and properly containing concrete washouts, among other practices.

5.2 Special Status Species

The following sections describe the potential impacts to special status biological resources. Recommended mitigation measures for each specific special status species or other sensitive biological resource are detailed below.

5.2.1 Special Status Plants

The results of the March 2024 biological resources surveys, and literature and database resource review, indicate no potential for special status plants to occur in the Project area. No additional avoidance measures are required to avoid impacts to special status plants.

5.2.2 Special Status Wildlife

Based on the assessment of local occurrence records, habitat conditions, elevation, and other factors, two special status wildlife species have the potential to occur within the Project site. These species include burrowing owl, and Coachella Valley round-tailed ground squirrel. No active sign of either of these species was observed during March 2024 field surveys. Avoidance and minimization measures for special status wildlife, nesting birds, and non-nesting birds are described in the sections below.

5.2.2.1 BURROWING OWL

Burrowing owl was determined to have a low potential for occurrence within the Project site, though no potential burrows or sign was observed. Burrowing owl is a covered species under the CVMSHCP. However, the CVMSHCP does not allow take of this species, which is also protected under the MBTA. The following measure is recommended for burrowing owl to ensure no owls are impacted during Project construction.

MM BIO-3: Burrowing Owl. A qualified biologist shall conduct a pre-construction survey for burrowing owls no more than 14 days prior to any ground-disturbing construction activities and within 24 hours prior to ground disturbance. The survey shall follow the methods outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The survey is recommended because habitat is suitable for the species, the presence of small rodent burrows indicates there is a food supply.

If occupied burrowing owl burrows are detected on-site prior to construction, the following steps shall be taken to avoid impacts. No activity shall occur within a minimum 50 m (approximately 160 feet) of occupied burrows during the non-breeding season (September 1 through January 31), or within a minimum of 200 m (approximately 656 feet) during the nesting season (February 1 through August 31). With CDFW approval, these buffers may be adjusted if the owls show tolerance of the surrounding activity. If avoidance is not feasible, passive relocation of burrowing owls during the non-nesting period may be possible following the development of a Burrowing Owl Relocation Plan approved by Riverside County and CDFW.

5.2.2.2 COACHELLA VALLEY ROUND-TAILED GROUND SQUIRREL

Coachella Valley round-tailed ground squirrel was determined to have low potential for occurrence within the Project site based on the literature review and field surveys. One active small mammal burrow was

documented within the proposed Project footprint. This burrow has a low probability of being inhabited by the Coachella Valley round-tailed ground squirrel, a covered species under the CVMSHCP. There are no specific survey requirements for projects outside of designated Conservation Areas.

Potential impacts to Coachella Valley round-tailed ground squirrel at the proposed Project site would be minimized through the implementation of *MM BIO-1: Worker Environmental Awareness Program,* and *MM BIO-2: Best Management Practices.*

5.2.3 Nesting Birds

Nesting habitat limited within the Project area to trees and shrubs along existing roadside. Nesting birds may occur anywhere in the Project area where vegetation is present and could be directly or indirectly impacted during construction. If work is conducted during the bird nesting season (February 1–August 31), or if an active nest is discovered outside this period, the following avoidance measures will be observed.

MM BIO-4: Nesting Birds. If construction or vegetation removal activities must occur during the bird breeding season (February 1–August 31), surveys for active nests shall be conducted by a qualified biologist no more than 3 days prior to the start of construction. For raptors, an initial no-disturbance buffer of 500 feet shall be established around active nests and demarcated with fencing or flagging. For non-raptors, an initial no-disturbance buffer of 250 feet shall be established around active nests and demarcated with fencing or flagging. No Project-related activities shall occur within the buffer zone until a qualified biologist has determined that the fledglings have fledged and are no long reliant on the nest or parental care for survival. The buffer distance for species not listed under the CESA or ESA may be reduced at the discretion of a biologist who has extensive experience observing bird behavior and monitoring nests; and if the biologist observes that the birds' behavior is not disturbed by activity closer to the nest, depending on the sensitivity of the species and nest location. Buffer sizes for species listed under the CESA and/or ESA may be reduced in consultation with CDFW and/or USFWS. In addition, portable sound walls may be installed to reduce noise impacts to nesting birds. If sound walls are used, the qualified biologist will be required to monitor noise weekly while nests remain active.

