Appendix B: Biological Resources Assessment and Western Riverside Multiple Species Habitat Conservation Plan Consistency Analysis

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Biological Resources Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis Ramona Expressway and Brennan Avenue Warehouse Project City of Perris, California

Assessor's Parcel Numbers (APNs): 303-020-005, 303-020-022, 303-020-023, 303-020-024, and 303-020-025

Project Applicant:
Seefried Industrial Properties, Inc.
2321 Rosecrans Avenue, Suite 2220
El Segundo, CA 90245

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Date: April 28, 2022
Revised: October 12, 2022

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List of Exhibits

SECTION 1: INTRODUCTION

The Biological Resources Assessment (BRA) and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis was prepared by FirstCarbon Solutions (FCS) to support the proposed Ramona Expressway and Brennan Avenue Warehouse Project (proposed project) in the City of Perris, in Riverside County, California. The purpose of the BRA is to (1) document existing and potentially occurring biological resources on the project site and adjacent areas; (2) analyze potential project-related impacts on regulated biological resources; (3) summarize relevant local, State, and federal regulations; and (4) recommend appropriate measures to mitigate potential impacts on biological resources to less than significant levels. The purpose of this MSHCP Consistency Analysis is to identify and analyze requirements of the MSHCP and any biological constraints to development of the proposed project, and to determine project consistency with goals, objectives, and requirements of the MSHCP.

1.1 - Project Location and Setting

The proposed project is located in the City of Perris, in Riverside County, California (Exhibit 1). The approximately 7.50 acre project site is located south of Ramona Expressway between Brennan Avenue and Webster Avenue, and corresponds to Assessor's Parcel Numbers (APNs) 303-020-005, -022, -023, -024, and -025 (Exhibit 2). The site is located within the *Perris, California* United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map. The project site is located within the Perris Valley Commerce Center Specific Plan (PVCCSP) area and is designated as Light Industrial (LI). According to the City of Perris Zoning Map, the site is zoned as Light Industrial (LI). Furthermore, the project site is also located within the PVCCSP Airport Overlay Zone, which is an area approximately 1,032 acres and generally extending south of the runway at March Air Reserve Base/Inland Port (March ARB/IP) through the central part of the PVCCSP area.

1.1.1 - General Setting

The proposed project is located approximately 0.5 mile east of Interstate 215 (I-215) in an area of mixed land use, including primarily industrial warehouse development, but also agricultural fields and commercial and residential development. The project site is bounded to the east by Brennan Avenue and Lowe's Distribution Center; a storage yard and Clearwater Pipeline, Inc. to the south; and a vacant lot and Webster Avenue to the west. The project site is currently used for storage of a variety of materials and currently contains five permanent buildings. A wood-framed commercial building and a residential building are present on the southeast portion of the project site. Two connected metal structures are present on the central portion of the project site, and a shed-type structure is present on the southwest portion of the project site.[1] Infrastructure associated with the storage of materials, including concrete foundation pads, equipment shelving, and shipping containers are present throughout the southern portion of the site. The northern portion of the site includes a former storage area for pallets that was recently cleared and now supports ruderal vegetation.

[1] Hazard Management Consulting, Inc. Phase I Environmental Site Assessment. Ramona Expressway and Brennen Avenue.

1.2 - Project Description

The project applicant, Seefried Industrial Properties, Inc., is proposing to construct an approximately 165,371-square-foot warehouse center for consumer products. The warehouse center would consist of a 160,371-square-foot warehouse, 2,500-square-foot office located on the first floor, a 2,500-square-foot mezzanine, 20 dock doors, an outdoor employee break area/seating patio, and an outdoor gym park (Exhibit 3).

1.2.1 - Site Access

Regional access to the project site is provided via I-215 by way of the Morgan Street exit. Local access to the site would be provided via one driveway along Brennan Avenue and one driveway along Ramona Expressway.

1.2.2 - Fencing

Fencing is proposed throughout the site, including along the perimeter as well as portions of the internal access areas within the site. An 8-foot-tall decorative steel fence with 10-foot-tall pilasters is proposed around the project's frontage along Brennan Avenue and Ramona Expressway, along the first quarter of the proposed project's southern border closest to Brennan Avenue, and along two-thirds of the proposed project's western border closest to Ramona Expressway. The remaining perimeter fencing along the proposed project's southern and western borders would consist of a 14-foot-tall concrete tilt-up screen wall with anti-graffiti coating. An 8-foot-tall sliding gate is proposed internally within the site just beyond the Brennan Avenue driveway, along with a 14-foot-tall concrete tilt-up screen wall with anti-graffiti coating. A 42-inch-tall concrete guard wall is proposed to the left and right of the loading areas designed as a safety feature.

1.2.3 - Parking and Loading

The proposed project would include 68 standard automobile parking spaces, 33 trailer parking spaces, and 29 trailer loading spaces. Parking would be provided along the northern, western, and southern edges of the project site.

1.2.4 - Off-site Improvements

The proposed project would construct half-width right-of-way improvements consisting of pavement, curb and gutter, parkway, and sidewalk improvements on the southern side of the centerline in addition to restriping of three through lanes and the construction of an acceleration/deceleration lane along Ramona Expressway. A dual 36-inch underground piping structure would replace the open channel along Ramona and connect to the existing storm drain on the north side of Ramona Expressway. By undergrounding the storm drainage, this would allow the proposed project frontage to be improved to provide for a multipurpose trail, landscaped parkway, and streetlights in accordance with the City of Perris, County of Riverside, and California Department of Transportation (Caltrans) standards. Sewer connections would be provided at the north side of Ramona Expressway. A 12-inch water line would also be extended along Ramona Expressway from the western connection point to the northeast corner of Ramona Expressway and Brennan Avenue.

Along Brennan Avenue, the proposed project would construct half-width right-of-way improvements including landscaped parkway and streetlights in accordance with the City of Perris, County of Riverside, and Caltrans standards. A 6-inch dry pipe would be installed along the Brennan frontage for an Eastern Municipal Water District (EMWD) connection.

The multipurpose trail would be constructed of decomposed granite and surrounded by a decorative landscaping palate.

1.2.5 - Lighting

Exterior lighting would meet Perris Municipal Code requirements. Given that the proposed project would operate 24 hours a day, 7 days a week and store consumer goods on-site, lighting would be designed to maximize employee safety and security while complying with Perris Municipal Code standards.

1.2.6 - Signage

Signage in and around the project site would be specific to the tenant and would comply with all applicable Perris Municipal Code requirements.

1.2.7 - Landscaping

The proposed project would include approximately 41,155 square feet of landscaping. The proposed landscaping plan would be consistent with Section 19.02.130 of the City of Perris Code of Ordinances and Section 6.0, Landscape Standards and Guidelines of the PVCCSP.

1.2.8 - Employment

The proposed project would utilize approximately 68 full-time employees. Employees would work in two shifts within a 24-hour period. Because of the number of employees expected, the day/night shifts are split in half with staggered start/end times 30-minutes apart to alleviate the peak traffic demand on the adjacent roadways. Most line haul trucks serving the facility arrive and depart between 7:00 p.m. and 1:00 a.m.

1.2.9 - Utilities

The proposed project would utilize existing utility connections from the following providers:

- Electricity—Southern California Edison (SCE)
- Natural Gas—Southern California Gas Company (SoCalGas)
- Potable Water—Eastern Municipal Water District
- Wastewater—Eastern Municipal Water District
- Solid Waste—CR&R Waste Services

Until the main sewer lines are constructed, a temporary septic field would be installed in the southeast portion of the project site.

Stormwater

The proposed project would install curb and gutter improvements, four catch basins, underground piping, and an underground detention system under the northern portion of the project site. The proposed project would also install a modular wetland treatment device at the northeast corner of the project site. Stormwater runoff from the building roof would be captured via roof drains/downspouts and conveyed underground to connect to the overall drainage system. Runoff from the roof, detention system, and treatment device would be discharged into the existing public storm drain system at the curb face along Brennan Avenue.

Additionally, underground pipe structures would be installed to replace the open channel on the north side of the proposed project frontage, and would connect to the existing storm drain along Ramona Expressway.

Wastewater

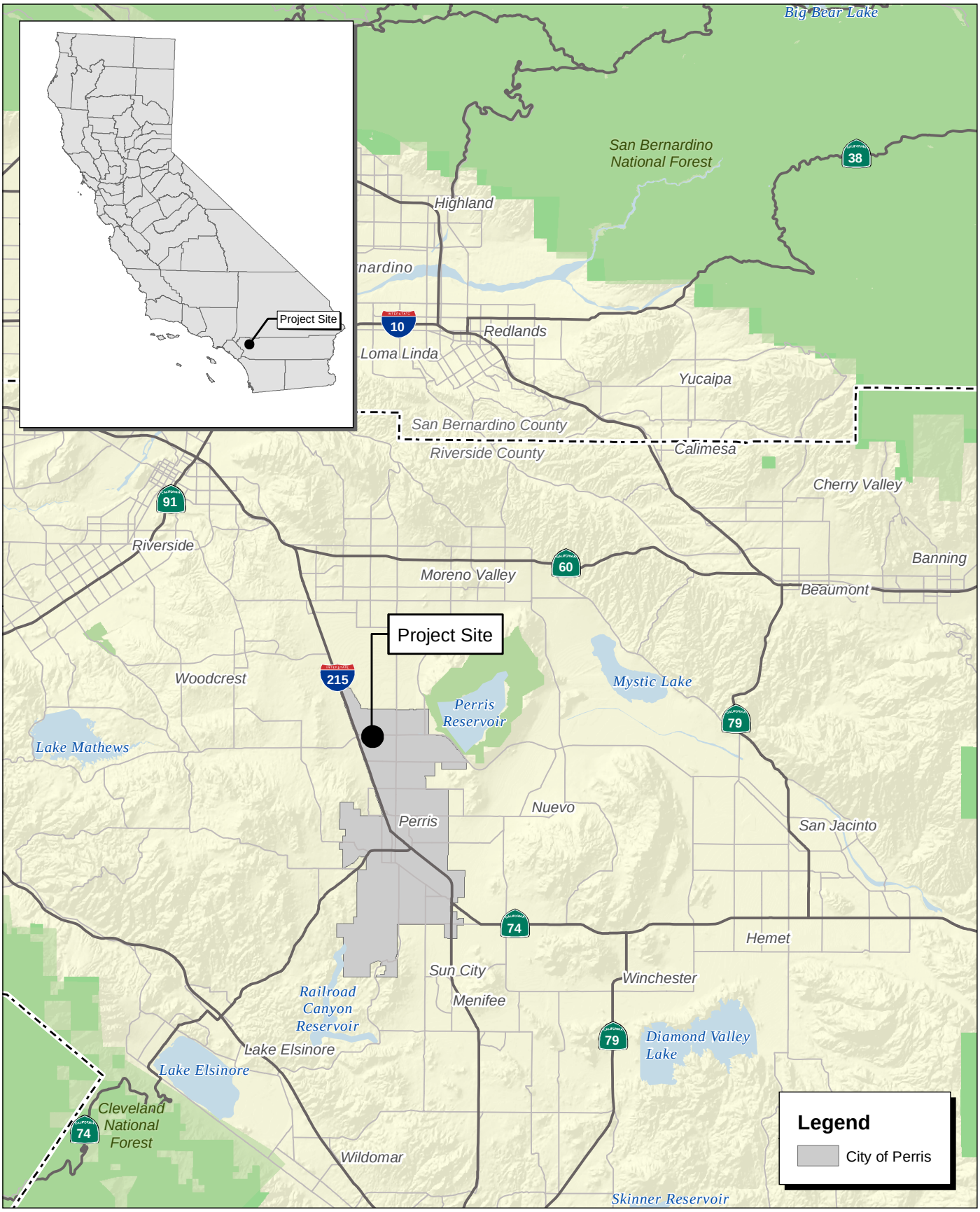
The project site would eventually be served by public sanitary sewer located in Ramona Expressway area; however, it is anticipated that sewer service would not be available until after the occupancy of the building. Therefore, the proposed project would include a temporary septic field at the southeast corner of the project site as an interim measure. This system would remain in use until the public sewer is available, at which point the system would be decommissioned.