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APPENDIX A

Site Photos



Figure A-1. Southeastern edge of Project boundary; allscale scrub habitat.



Figure A-2. Dominant vegetation (*Atriplex polycarpa*) at undeveloped lot depicted in Figure A-1.



Figure A-3. Native forb browneyes (*Chylismia claviformis*) found commonly throughout the lot depicted in Figure A-1.



Figure A-4. Small mammal burrow #1 that appears active due to recent tracks found at the lot depicted in Figure A-1.



Figure A-5. Small mammal burrow #2.



Figure A-6. Small mammal burrow #3 found at the lot depicted in Figure A-1.

APPENDIX B

Flora Observed within Project Area

Table B-1. Flora Observed Within Study Area

Family	Scientific Name	Common Name
DICOTS - Flowering Plants		
Amaranthaceae		
	Atriplex polycarpa	cattle saltbush
Apocynaceae		
	*Nerium oleander**	oleander
Asteraceae		
	*Lactuca serriola**	prickly lettuce
	Palafoxia arida	Spanish needle
	Pluchea sericea	arrowweed
Boraginaceae		
	Johnstonella angustifolia	narrow leaved cryptantha
Brassicaceae		
	*Brassica tournefortii**	Saharan mustard
Fabaceae		
	*Bauhinia variegate**	orchid tree
Geraniaceae		
	*Erodium cicutarium**	coastal heron's bill
Malvaceae		
	*Malva parviflora**	cheeseweed
	Malacothamnus fasciculatus	chaparral bushmallow
	Sphaeralcea ambigua	apricot mallow
Myrtaceae		
	*Eucalyptus sp. **	eucalyptus
Onagraceae		
	Chylismia claviformis	browneyes
	Eulobus californicus	California primrose
Rutaceae		
	*Citrus x sinensis**	orange tree
Solanaceae		
	Datura discolor	desert thorn-apple
Tamaricaceae		
	*Tamarix sp.**	tamarisk

Family	Scientific Name	Common Name
MONOCOTS – Grasses and Allies		
Arecaceae		
	*Phoenix dactylifera**	date palm

* Non-Native Species

APPENDIX C

Fauna Observed within Project Area

Table C-2. Fauna Observed Within Study Area

Scientific Name	Common Name	Notes
Insects		
Apies sp.	honeybee	
Reptiles		
Aspidocelis tigris	western whiptail	
Birds		
Anas platyrhynchos	*mallard*	
Auriparus flaviceps	*verdin*	
Branta canadensis	*Canada goose*	
Buteo jamaicensis	*red-tailed hawk*	
Calypte anna	*Anna's hummingbird*	
Calypte costae	*Costa's hummingbird*	
Cathartes aura	*turkey vulture*	
Corvus brachyrhynchos	*American crow*	
Corvus corax	*common raven*	
Dryobates nuttallii	*Nuttall's woodpecker*	*Female observed entering and lingering around a cavity on a dead palm tree*
Euphagus cyanocephalus	*Brewer's blackbird*	
Falco sparverius	*American kestrel*	*Pair observed both days, observed mating on second survey day*
Haemorhous mexicanus	*house finch*	
Mimus polyglottos	*northern mockingbird*	*Pair observed exhibiting nesting behavior*
Passer domesticus	*house sparrow*	
Pyrocephalus obscurus	*vermillion flycatcher*	
Quiscalus mexicanus	*great tailed grackle*	
Setophaga coronate	*yellow rumped warbler*	
Sialia mexicana	*western bluebird*	
Sturnus vulgaris	*European starling*	
Zenaida macroura	*mourning dove*	*Individual observed picking up nesting material and returning repeatedly to the same palm tree*
Zonotrichia leucophrys	*white-crowned sparrow*	

APPENDIX D

Special-Status Species with Potential to Occur within Project Area

Table D-1. Special Status Flora

Common Name / Scientific Name	Status	Habitat Description	Bloom Period	Occurrence Potential
chaparral sand-verbena *Abronia villosa var. aurita*	1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas.	January – September	**Absent.** No suitable habitat or aeolian sands.
singlewhorl burrobush *Ambrosia monogyra*	2B.2	Chaparral, Sonoran desert scrub. Sandy soils.	August – November	**Absent.** No suitable habitat. Record is historic >75-year-old.
San Bernardino milk-vetch *Astragalus bernardinus*	1B.2	Joshua tree woodland, pinyon and juniper woodland. Granitic or carbonate substrates.	April – June	**Absent.** No suitable habitat. Record is historic >50-year-old.
Coachella Valley milk-vetch *Astragalus lentiginosus var. coachellae*	FE; 1B.2, CVMSHCP	Sonoran desert scrub, desert dunes. Sandy flats, washes, outwash fans, sometimes on dunes.	February – May	**Absent.** No suitable habitat or aeolian sands.
Lancaster milk-vetch *Astragalus preussii var. laxiflorus*	1B.1	Chenopod scrub. Alkaline clay flats or gravelly or sandy washes and along draws in gullied badlands.	March – May	**Absent.** Species is likely extirpated from project area. Record is historic >75-year-old.
gravel milk-vetch *Astragalus sabulonum*	2B.2	Desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy or gravelly flats, washes, and roadsides.	February – July	**Absent.** Species is extirpated from project area. Record is historic >75-year-old.
triple-ribbed milk-vetch *Astragalus tricarinatus*	FE; 1B.2, CVMSHCP	Joshua tree woodland, Sonoran desert scrub. Hot, rocky slopes in canyons and along edge of boulder-strewn desert washes, with Larrea and Encelia.	February – May	**Absent.** No suitable habitat. Lack of appropriate vegetation community.
California ayenia *Ayenia compacta*	2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy and gravelly washes in the desert; dry desert canyons.	March – April	**Absent.** Nearby records are <20-year-old. Suitable habitat is not present.
little-leaf elephant tree *Bursera microphylla*	2B.3	Sonoran desert scrub. Hillsides and washes and on canyon sides in California; rocky sites.	June – July	**Absent.** Nearby records are <20-year-old. Suitable habitat is not present.
glandular ditaxis *Ditaxis claryana*	2B.2	Mojavean desert scrub, Sonoran desert scrub. In dry washes and on rocky hillsides. Sandy soils.	October – March	**Absent.** Nearby records are <20-year-old. Suitable habitat is not present.
Booth's evening-primrose *Eremothera boothii ssp. boothii*	2B.3	Joshua tree woodland, pinyon and juniper woodland.	June – August	**Absent.** No suitable woodland habitat.