1.2.10 - Phasing and Construction

The following construction schedule was assumed for the purposes of this environmental analysis. The proposed project would be constructed in a single phase beginning fourth quarter 2022. The proposed project is expected to be operational in the second quarter of 2023.

1.2.11 - Operation

The warehouse tenant is unknown at this time. Sortable e-commerce warehouses and distribution centers are high-cube package handling facilities that support the “first-mile” of the tenant’s fulfillment network. The proposed project is intended to be used primarily for the storage and/or consolidation of goods prior to their distribution to the customer or another supporting facility. The proposed building would store, package, and fulfill orders, utilizing automation to enable highly efficient processing of goods. The site would operate 24-hours a day, 365 days per year. Cold storage is not proposed as part of the project.



Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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Exhibit 1
Regional Location Map

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SEEFRIED INDUSTRIAL PROPERTIES, INC.
RAMONA EXPRESSWAY AND BRENNAN AVENUE WAREHOUSE PROJECT
BIOLOGICAL RESOURCES ASSESSMENT & MSHCP CONSISTENCY ANALYSIS

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Source: Bing Aerial Imagery.

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Exhibit 2
Local Vicinity Map

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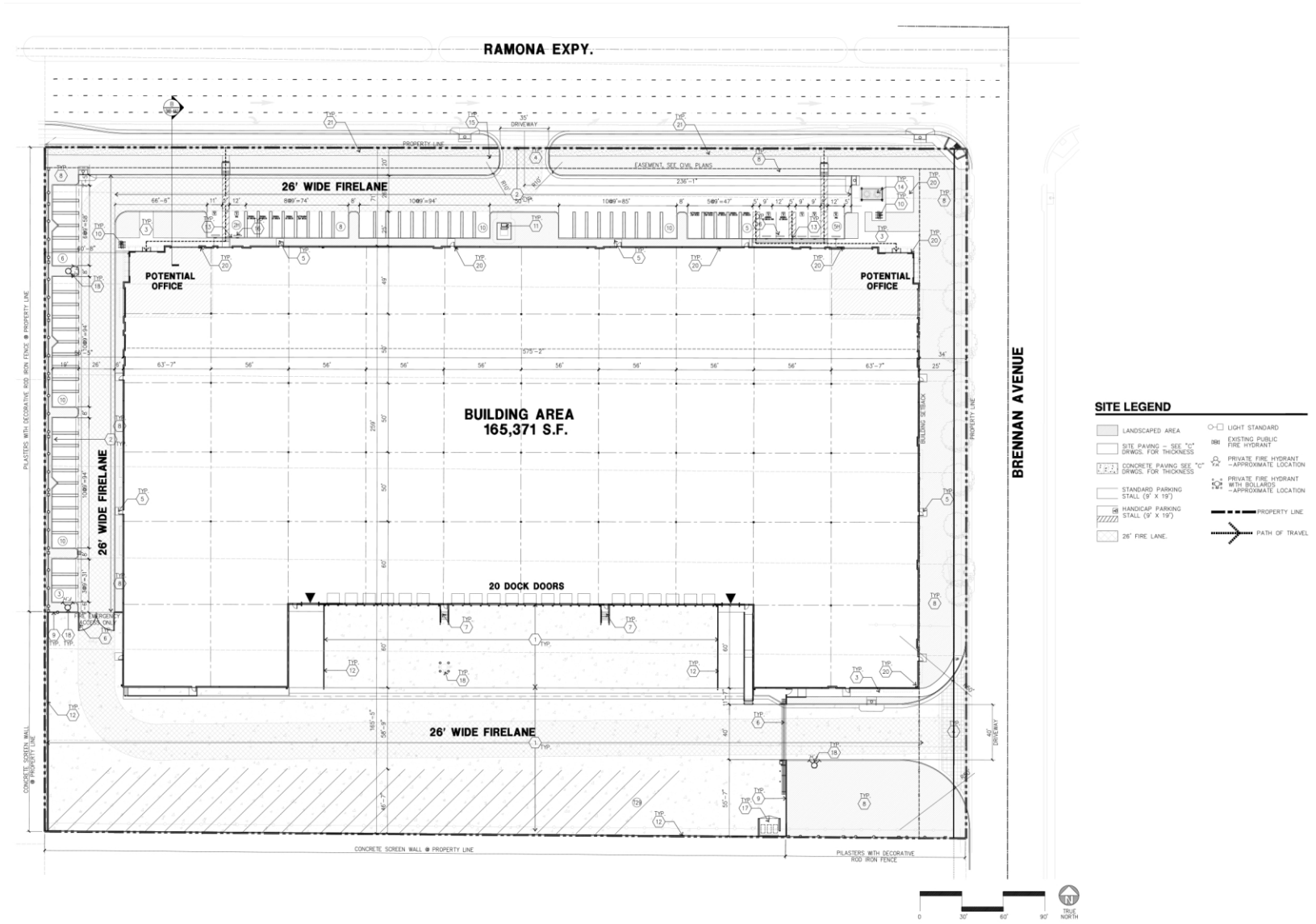

Source: HPA Architecture

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Exhibit 3
Site Plan

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SECTION 2: REGULATORY SETTING

2.1 - Federal

2.1.1 - Endangered Species Act

The United States Fish and Wildlife Service (USFWS) has jurisdiction over species listed as threatened or endangered under the Endangered Species Act. Section 9 of the Endangered Species Act protects listed species from "take," which is broadly defined as actions taken to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." The Endangered Species Act protects threatened and endangered plants and animals and their critical habitat. Candidate species are those proposed for listing; these species are usually treated by resource agencies as if they were actually listed during the environmental review process.

2.1.2 - Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. All migratory birds and their nests are protected from take and other impacts under the MBTA (16 United States Code [USC] § 703, *et seq*.).

2.1.3 - Bald and Golden Eagle Protection Act

The golden eagle (*Aquila chrysaetos*) and bald eagle (*Haliaeetus leucocephalus*) are afforded additional protection under the Eagle Protection Act, amended in 1973 (16 USC § 669, *et seq*.) and the Bald and Golden Eagle Protection Act (16 USC §§ 668–668d).

2.1.4 - Clean Water Act

Section 404

The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States. The USACE has established a series of nationwide permits that authorize certain activities in waters of the United States if a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or greater than 0.5 acre or greater than 0.5 acre of waters of the United States. A project that results in impacts to less than 0.5 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits if it is consistent with the standard permit conditions. The USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to between 0.1 and 0.5 acre. Use of any nationwide permit is contingent on the activities having no impacts on endangered species.

Section 401

As stated in Section 401 of the CWA, "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

2.2 - State

2.2.1 - CEQA Guidelines

The following California Environmental Quality Act (CEQA) Guidelines Appendix G checklist questions serve as thresholds of significance when evaluating the potential impacts of a proposed project on biological resources. Impacts are considered significant if a project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan.

2.2.2 - California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA pertains to State-listed endangered and threatened species. CESA requires State agencies to consult with the CDFW when preparing CEQA documents to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code [FGC] § 2080). CESA directs agencies to consult with the CDFW on projects or actions that could affect listed species, directs the CDFW to determine whether jeopardy would occur, and allows the CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. CESA allows the CDFW to

authorize exceptions to the State's prohibition against take of a listed species if the "take" of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (FGC § 2081).

2.2.3 - California Fish and Game Code

Under CESA, the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC § 2070). Fish and Game Code Sections 2050 through 2098 outline the protection provided to California's rare, endangered, and threatened species. Fish and Game Code Section 2080 prohibits the taking of plants and animals listed under the CESA, and Fish and Game Code Section 2081 established an incidental take permit program for State-listed species. The CDFW maintains a list of "candidate species," which it formally notices as being under review for addition to the list of endangered or threatened species.

In addition, the Native Plant Protection Act of 1977 (NPPA) (FGC § 1900, *et seq*.) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered (as defined by the CDFW). An exception to this prohibition in the NPPA allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed. Fish and Game Code Section 1913 exempts from "take" prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way." Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

In addition to formal listing under the Endangered Species Act and CESA, some species receive additional consideration by the CDFW and local lead agencies during the CEQA process. Species that may be considered for review are those listed as a "Species of Special Concern." The CDFW maintains lists of "Species of Special Concern" that serve as species "watch lists." Species with this status may have limited distributions or limited populations and/or the extent of their habitats has been reduced substantially, such that their populations may be threatened. Thus, their populations are monitored, and they may receive special attention during environmental review. While they do not have statutory protection, they may be considered rare under CEQA and specific protection measures may be warranted. In addition to Species of Special Concern, the CDFW Special Animals List identifies animals that are tracked by the California Natural Diversity Database (CNDDB) and may be potentially vulnerable but warrant no federal interest and no legal protection.

Sensitive species that would qualify for listing but are not currently listed are afforded protection under CEQA. CEQA Guidelines Section 15065 (Mandatory Findings of Significance) requires that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines Section 15380 (Rare or Endangered Species) provides for the assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Unlisted plant species on the California Native Plant Society (CNPS) List ranked 1A, 1B, and 2 would typically require evaluation under CEQA.

Fish and Game Code Sections 3500—5500 outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. The CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock.

Under Fish and Game Code Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. To comply with the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project study area and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. "Take" of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from the CDFW would be in the form of an Incidental Take Permit.

Fish and Game Code Section 1602 requires any entity to notify the CDFW before beginning any activity that "may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake" or "deposit debris, waste, or other materials that could pass into any river, stream, or lake." "River, stream, or lake" includes waters that are episodic and perennial and ephemeral streams, desert washes, and watercourses with a subsurface flow. A Lake or Streambed Alteration Agreement will be required if the CDFW determines that project activities may substantially adversely affect fish or wildlife resources through alterations to a covered body of water.

2.2.4 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)).

2.2.5 - California Native Plant Society Rare Plant Rankings

The CNPS maintains a rank of plant species that are native to California and that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Following are the definitions of the CNPS ranks:

- **Rank 1A:** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B:** Plants Rare, Threatened, or Endangered in California and elsewhere
- **Rank 2A:** Plants presumed extirpated in California but common elsewhere
- **Rank 2B:** Plants rare, threatened, or endangered in California but more common elsewhere
- **Rank 3:** Plants about which more information is needed
- **Rank 4:** Watch List: Plants of limited distribution

Potential impacts to populations of CNPS ranked plants receive consideration under CEQA review. All plants appearing on the CNPS List ranked 1 or 2 are considered to meet the CEQA Guidelines Section 15380 criteria. Rank 3 and 4 plants do not automatically meet this definition. Rank 4 plants do not clearly meet CEQA standards and thresholds for impact considerations.[2]

2.3 - Regional and Local

2.3.1 - Western Riverside County Multiple Species Habitat Conservation Plan

The MSHCP serves as a multijurisdictional Habitat Conservation Plan pursuant to Section 10(a)(1)(B) of the Endangered Species Act and a Natural Communities Conservation Plan pursuant to Fish and Game Code Section 2081.1 that focuses on the conservation of species and habitats in western Riverside County. The MSHCP allows permittees to obtain take of threatened, endangered, and rare plant and animal species covered by the MSHCP. Regulation of take of species is authorized by the USFWS and the CDFW for lawful actions (e.g., public and private projects) in exchange for the assembly and management of a conservation reserve system. The MSHCP covers take of 146 species in the plan area, including 32 that are State and/or federally listed.

The MSHCP area encompasses approximately 1.26 million acres and includes all unincorporated land in Riverside County west of the crest of the San Jacinto Mountains to the Orange County line, inclusive of the jurisdictional areas of the cities of Eastvale, Jurupa Valley, Wildomar, Menifee, San Jacinto, Hemet, Perris, Calimesa, Beaumont, Banning, Moreno Valley, Riverside, Corona, Norco, Canyon Lake, Lake Elsinore, Murrieta, and Temecula. Conservation areas that comprise the reserve system will be assembled from Criteria Area cells that consist of one-quarter-section cells of approximately 160 acres, each with specific criteria for conservation.

The Conservation Areas that comprise the reserve system will total 500,000 acres when complete, which is projected by 2028. Of the 500,000 acres targeted for conservation, 347,000 were in existing open spaces in Public/Quasi-Public (PQP) Lands at the time the MSHCP was adopted in 2003. These lands are under ownership or management of government agencies and their development is not likely. The County and city permittees are responsible for assembling the remaining 153,000 acres in the reserve system by 2028 through implementing the MSHCP during the development and entitlement process.

[2] California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Sacramento, CA. 21 January 2020.

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SECTION 3: METHODS

3.1 - Literature and Database Reviews

This literature review provides a baseline from which to evaluate potential project impacts on biological resources on the project site and in the surrounding area.

3.1.1 - Existing Documentation

As part of the literature review, an FCS Biologist examined existing environmental documentation for the project site and vicinity. This documentation included literature pertaining to the habitat requirements of special-status species with the potential to occur in the project vicinity; and federal register listings, protocols, and species data provided by the USFWS and CDFW.

3.1.2 - Topographic Maps and Aerial Photographs

An FCS Biologist reviewed current USGS 7.5-minute topographic quadrangle map(s)and aerial photographs as a preliminary analysis of the existing conditions within the project site and immediate vicinity.[3] Information obtained from the topographic maps included elevation, general watershed information, and potential drainage feature locations using Google Earth in conjunction with the United States Environmental Protection Agency (EPA) Watershed Assessment, Tracking, and Environmental Results System (WATERS).[4] Aerial photographs provided a perspective of the current site conditions relative to on-site and off-site land use, plant community locations, and potential locations of wildlife movement corridors.

3.1.3 - Soil Surveys

The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series (i.e., group of soils with similar profiles) occurring within a particular area.[5] These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units that provide specific information regarding soil characteristics. Many special-status plant species have a limited distribution based exclusively on soil type. Therefore, pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the project site and to establish whether the soil conditions on-site are suitable for any special-status plant species.

3.1.4 - Special-status Species Database Search

An FCS Biologist compiled a list of threatened, endangered, and otherwise special-status species previously recorded within the project vicinity based on a search of the USFWS Information for

[3] United States Geological Survey (USGS). 2021. National Geospatial Program. Website: https://www.usgs.gov/core-science-systems/national-geospatial-program/us-topo-maps-america?qt-science_support_page_related_con=4#qt-science_support_page_related_con. Accessed March 22, 2022.

[4] United States Environmental Protection Agency (EPA). 2021. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed March 22, 2022.

[5] Natural Resources Conservation Service (NRCS). 2021. Web Soil Survey (WSS). United States Department of Agriculture (USDA). Website: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed March 22, 2022.

Planning and Consultation (IPaC) database,[6] the California Natural Diversity Database (CNDDB), and the CNPS Electronic Inventory (CNPSEI) of Rare and Endangered Vascular Plants of California.[7,8] The CNDDB search focused on species records within 10 miles of the project site. The CNPSEI search focused on records from the *Perris, California,* USGS 7.5-minute Topographic Quadrangle Map and the eight surrounding quadrangles. The CNDDB Biogeographic Information and Observation System (BIOS 5) was used to determine distances between species occurrences and the project site.[9]

The potential for occurrence on the project site was assessed for each of the special-status species identified in the database searches. The potential for occurrence was assessed based on conditions on the project site, habitat requirements of special-status species, and number of recent (< 25 years old) occurrences in the project vicinity.

3.1.5 - Trees and Native Vegetation

Prior to conducting the reconnaissance-level field survey, an FCS Biologist reviewed applicable City and County ordinances pertaining to tree and native vegetation preservation and protection and ascertained whether measures or permits are required to remove, replace, or transplant protected trees or native vegetation.

3.1.6 - Jurisdictional Waters and Wetlands

Prior to conducting the reconnaissance-level survey, an FCS Biologist reviewed EPA WATERS and aerial photography to identify potential natural drainage features and water bodies.[10] In general, all surface drainage features identified as blue-line streams on USGS maps and linear patches of vegetation are expected to exhibit evidence of flows and considered potentially subject to State and federal regulatory authority as waters of the United States and/or State. A preliminary assessment was conducted to determine the location of any existing drainages and limits of project-related grading activities to aid in determining whether a formal delineation of waters of the United States or State is necessary.

3.1.7 - MSHCP Information Map

As part of the MSHCP Consistency Analysis, an FCS Biologist reviewed the Regional Conservation Authority (RCA) MSHCP Information Map[11] to assess species survey and conservation requirements for the parcels that comprise the project site.

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[6] United States Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed March 22, 2022.

[7] California Department of Fish and Wildlife (CDFW). 2021. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 22, 2022.

[8] California Native Plant Society (CNPS). 2021. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed March 22, 2022.

[9] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed March 22, 2022.

[10] United States Environmental Protection Agency (EPA). 2021. Watershed Assessment, Tracking and Environmental Results System (WATERS). Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed March 22, 2022.

[11] Riverside Conservation Authority (RCA). RCA MSHCP Information Map. Website: https://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd. Accessed March 22, 2022.

3.2 - Field Surveys

3.2.1 - Survey Personnel

A general biological survey and vegetation community mapping of the project site was performed on March 24, 2022, by FCS Senior Biologist Michael Tuma, PhD (brief resume presented in Appendix A).

3.2.2 - General Biological Survey

The objective of the general biological survey was to ascertain general site conditions and identify whether existing vegetation communities provide suitable habitat for special-status plant or wildlife species. During this survey, the Biologist walked and drove the project site and characterized and mapped vegetation communities, identified and recorded plants and wildlife observed on-site, and recorded evidence of wildlife habitats, including wildlife corridors, nests, dens, or burrows. Special-status or unusual biological resources identified during the literature review were ground-truthed during the field survey for mapping accuracy. Special attention was paid to sensitive habitats and areas potentially supporting special-status floral and faunal species.

Vegetation Communities and Plants

Common plant species observed during the general biological survey were identified by visual characteristics and morphology in the field and recorded in a field notebook and on field maps. Uncommon and fewer familiar plants were identified with the use of taxonomical guides, including Jepson eFlora and Calflora.[12,13] Taxonomic nomenclature used in this study follows The Jepson Manual: Vascular Plants of California.[14] Common plant names, when not available from The Jepson Manual, were taken from other regionally specific references. Vegetation community types and boundaries were noted on aerial photos, verified through field observation, and digitized using ESRI ArcGIS software® ArcMap 10.0. By incorporating collected field data and interpreting aerial photography, a map of habitat types, land cover types, and other biological resources within the project site was prepared. Vegetation community and land cover types used to help classify habitat types are based on the Manual of California Vegetation (MCV) and cross-referenced with the CDFW Natural Communities List.[15,16]

Wildlife

Wildlife species detected during the general biological survey by sight, calls, tracks, scat, or other signs were recorded. Notations were made regarding suitable habitat for those special-status species determined to have the potential to occur within the project site.[17] Appropriate field guides were

[12] Jepson Flora Project (eds.) 2021. Jepson eFlora, https://ucjeps.berkeley.edu/eflora/. Accessed on March 22, 2022.
[13] Calflora. 2020. Calflora: Information on California plants for education, research, and conservation. Website: http://www.calflora.org/. Accessed on March 22, 2022
[14] Baldwin, B., et al. 2012. The Jepson Manual: Vascular Plants of California. Berkeley: University of California Press. County of San Bernardino (Bernardino). 2007 (amended 2015).
[15] Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento. 1300 pp.
[16] California Department of Fish and Wildlife (CDFW). 2021. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Website: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed March 22, 2022.
[17] California Department of Fish and Wildlife (CDFW). 2021. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 22, 2022.

used to assist in species identification during surveys, such as Peterson, Reid, and Stebbins.[18,19,20] Online resources such as eBird and California Herps were also consulted, as necessary. [21,22]

Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Urbanization and the resulting fragmentation of open space areas create isolated "islands" of wildlife habitat, forming separated populations. Corridors act as an effective link between populations.

The project site was evaluated for evidence of a wildlife movement corridor during the general biological survey. The scope of the biological resource assessment did not include a formal wildlife movement corridor study utilizing track plates, camera stations, scent stations, or snares. Rather, the focus of this study was to determine whether a change in land use at the project site could have significant impacts on the regional movement of wildlife. Conclusions are based on the information compiled during the literature review, including aerial photographs, USGS topographic maps, and resource maps for the vicinity; the field survey; and professional experience with the desired topography, habitat, and resource requirements of the special-status species potentially utilizing the project site and vicinity.

[18] Peterson, T.R. 2010. A Field Guide to Birds of Western North America, 4th Edition. Boston: Houghton Mifflin Harcourt.
[19] Reid, F. 2006. A Field Guide to Mammals of North America, Fourth Edition. Boston: Houghton Mifflin Harcourt.
[20] Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin Harcourt.
[21] eBird. 2021. Online bird occurrence database. Website: http://ebird.org/content/ebird/. Accessed March 22, 2022.
[22] California Herps. 2021. A Guide to the Amphibians and Reptiles of California. Website: http://www.californiaherps.com/ Accessed March 22, 2022.