Common Name / Scientific Name	Status	Habitat Description	Bloom Period	Occurrence Potential
Harwood's eriastrum *Eriastrum harwoodii*	1B.2	Desert dunes. Sandy soils.	March – June	**Absent.** No suitable habitat or aeolian sands.
Abram's spurge *Euphorbia abramsiana*	2B.2	Mojavean desert scrub, Sonoran desert scrub. Sandy sites.	September – November	**Absent.** No suitable habitat. Record is historic >50-year-old.
Arizona spurge *Euphorbia arizonica*	2B.3	Sonoran desert scrub. Sandy soils.	March – April	**Absent.** No suitable habitat. Record is historic >50-year-old.
flat-seeded spurge *Euphorbia platysperma*	2B.2	Mojavean desert scrub, desert dunes. Sandy places or shifting dunes. Possibly a waif in California; more common in Arizona and Mexico.	February – September	**Absent.** No suitable habitat. Record is historic >50-year-old.
wavyleaf twinvine *Funastrum crispum*	1B.3	Pinyon and juniper woodland, chaparral.	May – August	**Absent.** No suitable woodland or chaparral habitat.
Santa Rosa Mountains leptosiphon *Leptosiphon floribundus ssp. hallii*	1B.3	Sonoran desert scrub, pinyon and juniper woodland. Desert canyons.	May – July	**Absent.** No suitable habitat. Record is historic >100-year-old.
Little San Bernardino Mtns. linanthus *Linanthus maculatus ssp. maculatus*	1B.2, CVMSHCP	Desert dunes, Sonoran desert scrub, Mojavean desert scrub, Joshua tree woodland. Sandy places. Usually in light-colored quartz sand; often in wash or bajada.	March – May	**Absent.** No suitable habitat. No records of occurrence within the nine-quad search area.
California marina *Marina orcuttii var. orcuttii*	1B.3	Pinyon and juniper woodland, Sonoran desert scrub, chaparral. Gravelly hillsides, rocky soil..	May – October	**Absent.** No suitable habitat. Record is historic >40-year-old.
spear-leaf matelea *Matelea parvifolia*	2B.3	Mojavean desert scrub, Sonoran desert scrub. Dry rocky ledges and slopes.	March – May	**Absent.** No suitable habitat. Record is historic >40-year-old.
slender cottonheads *Nemacaulis denudata var. gracilis*	2B.2	Coastal dunes, desert dunes, Sonoran desert scrub. In dunes or sand.	April – May	**Absent.** No suitable habitat or aeolian sands. Record is historic >40-year-old.
narrow-leaf sandpaper-plant *Petalonyx linearis*	2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy or rocky canyons.	March – May	**Absent.** No suitable habitat. Record is historic >40-year-old.
slender-stem bean *Phaseolus filiformis*	2B.1	Sonoran desert scrub. Gravelly washes bordered by creosote bush-dominated rocky slopes.	April	**Absent.** No suitable habitat. Record is historic >40-year-old.
Deep Canyon snapdragon *Pseudorontium cyathiferum*	2B.3	Sonoran desert scrub. Rocky sites.	January – April	**Absent.** No suitable habitat. Record is historic >40-year-old.

Common Name / Scientific Name	Status	Habitat Description	Bloom Period	Occurrence Potential
Orocopia sage *Salvia greatae*	1B.3, CVMSHCP	Mojavean desert scrub, Sonoran desert scrub. Broad alluvial bajadas and fans adjacent to desert washes in gravelly or rocky soil, rocky slopes of canyons.	March – April	**Absent.** No suitable habitat. No records of occurrence within the nine-quad search area.
Latimer's woodland-gilia *Saltugilia latimeri*	1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone.	March – June	**Absent.** No suitable habitat. Record is unreliable and is missing collection date data.
Cove's cassia *Senna covesii*	2B.2	Sonoran desert scrub. Dry, sandy desert washes, slopes.	March – June	**Absent.** No suitable habitat. Record is historic >30-year-old.
purple stemodia *Stemodia durantifolia*	2B.1	Sonoran desert scrub. Sandy soils; mesic sites.	Year-round	**Absent.** No suitable habitat. Record is historic >75-year-old.
jackass-clover *Wislizenia refracta ssp. refracta*	2B.2	Playas, desert dunes, Mojavean desert scrub, Sonoran desert scrub. Sandy washes, roadsides, alkaline flats.	April – November	**Absent.** Marginal habitat available at one undeveloped lot within the project buffer. Record is historic >75-year-old, and >9miles from Project Area.
mecca-aster *Xylorhiza cognata*	1B.2, CVMSHCP	Sonoran desert scrub. Steep canyon slopes, in sandstone and clay.	January – June	**Absent.** Nearby records are <20-year-old. Suitable habitat is not present.