SECTION 4: RESULTS

This section summarizes the results of the literature search and general biological reconnaissance survey. The results of the sensitive biological resources database reviews and an analysis for the potential for occurrence of these resources on the project site are presented in Section 5. An analysis of project requirements for MSHCP consistency is presented in Section 6.

4.1 - Literature Review

4.1.1 - Environmental Setting

The project site is situated within Perris Valley and the Perris Block, a geologic structural block bounded on the west by the Chino Fault and Elsinore Trough, on the east and northeast by the San Jacinto Fault Zone, on the north by the Cucamonga Fault Zone and San Jose Hills Fault, and on the south by the San Felipe Fault Zone. Prior to the Late Pleistocene (126,000 years ago), the Perris Block was tectonically tilted eastward, elevating and exposing older granitic rocks on the west side (Jurupa Hills) and facilitating accumulation of Pleistocene sediments in San Bernardino, Lakeview, Perris, and San Jacinto Valleys. The project site is mapped in an area of very old (early Pleistocene) alluvial-fan deposits.[23] Perris Valley, within which the City of Perris is situated, is characteristically flat. Elevation at the project site is approximately 1,480 feet (451 meters) above mean sea level. Major waterways in the project vicinity include the San Jacinto River, which drains the Perris Block, located approximately 5 miles south of the project site, and the Santa Ana River, located approximately 13 miles northwest of the project site.

Soils

The Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) mapped one soil type (Ramona sandy loam, 0 to 2 percent slopes) on the project site and two soil types (Ramona sandy loam, 0 to 2 percent slopes and Pachappa fine sandy loam, 0 to 2 percent slopes) within the off-site road improvements area (Exhibit 4). The Ramona series soils are brown, slightly and medium acid, sandy loams and fine sandy loams. The Pachappa series soils consist of well drained (minimal) Noncalcic Brown soils developed from moderately coarse textured alluvium.

4.2 - Biological Surveys

FCS Senior Biologist, Michael Tuma, PhD, conducted a general biological survey of the project site on March 24, 2022, between approximately 9:00 a.m. to 10:30 a.m. Weather conditions during the field surveys were sunny and clear, with an average temperature around 65°F (degrees Fahrenheit), and wind speeds between 0 and 3 miles per hour (mph).

[23] Morton, Douglas M. 2003 Preliminary Geologic Map of the Perris 7.5-minute Topographic Quadrangle Map, Riverside County, California, Version 1.0. Map Scale 1:24,000. Digital preparation by Kelly R. Bovard and Rachael M. Alvarez. USGS Prepared in Cooperation with the Eastern Municipal Water District and the California Division of Mines and Geology. Open-File Report 03-270.

4.2.1 - Vegetation Communities and Land Use

The project site consists of developed lands used for outdoor equipment storage. The northern portion of the project site was formerly used for storage of wooden pallets and was recently cleared. This area was open and vegetated in ruderal species at the time of the survey. The southern portion of the project site is still used for storage of materials and includes several outbuildings and numerous metal shipping containers. The landowner was actively using the larger outbuilding at the time of the survey.

Dr. Tuma recorded the following vegetation community types on-site during the general biological reconnaissance survey. A map of the vegetation communities is presented in Exhibit 5. Photographs of the vegetation communities on-site are presented in Appendix B.

Ruderal/Disturbed

Ruderal/disturbed habitat is classified as areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continue to retain a soil substrate. Typically, if any vegetation is present, it is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or show signs of past or present animal usage that precludes them from providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, land that is repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle (OHV) trails, and old home-sites.

Ruderal/disturbed habitat occurs in the northern portion of the project site in areas where pallets were previously stored. Soils in this area are highly disturbed, with inclusions of debris, trash, and gravel that indicate previous dumping and grading. The soil surface is bare in areas but mostly vegetated in nonnative and native ruderal species, including pineappleweed (*Chamomilla suaveolens*), London rocket (*Sisymbrium irio*), red brome (*Bromus madritensis*), black mustard (*Brassica nigra*), redstem filaree (*Erodium cicutarium*), puncturevine (*Tribulus terrestris*), common fiddleneck (*Amsinckia menziesii*), and common cryptantha (*Cryptantha intermedia*). Ruderal habitat also occurs within 500 feet of the project site to the north, west, and south in recently disked fallow fields.

Urban/Developed

Urban developments are characterized by a combination of developed and hardscaped areas and manicured vegetation, including street/shade trees, lawns, and shrubs, and little or no exposed soil substrates. Irrigation and fertilization allow for tropical and other non-native and ornamental species to flourish in urban areas. Trees are often grown in a spaced pattern with an open understory, and lawns are typically one species maintained at a continuous, uniform height. Shrubs are grown as spaced individuals or in tight rows that are hedged. These conditions provide habitat to a low diversity of wildlife that are tolerant of human-modified environments.

The southern portion of the project site supports outbuildings, storage containers, and stored equipment and is considered urban/developed land. Additional urban/developed lands occur within 500 feet of the project site, and include industrial, commercial, and residential developments.

4.2.2 - Wildlife

The vegetation community and land cover types on the project site provide habitat for numerous wildlife species. As well, the anthropogenic features on the project site (buildings, shipping containers, stored equipment, and concrete foundations) could provide habitat for numerous wildlife species. Wildlife activity during the general biological reconnaissance survey was moderate and consisted primarily of avian species. Evidence of other species was evident in tracks, scat, and other signs, as well as information provided by the current site occupant. The following discussions regarding the wildlife species observed within the project site are organized by taxonomic group. Each discussion contains representative examples of a particular taxonomic group either observed or expected to occur on-site. No special-status wildlife species were observed during the survey.

Amphibians and Fish

No amphibian or fish species were observed on-site during the general biological reconnaissance surveys. Because of arid climate of the project site, amphibians are uncommon and largely limited to areas where sufficient sources of water are present. With no apparent open water sources on-site or in the vicinity, amphibians are not expected to occur on-site.

Birds

Avian activity was moderate during the field survey. Dr. Tuma identified common native and nonnative species, including Eurasian collared dove (Streptopelia decaocto), rock dove (Columba livia), Anna's hummingbird (Calypte anna), red-tailed hawk (Buteo jamaicensis), common raven (Corvus corax), horned lark (Eremophila alpestris), bushtit (Psaltriparus minimus), European starling (Sturnus vulgaris), northern mockingbird (Mimus polyglottos), house sparrow (Passer domesticus), house finch (Haemorhous mexicanus), and western meadowlark (Sternella neglecta). Other bird species expected to occur on-site include common species typical of the region and tolerant of anthropogenic activities and features, such as mourning dove (Zenaida macroura) and California scrub jay (Aphelocoma californica). Birds may find nesting platforms throughout the project site on bare ground, in grasses, shrubs, and trees, and on buildings and materials in storage. The concrete slab in the ruderal area in the northern portion of the project site could potentially provide burrowing opportunities for burrowing owls if the site becomes populated by California ground squirrels prior to its development.

Invertebrates

Two butterflies, painted lady (Vanessa cardui) and cabbage white (Pieris rapae), were observed on-site, as were European honeybees (Apis mellifera), houseflies (Musca domestica), and oblique streaktail (Allograpta obliqua). Other invertebrates that likely occur at the site year-round or during seasonal pulses include several species of beetles, flies, ants, bees, wasps, moths and butterflies, and spiders and tarantulas, among others.

Mammals

No mammal species were directly observed on-site during the field survey. However, the current landowner reported seeing coyote (*Canis latrans*) and striped skunk (*Mephitis mephitis*) on the property at night. California ground squirrels (*Otospermophilus beecheyi*) and valley pocket gophers (*Thomomys bottae*) may be present in ruderal habitats adjacent to the project site. Neither of these species nor their sign were detected in the ruderal habitat on the project site, but they may find good habitat in the recently cleared northern portion of the project site. California ground squirrels may find good burrowing habitat under the concrete slabs and shipping containers on-site.

Reptiles

One reptile, western fence lizard (*Sceloporus occidentalis*), was observed on the project site. Another common lizard that is expected to occur on-site is the western side-blotched lizard (*Uta stansburiana*).

4.2.3 - Wildlife Movement Corridors

The majority of the project site consists of developed lands used for outdoor storage of materials. The project site is also surrounded by roads, highways, and urban development to the east and north that limits wildlife movement to and from the project site in those directions. The property owner reported seeing coyotes and striped skunks walking along the western boundary of the property at night. These animals are likely accessing the project site, or traveling along its border, from the large ruderal field west of the project site. The project site itself does not serve as a wildlife movement corridor.

Source: Bing Aerial Imagery. USDA Web Soil Survey Database.

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Exhibit 4
Soils Map

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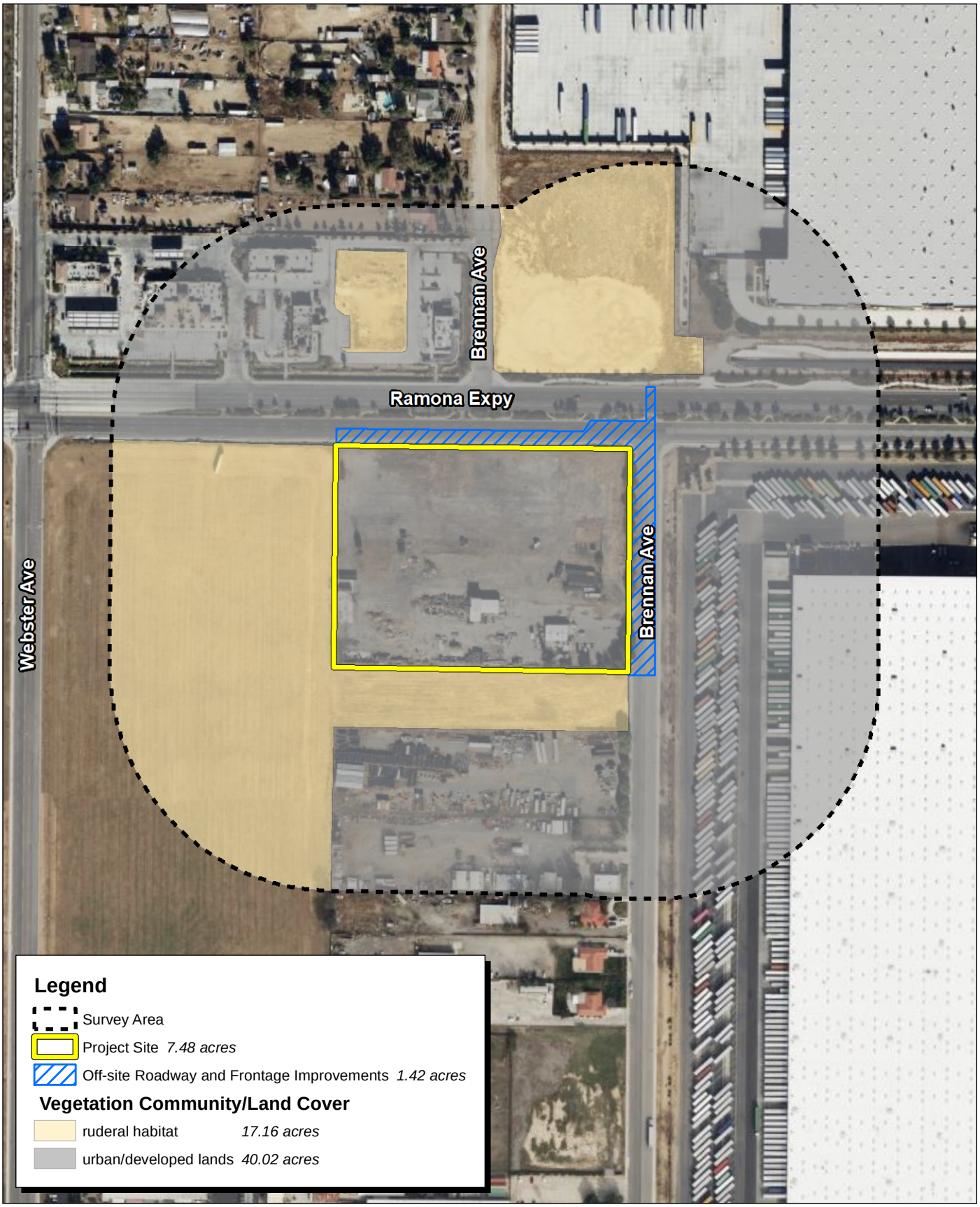