Notes:

*Nine-quad search area included Indio; La Quinta; Martinez Mountain; Mecca; Myoma; Rockhouse Canyon; Thermal Canyon; Valerie; and West Berdoo Canyon.

† "Project" includes the roadway of Avenue 50.

E =:	Endangered	CNPS	Rare Plant Rank
T =:	Threatened	1A	Plants presumed extirpated in California and either rare or extinct elsewhere
CVMSHCP =:	CVMSHCP Covered Species	1B	Plants rare, threatened, or endangered in California and elsewhere
		2A	Plants presumed extirpated in California, but more common elsewhere
		2B	Plants rare, threatened, or endangered in California but more common elsewhere
			Threat Rank
		0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
		0.2	Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
		0.3	Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Table D-2. Special Status Fauna

Common Name / Scientific Name	Status	Habitat Description	Occurrence Potential
INVERTEBRATES			
Casey's June beetle *Dinacoma caseyi*	FE	Found only in two populations in a small area of southern Palm Springs. Found in sandy soils; the females live underground and only come to the ground surface to mate.	**Absent**. No suitable habitat. Lack of desert wash habitat.
Coachella Valley giant sand-treader cricket *Macrobaenetes valgum*	CVMSHCP	Known from the sand dune ridges in the vicinity of Coachella Valley. Population size regulated by amount of annual rainfall; some spots favor permanent habitation where springs dampen sand.	**Absent**. No suitable habitat or aeolian sands.
Coachella Valley Jerusalem cricket *Stenopelmatus cahuilaensis*	CVMSHCP	Inhabits a small segment of the sand and dune areas of the Coachella Valley, in the vicinity of Palm Springs. Found in the large, undulating dunes piled up at the north base of Mt San Jacinto.	**Absent**. No suitable habitat or aeolian sands.
AMPHIBIANS AND REPTILES			
Arroyo toad *Anaxyrus californicus*	FE, CVMHSCP, SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	**Absent.** No nearby records found; no suitable aquatic habitat.
desert slender salamander *Batrachoseps major aridus*	FE, SE	Known only from Hidden Palm Canyon and Guadalupe Creek, Riverside County, in barren, palm oasis, desert wash, and desert scrub. Occurs under limestone sheets, rocks, and talus, usually at the base of damp, shaded, north and west-facing walls.	**Absent.** Project area occurs outside of known species range. No suitable habitat.
desert tortoise *Gopherus agassizii*	FT, ST	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.	**Absent.** Marginal suitable habitat. High disturbance from roadway and human development.
flat-tailed horned lizard *Phrynosoma mcallii*	CVMSHCP, SSC	Restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. Critical habitat element is fine sand, into which lizards burrow to avoid temperature extremes; requires vegetative cover and ants.	**Absent.** No nearby records found; no suitable habitat or aeolian sands.
Coachella Valley fringe-toed lizard *Uma inornata*	FT, SE	Limited to sandy areas in the Coachella Valley, Riverside County. Requires fine, loose, windblown sand (for burrowing), interspersed with hardpan and widely-spaced desert shrubs.	**Absent.** No suitable habitat or aeolian sands.

Common Name / Scientific Name	Status	Habitat Description	Occurrence Potential
FISH			
desert pupfish *Cyprinodon macularius*	FE, SE	Desert ponds, springs, marshes and streams in Southern California. Can live in salinities from freshwater to 68 ppt; can withstand temps from 9 - 45 C and dissolved oxygen levels down to 0.1 ppm.	**Absent.** Suitable aquatic habitat absent from study area.
razorback sucker *Xyrauchen texanus*	FE, SE, FP	Found in the Colorado River bordering California. Adapted for swimming in swift currents but also need quiet waters. Spawn in areas of sand/gravel/rocks in shallow water.	**Absent.** Suitable aquatic habitat absent from study area.
BIRDS			
burrowing owl *Athene cunicularia*	CVMSHCP, SSC	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.	**Low.** Marginal habitat available in project buffer and small mammal burrows observed in some of the undeveloped lots.
yellow warbler *Dendroica petechia brewsteri*	CVMSHCP	Summer resident; inhabits riparian woodland vegetation close to streams or wet meadows.	**Absent.** No suitable riparian woodland habitat.
southwestern willow flycatcher *Empidonax traillii extimus*	FE, SE	Riparian woodlands in Southern California.	**Absent.** No suitable riparian woodland habitat.
yellow-breasted chat *Icteria virens*	CVMSHCP, SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	**Absent.** No suitable riparian woodland habitat.
California black rail *Laterallus jamaicensis coturniculus*	ST, FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Absent.** No suitable marsh or meadow habitat.
summer tanager *Piranga rubra*	CVMSHCP, SSC	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts. Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.	**Absent.** No suitable riparian woodland habitat.
Yuma clapper rail *Rallus longirostris yumanensis*	FE, SE, FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.	**Absent.** No suitable marsh habitat.