Source: Bing Aerial Imagery. USDA Web Soil Survey Database.

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Exhibit 5
Vegetation Community and Land Cover Map

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SECTION 5: SENSITIVE BIOLOGICAL RESOURCES DATABASE REVIEWS

The following section discusses the results of the database reviews for sensitive biological resources and an analysis of the potential for these resources to occur within the project site based on existing biological conditions on and adjacent to the site.

5.1 - Sensitive Natural Communities

Sensitive natural communities are vegetation communities or special wildlife habitats that are rare or occur in limited distributions or provide specific habitat requirements for special-status plant or wildlife species. The CDFW maintains a list of natural communities which attempts to classify vegetation types found within the State of California and rank them based on rarity. Communities ranked S1-S3 are considered sensitive natural communities.[24] No sensitive natural communities are present on the project site, and none have been recorded within five miles of the project site. Three sensitive natural communities, including Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland have been recorded in the CNDDB between 5 and 10 miles from the project site.[25] These communities are not present on or adjacent to the project site.

5.2 - Special-status Plant Species

Twenty-two special-status plant species have been recorded within 10 miles of the project site or on the 9-quadrangle search area (Appendix C, Table 1). Table 1 in Appendix C includes the species' status, required habitat, and a summary analysis of the potential for each of these species to occur on the project site. Special-status plant species that were determined to have no potential to occur on-site appear in the table with justification for their exclusion from further discussion. Special-status plant species with low to high potential to occur on-site are analyzed further below. The potential for occurrence of a species was based on presence of suitable habitats, soil types, and occurrences recorded by the CNPSEI and CNDDB.[26,27,28] Previous and significant surface disturbances evident throughout the project site and the presence and abundance of several non-native, invasive, annual plant species there have likely lowered the potential for persistence and occurrence of populations of many special-status plant species.

5.2.1 - Potential for Occurrence of Special-status Plants

The project site is significantly disturbed and is surrounded by urbanized development and undeveloped lands that have been repeatedly disturbed (disked). Because of the conditions on and

[24] California Department of Fish and Wildlife (CDFW). 2021. Natural Communities List, Sacramento: California Department of Fish and Wildlife. Accessed March 22, 2022.
[25] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed March 22, 2022.
[26] California Department of Fish and Wildlife (CDFW). 2021. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 22, 2022.
[27] California Native Plant Society (CNPS). 2021. California Native Plant Society Rare and Endangered Plant Inventory. Website: http://www.rareplants.cnps.org/. Accessed March 22, 2022.
[28] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed March 22, 2022.

adjacent to the project site, all special-status plants that occur in the region were assessed as having no or low potential for occurrence (Appendix C, Table 1). Thus, special-status plants are not expected to occur on the project site and are not discussed further.

5.3 - Special-status Wildlife Species

Forty-four special-status wildlife species were identified as occurring within 10 miles of the project site as recorded in the CNDDB and an additional three species were identified in the USFWS IPaC review (Appendix C, Table 2). [29,30,31] Table 2 in Appendix C includes the species' status, required habitat types and features, and potential to occur within the project site. The table also includes special-status wildlife species that have been determined to have no potential to occur on-site, primarily based on the absence of suitable habitat and the lack of recorded occurrence in the project vicinity, along with other justification(s) for their exclusion from further discussion. Special-status wildlife species with low to high potential to occur on-site are analyzed further below. The potential for wildlife to occur on the project site was based on presence of suitable habitats and occurrences recorded in the CNDDB.

5.3.1 - Potential for Occurrence of Special-status Wildlife

The project site contains suitable habitat conditions that provide at least a moderate potential for the following special-status wildlife species to occur on-site:

Species evaluated with a **moderate** potential to occur include:

- burrowing owl (*Athene cunicularia*)
- California horned lark (*Eremophila alpestris actia*)

All other species were assessed as having no or low potential to occur because the project site is outside of the known distributional range of the species or did not support suitable habitat (Appendix C, Table 2). Those species with moderate potential to occur on-site are discussed below.

Moderate Potential

Burrowing owl

The burrowing owl is an owl in the family Strigidae. Burrowing owls occur in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. This species utilizes, modifies, and nests in burrows created by other species, most notably those of the California ground squirrel, but also those excavated by coyotes, desert kit foxes, desert tortoises, American badgers, and other burrowing mammals. Burrowing owl populations are threatened by habitat loss, pesticide use, and ground squirrel eradication programs, which limit suitable burrowing habitat. This species is considered a Special Species of Concern (SSC) by the CDFW and a Bird of Conservation Concern (BCC) by the USFWS. Take of this species is covered under the MSHCP under certain conditions;

[29] California Department of Fish and Wildlife (CDFW). 2021. CNDDB RareFind 5 California Natural Diversity Database Query for Special-Status Species. Website: https://map.dfg.ca.gov/rarefind/view/RareFind.aspx. Accessed March 22, 2022.
[30] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed March 22, 2022.
[31] United States Fish and Wildlife Service (USFWS). 2021. Information for Planning and Consultation (IPaC). Website: https://ecos.fws.gov/ipac/. Accessed March 22, 2022.

however, their nesting burrows are protected by the MBTA and Fish and Game Codes pertaining to native nesting avian species.

The project site contains suitable non-native grassland habitat with low-growing vegetation. There were no small mammal burrows observed on the project site, but California ground squirrels were observed on adjacent properties in the project vicinity. The northern portion of the project site was recently cleared of stacks of wooden pallets. This has opened the area and allowed ruderal vegetation to invade it. There is a large concrete slab in the northern portion of the site that could potentially provide burrowing habitat for burrowing owls. Additionally, there is high potential for California ground squirrels to occupy and burrow on the project site prior to its development; thus, there is a potential for occurrence of burrowing owls on the project site prior to its development. Additional studies would be necessary to confirm whether California ground squirrels and burrowing owls use the site. There are 11 recent records within 5 miles of the project site and 40 recent records between 5 and 10 miles from the project site (Exhibit 6).[32] Therefore, there is moderate potential for this species to occur on-site as a breeder, winter resident, and/or for post-breeding dispersal.

California Horned Lark

California horned lark is designated as a California Species of Special Concern. This species is a common to abundant year-round resident that inhabits a variety of open habitats, such as grasslands and other open habitats with low, sparse vegetation, and typically where trees and large shrubs are absent. California horned lark nest on the ground, building grass-lined nests in a cup-shaped depression on open ground. This species is very gregarious and often forms large flocks that forage and roost together after the breeding season. California horned lark eats insects, snails, and spiders during breeding season and grass and forb seeds and other plant matter outside of the breeding season. There is one recent record within 5 miles of the project site and three recent records between 5 and 10 miles from the project site (Exhibit 6).[33]

The non-native grassland areas on and adjacent to the project site may provide suitable foraging and nesting habitat for this species.

5.3.2 - Nesting Birds

The project site contains numerous surfaces, structures, and vegetation that could provide suitable nesting habitat for bird species protected under the MBTA and the Fish and Game Code. These species include burrowing owl and California horned lark and other native avian species. Construction activities could disturb nesting and breeding birds in trees and shrubs within and around the construction site. Potential impacts on special-status and migratory birds that could result from construction and operation of the proposed project include destruction of eggs or occupied nests, mortality of young, and abandonment of nests with eggs or young birds prior to fledging.

[32] California Department of Fish and Wildlife (CDFW). 2021. Biogeographic Information and Observation System (BIOS 5). Website: https://map.dfg.ca.gov/bios/. Accessed March 22, 2022.
[33] Ibid.

5.4 - Potentially Jurisdictional Water and Wetlands

There are no waters or wetland features on the project site that would be considered potentially jurisdictional by USACE, nor any features that would be considered potentially jurisdictional by State regulatory agencies including the RWQCB and CDFW.

SECTION 6: MSHCP CONSISTENCY ANALYSIS

6.1 - Relationship to Criteria Cells, Cell Groups, and Conservation Areas

The project site is located within the Mead Valley Area Plan of the MSHCP but not "within or adjacent to" a Criteria Cell or Conservation Area. The nearest Criteria Cell Group (2432) is located approximately 1.1 miles southwest of the project site (Exhibit 6). The nearest Conservation Areas include a Riverside County Flood Control District channel (Public Quasi-Public Conserved Land) approximately 1.5 miles east of the project site, Motte/Rimrock Reserve (Public Quasi-Public Conserved Land) approximately 2.1 miles southwest of the project site, and Lake Perris State Recreation Area (Public Quasi-Public Conserved Land) approximately 2.4 miles east of the project site. This project area is not located within any Linkage; the nearest Linkage is approximately 2.5 miles northeast of the project area (Exhibit 6). Because of its location outside of any Criteria Cells or Cell Groups, the project is not subject to Reserve Assembly Analysis requirements under the MSHCP (Exhibit 7). Because the project site is not within or adjacent to any MSHCP Conservation Areas, the proposed project is not subject to Guidelines Pertaining to the Urban/Wildlands Interface or other requirements under the MSHCP pertaining to projects or actions implemented within or adjacent to a Conservation Area.

The project site is not located within an area slated for "Existing or Pending Conservation." The project site does not feature "Avoidance Areas," or areas that must be protected by, or proposed to be protected by, deed restriction. Current conditions and full development of the approximately 7.50-acre project site would not provide for any contributions to "Undeveloped Areas Potentially Available for Future Conservation."

6.2 - Covered Roads

One Covered Road, Ramona Expressway, is located along the northern border of the project site and outside of the project development area. The project proposes several off-site improvements to Ramona Expressway; however, because the project and off-site improvements are located outside of any Criteria Area or Public/Quasi-Public Lands, the project is not subject to Covered Road requirements under the MSHCP.

6.3 - Covered Public Access Activities

The project site is not located within an MSHCP Conservation Area and therefore, not subject to Covered Public Access Activities requirements under the MSHCP.

6.4 - Public Quasi-Public Lands

The project site is not located within or adjacent to any public or quasi-public lands, nor any area designated as Public/Quasi-Public Conserved Lands. The project is not subject to MSHCP requirements covering Public Quasi-Public Lands.

6.5 - Covered Species Survey Area Requirements

The project site is located in the following covered species survey area:

- Burrowing Owl Survey Area

The proposed project is therefore subject to survey requirements for burrowing owl. Initially, the project site would be subject to a burrowing owl habitat assessment on and adjacent (within 500 feet) to the project site, per MSHCP protocol and per CDFW (2012) protocol.

The project area is not located in any of the following covered species survey areas:

- Amphibians Survey Area
- Mammals Survey Area
- Narrow Endemic Plants Survey Area
- Delhi Sands Flower-loving Fly Survey Area
- Criteria Area Species

Additionally, the project site is not located within any Additional Needs Survey Areas. The proposed project is therefore not subject to these survey requirements under the MSHCP.

6.6 - Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

6.6.1 - Riparian Riverine Habitat

There is no Riparian Riverine Habitat on the project site or within 500 feet. The proposed project is therefore not subject to Riparian Riverine Requirements under the MSHCP.

6.6.2 - Riparian Birds

There is no Riparian Riverine Habitat on or adjacent to the project site and therefore no habitat for any riparian/riverine bird species, including least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), or western yellow-billed cuckoo (*Coccyzus americanus*). The proposed project is therefore not subject to riparian birds survey requirements.

6.6.3 - Vernal Pools

There are no vernal pools or features indicative of the historic presence of vernal pools on the project site or within 500 feet. According to the NRCS Web Soil Survey (2022), two soil types are mapped on the project site (Exhibit 4). Neither soil type on the project site and off-site road improvements area are known to be soils utilized by fairy shrimp species known to occur in the Western Riverside County MSHCP Plan Area (USFWS 2007).[34] The project is not subject to Vernal Pool or Vernal Pool Species requirements under the MSHCP.

[34] USFWS. 2007. Endangered and Threatened Wildlife and Plants; Clarification of the Economic and Non-Economic Exclusions for the Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon. 72 FR 30279 30279-30297 05/31/2007

6.7 - Additional Survey Needs and Procedures

6.7.1 - Burrowing Owl

Analysis

The non-native grassland habitat in the northern portion of the project site supports suitable foraging habitat for burrowing owl. There is a large concrete slab in this portion of the site that could provide burrowing habitat for burrowing owls. Additionally, if California ground squirrels inhabit this portion of the site, there is moderate potential for burrowing owl to occupy the project site. The CNDDB shows 51 records of burrowing owls within 10 miles of the project site. This species is covered under the MSHCP and protected by the MBTA and Fish and Game Codes.

Potential Project Impacts

Construction of the proposed project could potentially impact burrowing owls if ground-disturbing construction activities are initiated or conducted during the burrowing owl nesting season (February 15 through August 31).

Proposed Mitigation

Mitigation for burrowing owls is presented in Section 7.

6.7.2 - Nesting Birds

Analysis

The project area supports vegetation communities, land cover types, and other habitat features that provide nesting habitat for avian species covered under the MBTA and Fish and Game Codes, including common, native species.

Potential Project Impacts

Construction of the proposed project could potentially impact nesting birds if ground-disturbing construction activities are initiated or conducted during the avian breeding season (February 15 through August 31).

Proposed Mitigation

Mitigation for nesting birds is presented in Section 7.

6.8 - Best Management Practices

The project applicant shall implement Standard Best Management Practices (BMPs) of the MSHCP (Volume I, Appendix C). The BMPs are presented in Section 7.

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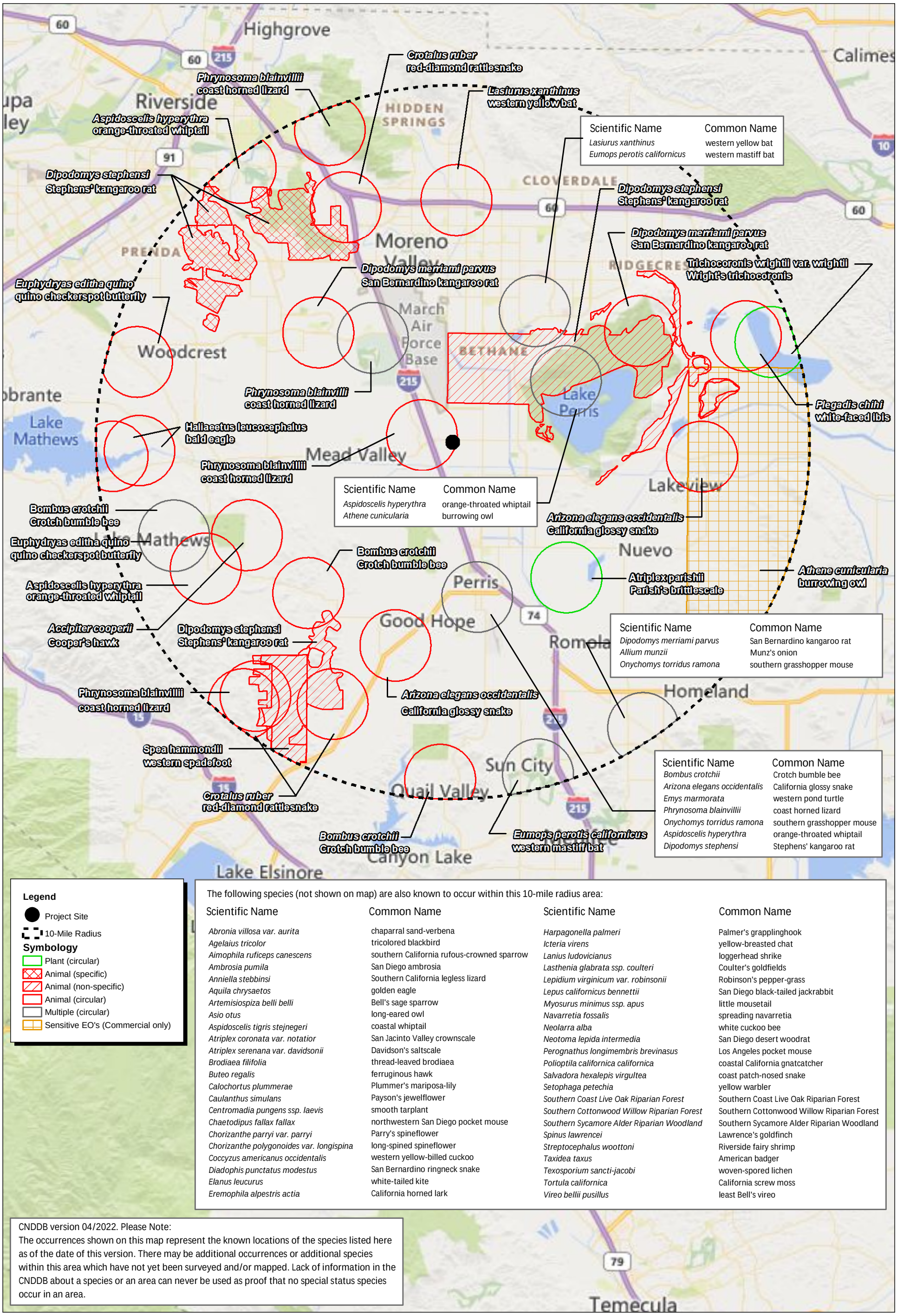

Source: Bing Street Imagery. California Natural Diversity Database (CNDDB), April 2022.

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Exhibit 6
CNDDB Special-Status Species Occurrences (10-mile radius)

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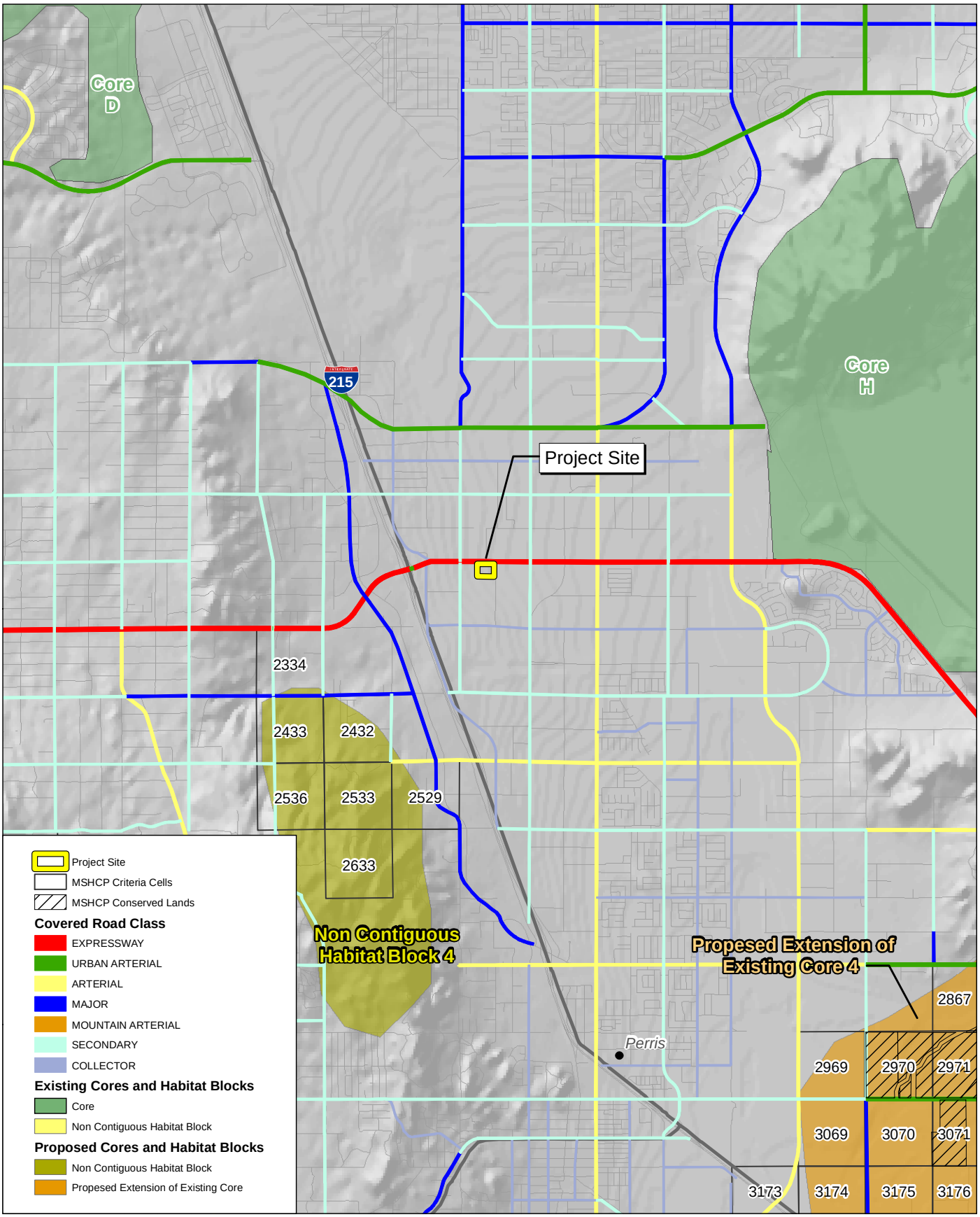

Source: USGS, Western Riverside County Regional Conservation Authority (RCA) MSHCP, Census 2000 data.