Common Name / Scientific Name	Status	Habitat Description	Occurrence Potential
Crissal thrasher *Toxostoma crissale*	CVMSHCP, SSC	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.	**Absent.** No suitable riparian woodland habitat.
Le Conte's thrasher *Toxostoma lecontei*	CVMSHCP, SSC	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.	**Absent.** Potentially suitable habitat at one undeveloped lot in project buffer for foraging or fly-overs. No suitable habitat for nesting. No nearby records found of species occurrence.
least Bell's vireo *Vireo bellii pusillus*	FE, SE	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.	**Absent.** No suitable riparian woodland habitat.
gray vireo *Vireo vicinior*	CVMSHCP, SSC	Dry chaparral; west of desert, in chamise-dominated habitat; mountains of Mojave Desert, associated with juniper and Artemisia. Forage, nest, and sing in areas formed by a continuous growth of twigs, 1-5 ft above ground.	**Absent.** No suitable habitat. No nearby records found of species occurrence.
MAMMALS			
southern yellow bat *Lasiurus xanthinus*	FE; SC; SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	**Absent.** No suitable habitat. Palm trees are prolific down the roadway and there is a man-made channel that runs near the roadway. Records are historic and > 30-years-old.
Peninsular bighorn sheep DPS *Ovis canadensis nelson pop.2*	FE, ST, FP	Eastern slopes of the Peninsular Ranges below 4,600 ft elevation. This DPS of the subspecies inhabits the Peninsular Ranges in southern California from the San Jacinto Mountains south to the US-Mexico International Border. Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes, with available water.	**Absent.** No suitable bedding habitat. Developed habitat is unsuitable for foraging.
Palm Springs pocket mouse *Perognathus longimembris bangsi*	CVMSHCP, SSC	Desert riparian, desert scrub, desert wash and sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.	**Absent.** No suitable habitat. Lack of appropriate vegetation community.
Coachella Valley round-tailed ground squirrel, *Sermophilus tereticaudus chlorus*	CVMSHCP, SSC	Restricted to the Coachella Valley. Prefers desert succulent scrub, desert wash, desert scrub, alkali scrub, and levees. Prefers open, flat, grassy areas in fine-textured, sandy soil. Density correlated with winter rainfall.	**Low.** Marginal alkali scrub with sandy soils at one undeveloped lot adjacent to Project Area. High disturbance from human development minimizes likelihood of occurrence. Closest record is <25 year-old, and 3-miles from Project Area.

Notes:

*Nine-quad search area included Indio; La Quinta; Martinez Mountain; Mecca; Myoma; Rockhouse Canyon; Thermal Canyon; Valerie; and West Berdoo Canyon.

† "Project" includes the roadway of Avenue 50.

[1]Status Key

Federal (USFWS) Status
- FE: Federally Endangered
- FT: Federally Threatened

State (CDFW) Status
- SE: State Endangered
- ST: State Threatened
- SC: State Candidate
- FP: Fully Protected
- SSC: Species of Special Concern

CVMSHCP: Covered Species under CVMSHCP