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Exhibit 7
MSHCP Conservation Areas

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SEEFRIED INDUSTRIAL PROPERTIES, INC.
RAMONA EXPRESSWAY AND BRENNAN AVENUE WAREHOUSE PROJECT
BIOLOGICAL RESOURCES ASSESSMENT & MSHCP CONSISTENCY ANALYSIS

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SECTION 7: IMPACT ANALYSIS AND RECOMMENDATIONS

The following discussion addresses potential project impacts on regulated biological resources, including special-status species, and recommends measures to avoid and/or mitigate impacts to a less-than-significant level under CEQA. These measures are consistent with requirements under the PVCCSP and MSHCP.

7.1 - Applicable PVCCSP Mitigation Measures

The proposed project is required to comply with the following applicable mitigation measures from the PVCCSP EIR.

MM Bio-1 In order to avoid violation of the MBTA and the California Fish and Game Code, site-preparation activities (removal of trees and vegetation) for all PVCC implementing development and infrastructure projects shall be avoided, to the greatest extent possible, during the nesting season (generally February 1 to August 31) of potentially occurring native and migratory bird species.

If site-preparation activities for an implementing project are proposed during the nesting/breeding season (February 1 to August 31), a pre-activity field survey shall be conducted by a qualified biologist prior to the issuance of grading permits for such project, to determine if active nests of species protected by the MBTA or the California Fish and Game Code are present in the construction zone. If active nests are not located within the implementing project site and an appropriate buffer of 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected bird nests (nonlisted), or 100 feet of sensitive or protected songbird nests, construction may be conducted during the nesting/breeding season. However, if active nests are located during the pre-activity field survey, no grading or heavy equipment activity shall take place within at least 500 feet of an active listed species or raptor nest, 300 feet of other sensitive or protected (under MBTA or California Fish and Game Code) bird nests (nonlisted), or within 100 feet of sensitive or protected songbird nests until the nest is no longer active.

MM Bio-2 Project-specific habitat assessments and focused surveys for burrowing owls will be conducted for implementing development or infrastructure projects within burrowing owl survey areas. A pre-construction survey for resident burrowing owls will also be conducted by a qualified biologist within 30 days prior to commencement of grading and construction activities within those portions of implementing project sites containing suitable burrowing owl habitat and for those properties within an implementing project site where the biologist could not gain access. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the preconstruction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity

will be conducted in accordance with the current Burrowing Owl Instruction for the Western Riverside MSHCP.

If active nests are identified on an implementing project site during the pre-construction survey, the nests shall be avoided or the owls actively or passively relocated. To adequately avoid active nests, no grading or heavy equipment activity shall take place within at least 250 feet of an active nest during the breeding season (February 1 through August 31), and 160 feet during the non-breeding season.

If burrowing owls occupy any implementing project site and cannot be avoided, active or passive relocation shall be used to exclude owls from their burrows, as agreed to by the City of Perris Planning Department and the CDFW. Relocation shall be conducted outside the breeding season or once the young are able to leave the nest and fly. Passive relocation is the exclusion of owls from their burrows (outside the breeding season or once the young are able to leave the nest and fly) by installing one-way doors in burrow entrances. These one-way doors allow the owl to exit the burrow, but not enter it. These doors shall be left in place 48 hours to ensure owls have left the burrow. Artificial burrows shall be provided nearby. The implementing project area shall be monitored daily for one week to confirm owl use of burrows before excavating burrows in the impact area. Burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible pipe shall be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow. The CDFW shall be consulted prior to any active relocation to determine acceptable receiving sites available where this species has a greater chance of successful long-term relocation. If avoidance is infeasible, then a DBESP will be required, including associated relocation of burrowing owls. If conservation is not required, then owl relocation will still be required following accepted protocols. Take of active nests will be avoided, so it is strongly recommended that any relocation occur outside of the nesting season.

7.2 - Project-specific Mitigation Measures

The following project-specific measures are required to reduce potential project-related impacts to less than significant levels. These measures provide clarification and expand upon measures required under the PVCCSP and MSHCP.

MM BIO-1 Burrowing Owl Breeding Season Surveys

Breeding season surveys shall be implemented by a qualified Biologist according to MSHCP protocol and consistent with California Department of Fish and Wildlife (CDFW) 2012 Guidelines. This would consist of a Step II, Part A focused burrow survey, and four Step II, Part B focused burrowing owl surveys conducted during appropriate conditions and times of day. The results of the breeding season surveys shall be reported to the Riverside County Environmental Programs Department and

the Regional Conservation Authority (RCA) Monitoring Program Administrator. If the survey is positive for burrowing owls, the project applicant shall implement measures, as needed, as described in PVCCSP mitigation measure MM Bio-2.

MM BIO-2 Implement MSHCP Best Management Practices

Project personnel shall implement the following standard MSHCP Best Management Practices (BMPs) during the construction phase of the proposed project:

1. A condition shall be placed on grading permits requiring a qualified Biologist to conduct a training session (Worker Environmental Awareness Program [WEAP]) for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act and the Multiple Species Habitat Conservation Plan (MSHCP), the need to adhere to the provisions of the Endangered Species Act and the MSHCP, the penalties associated with violating the provisions of the Endangered Species Act, the general measures that are being implemented to conserve the species of concern as they relate to the proposed project, and the access routes to and project site boundaries within which the proposed project activities must be accomplished.
2. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.
3. The qualified project Biologist shall monitor construction activities for the duration of the proposed project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.
4. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.
5. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.
6. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).
7. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the proposed project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.
8. The City shall have the right to access and inspect the project site to determine its compliance with project approval conditions, including these BMPs.

MM BIO-3 Designation of Project Biologists

Prior to the initiation of ground-disturbing activities during the construction phase of the proposed project, the project applicant will ensure that project Biologists are designated for the proposed project. The Biologist(s) must be familiar with the biology and conservation of special-status species in the project vicinity, including burrowing owl, and be able to identify the species. The Biologist(s) shall perform pre-construction surveys and monitor construction activities. The Biologist(s) shall be responsible for ensuring that impacts on special-status species, wildlife habitat, or unique resources would be avoided to the fullest extent possible. The Biologist(s) shall ensure that Environmentally Sensitive Areas (ESAs) are fenced by the construction contractor around the on-site preservation area and, where appropriate, around other biologically sensitive areas where activities need to be restricted to protect native plants and wildlife or special-status species. These restricted areas would be monitored by the Biologist(s) during ground-disturbing construction activities to ensure their protection during construction. The Biologist(s) shall administer the Worker Environmental Awareness Program (WEAP) to construction personnel and report project minimization activities to the City and the California Department of Fish and Wildlife (CDFW). The project Biologist(s) shall ensure that project minimization measures are implemented prior to, during, and after ground-disturbing construction activities. The Biologist(s) shall have the authority to stop work if work activities threaten a sensitive biological resource.

MM BIO-4 Establish Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) shall be established around sensitive biological resources on the project site during the construction phase. Long-term ESAs shall be fenced with orange construction fencing that shall remain in-place until the end of construction activities. Other ESAs that are temporary in nature, such as a burrow occupied by burrowing owl or an active bird nest or other sensitive species or resource, as necessary, shall be marked with stakes and flagging. Construction personnel shall be instructed not to enter the ESAs and the Biologist(s) shall ensure that ESA boundaries are maintained and that sensitive resources within them are not disturbed by construction activities.

MM BIO-5 Monitoring of Ground-disturbing Construction Activities

During project construction activities that result in ground disturbance, the project Biologist(s) shall monitor the activities to ensure that sensitive biological resources are protected. The Biologist(s) shall ensure that vegetation clearance activities limit disturbance to the smallest practical area and that construction personnel and activities do not enter Environmentally Sensitive Areas (ESAs). The Biologist(s) shall perform daily pre-construction sweeps of work areas prior to initiation of daily construction activities. The Biologist(s) shall inspect open trenches, pits, and pipes or other materials within which a covered species or other sensitive species may become entrapped or hide within. The Biologist(s) shall have the authority to stop work if work activities threaten a sensitive biological resource.

MM BIO-6 Reporting

The project Biologist(s) shall provide quarterly and annual reports to the City of Perris and the California Department of Fish and Wildlife (CDFW) that detail the implementation of minimization measures. If individuals of a covered species are found on the project site during the construction phase, the Biologist(s) shall submit a species occurrence observation to the CDFW.

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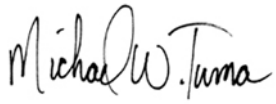
SECTION 8: CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this Biological Resources Assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 12, 2022 Signed:



Michael W. Tuma, PhD, Senior Biologist
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Appendix A: Resumes

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FIRSTCARBON SOLUTIONS™

MICHAEL TUMA, PHD, CWB, RPA—SENIOR BIOLOGIST

OVERVIEW

- More than 26 years of experience
- Experience leading teams in large data collection and analysis efforts

Education

- Doctor of Philosophy, Integrative and Evolutionary Biology, University of Southern California, Los Angeles, CA, 2016
- Master of Science, Anthropology, University of Southern Mississippi, Hattiesburg, MS, 1998
- Master of Science, Zoology, Eastern Illinois University, Charleston, IL, 1993
- Bachelor of Science, Zoology, Truman State University, Kirksville, MO, 1991

Permits, Authorizations, and Certifications

- Certified Wildlife Biologist, The Wildlife Society, 2013–present
- Certified Significant Ecological Areas Technical Advisory Committee (SEATAC) Biota Report Preparer, Los Angeles County Department of Regional Planning, 2008–present
- Qualified Biologist, San Bernardino County, 2007–present
- Authorized Biological Consultant, Riverside County, 2006–present
- Authorized Biologist for Agassiz's desert tortoise activities under 10(a)1(A) Recovery Permits (former) and Biological Opinions, US Fish and Wildlife Service (USFWS), August 2005–present
- California Scientific Collecting Permit/California Endangered Species Act (ESA)-Memorandum of Understanding, California Department of Fish and Wildlife (CDFW), August 2005–present

Trainings and Workshops

- ArcGIS Training Courses, Esri Academy, 2016–present
- Desert Tortoise Health Assessments for Translocation Projects, Desert Tortoise Council, 2015
- CEQA Workshop, Association of Environmental Professionals, 2008
- Endangered Species: Regulation, Conservation Planning, and Permits for Development, University of California, Los Angeles Extension, 2008
- Desert Tortoise Health Assessment and Phlebotomy Training, US Geographical Survey (USGS), 2007
- Endangered Species Permitting: Strategies and Successful Negotiations Workshop, The Wildlife Society, 2006
- A/E/C Project Management Bootcamp, PSMJ Resources, Inc., 2006
- Introduction to CEQA: A Step-by-Step Approach Workshop, SCWA, 2005
- Western Pond Turtle Workshop: Ecology and Conservation, The Wildlife Society, 2005
- Surveying, Monitoring, and Handling Techniques Workshop, Desert Tortoise Council, 2004

Professional Affiliation

- Adjunct Professor, University of Southern California, March 2019–present
- Chair, Board of Directors, Desert Tortoise Council, February 2018–February 2020
- Chair, Media Committee, Desert Tortoise Council, June 2017–present
- Chair, Grants Committee, Desert Tortoise Council, January 2016–present
- Board of Directors Member, Desert Tortoise Council, January 2014–present
- Newsletter Editor, Desert Tortoise Council, January 2014–January 2018

FIRSTCARBON SOLUTIONS™

MICHAEL TUMA, PHD, CWB, RPA—SENIOR BIOLOGIST

Michael Tuma, PhD, CWB, RPA, has more than 26 years of experience as a professional scientist in academic settings, agency positions, and as an environment consultant. He assists clients in complying with laws such as the ESA, the National Historic Preservation Act, CEQA, and NEPA. He has experience in a wide variety of technical biological work, including rare plant surveys and botanical inventories, habitat restoration planning and implementation, field data collection, population and habitat modeling, and technical biological reporting. He is a proficient project and client manager with experience in a diversity of market sectors, including land management, renewable energy, transportation, water infrastructure, gas and mineral extraction, and land development. Dr. Tuma has led teams in the implementation of studies and documentation in support of permitting and compliance with numerous environmental laws, including the Federal Endangered Species Act, California Endangered Species Act, NEPA, CEQA, and Migratory Bird Treaty Act, among many others. Dr. Tuma is an experienced leader and has supervised and mentored groups of biologists. He has directed teams on large and long-term projects and mentored junior staff on issues pertaining to project management, technical studies and documentation, and regulatory processes. He has led and mentored large groups of volunteers and international biologists on learning advanced data collection techniques and has experience leading a non-profit organization with more than 350 members. Dr. Tuma is skilled in project management, statistics, geographic information systems (GIS), and computer modeling. He has a passion for educating the public about science, and has been providing tutoring sessions, workshops, and lectures for more than 20 years.

RELATED EXPERIENCE AND CLIENT SUMMARY

Biological, Archaeological, and Paleontological Monitoring and Reporting Services for the Los Angeles Regional Interoperable Communications System, Los Angeles County, CA

FCS provided monitoring and reporting services during the construction of more than 150 land mobile radio (LMR) facilities at sites located primarily in Los Angeles County. The LMR sites contain the infrastructure and equipment necessary to provide voice communications coverage throughout the County for emergency responders. These locations are widely dispersed across the County in both urban (intensively developed) and rural (less developed) settings and include coastal locations, sites in downtown Los Angeles, remote mountain peaks across the County, and the northern high desert. FCS conducted the biological, archaeological, and paleontological pre-construction and construction monitoring and reporting services in accordance with the Construction Management Requirements outlined in the NEPA Environmental Assessment that FCS prepared for the project.

Dr. Tuma served as Biological Monitor for this project in 2020. His responsibilities included implementing mitigation measures and ensuring project compliance in support of the LA-RICS LMR System in Los Angeles County, California. Dr. Tuma monitored project for compliance for up to 33 mitigation measures, including performing clearance surveys for special status species, pre-construction nesting bird surveys, and several measures pertaining to California condor (*Gymnogyps californianus*) conservation, including condor hazing.

Other Relevant FCS Projects

- Port of Los Angeles Industrial Project Bird's Nest Survey, City of Los Angeles, CA
- Alton Parkway Logistics Facility Project IS/MND and Technical Studies, City of Irvine, CA
- Quick N Clean Car Wash Project IS/MND and Technical Studies, City of Adelanto, CA
- Bridge Point Peer Review of EIR and Technical Reports, City of Rancho Cucamonga, CA

- Redlands Residential Project Biological and Cultural Due Diligence, City of Redlands, CA
- Lilac Avenue Warehouse Due Diligence Memoranda, City of Rialto, CA
- Barton Road Logistics Center Project EIR, Technical Studies, and Peer Review, City of Colton, CA
- Griswold Residential Project Constraints Analysis, Unincorporated Los Angeles County, CA

Prior Work Experience

Santa Susana Field Laboratory, Boeing (through contract with MWH Americas, Inc.), Ventura County, CA

Dr. Tuma served as the Project Manager for this project between 2006 and 2008. Under one task he designed and conducted field investigations on the extent and size of Braunton's milk-vetch (*Astragalus brauntonii*) population within an area of a USFWS-proposed designated Critical Habitat. He led field efforts, which included conducting vegetation mapping, delineating the Braunton's milk-vetch population within the proposed area, estimating the population size with the use of randomized transects and quadrats, conducting a complete vascular plant inventory within the study area, and authoring a technical report detailing the results of the investigation, which were used by the client in commenting on the proposed area of designated Critical Habitat. Dr. Tuma performed other tasks under this project, including nesting bird surveys, pre-construction surveys for special status species, and a revegetation/mitigation effort for the California Rare Santa Susana tarplant.

Environmental Generalist Services Task Order Contract, California Department of Transportation District 7, Los Angeles and Ventura Counties, CA

Dr. Tuma served as a Senior Biologist for this two-year on-call environmental services contract with the California Department of Transportation (Caltrans) District 7 between 2014 and 2015. While serving in this capacity, contributed to two task orders in support of the State Route 138 NW project, which consists of protocol desert tortoise, burrowing owl, and rare plant surveys and an analysis of wildlife crossing and movements on State Route (SR) 138 between SR 14 and Interstate 5. Dr. Tuma led in the field surveys, planned field and desktop analyses, directed a group of biologists and GIS specialists, and served as primary author of the deliverables produced for these task orders.

Dune Palms Road Crossing Replacement, Caltrans (through contract with Parsons Brinckerhoff), Riverside County, CA

Dr. Tuma served as the Project Manager for this project in 2014 and 2015. He was responsible for coordinating natural resources studies and agency consultation in support of the preparation of a Caltrans Natural Environment Study (NES). Project tasks included a general biological survey, focused surveys for burrowing owl and rare plants, trapping efforts for Palm Springs round-tailed ground squirrel (*Spermophilus tereticaudus*) and Palm Springs pocket mouse, a jurisdictional waters/habitats determination, agency consultation, preparation of a Biological Assessment in support of Section 7 consultation, documentation of study results, and preparation of the NES.

Desert Quartzite Solar Energy Project EIR/EIS and Biological Studies, First Solar, Inc., Riverside County, CA

Dr. Tuma served as the Project Manager for this project in 2015 and 2016, and was responsible for client management, biological studies, technical report preparation, and CEQA/NEPA documentation for a large-scale development in east Riverside County, California. His specific duties included reviewing studies prepared by prior consultants, conducting updated field surveys (vegetation mapping, rare plant, and desert tortoise surveys) and technical studies, and preparing the EIR/EIS Biological Resources

section and appendices (Invasive Weed Management Plan, Raven Management Plan, Desert Tortoise Translocation Plan, Desert Kit Fox and American Badger Management Plan, Rare Plant Management Plan, and Vegetation Restoration Plan).

Edom Hills Wind Energy Facility, BP Wind Energy North America, Inc., Riverside County, CA

Dr. Tuma served as the Project Manager and Lead Authorized Biologist for this project in 2016 and was responsible for conducting a habitat assessment, eolian dune characterization study, and biological monitoring of project activities in support of minimizing the potential for take of Coachella Valley fringe-toed lizard (*Uma inornata*) and Coachella Valley milk-vetch (*Astragalus lentiginosus var. coachellae*) during the installation of equipment in two project turbines. He coordinated with the BLM project Biologist to gain approval of biologists to monitor the work, and concurrence for the recommended mitigation measures, which included removing wind-blown sands from portions of the access road and placing the sand in adjacent areas where they could continue transport in the eolian ecosystem. He authored a post-construction memorandum that detailed the restoration of the eolian sand and avoidance of sensitive microhabitats where fringe-toed lizards typically hibernate during the project activities.

High Desert Solar Project, Middle River Power (through contract with AECOM), San Bernardino County, CA

Dr. Tuma served as the Lead Authorized Biologist for this project in 2020. He led the implementation of a desert tortoise translocation program in support of the High Desert Solar Project site in Victorville, San Bernardino County, California. The effort consists of performing protocol health assessments, collecting blood samples for disease testing, translocating tortoises from the development area to an off-site location in the Kramer Hills in the Fremont-Kramer Critical Habitat Unit, and monitoring them following translocation. Additional tasks included transplanting western Joshua trees from the project site, and monitoring of Environmentally Sensitive Areas established around active desert kit fox dens and burrowing owl burrows.

Agassiz's Desert Tortoise Population Modeling and Conservation Planning for the Superior-Cronese and Gold Butte-Pakoon Critical Habitat Units, BLM, San Bernardino County, CA, Clark County, NV, and Mohave County, AZ

As the Project Manager, Client Manager, and Principal Investigator of this project, Dr. Tuma conducted research into the population biology of Agassiz's desert tortoises on two study areas that comprise federal lands administered by the BLM between 2008 and 2013. He directed a team of more than 40 biologists, statisticians, and GIS specialists who contributed to the project; successfully developed spatially explicit, individual-based population models used to rank the importance of site-specific threats at each of the study areas; and served as the primary author of the technical report deliverables. This project consisted of collecting field data, compiling GIS data, conducting intensive literature reviews and expert interviews, and developing tortoise occurrence models, population models, and threats models for study areas that included the Superior-Cronese Critical Habitat Unit in San Bernardino County, California, and the Gold Butte-Pakoon Critical Habitat Unit in Clark County, Nevada, and Mohave County, Arizona. The modeling effort allowed Dr. Tuma to simulate the effects of site-specific threats on tortoise populations at each study area and develop land management and species conservation strategies that could be implemented by the BLM Field and State Offices on tortoise populations within each Critical Habitat Unit. He presented the research at the annual meetings of the Desert Tortoise Council, The Wildlife Society, and the World Congress of Herpetology, and published a manuscript in the Journal of Wildlife Management in early 2016.

Appendix B:
Site Photographs

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Photo 1: Overview of northern portion of the project site, facing west from the northeast corner.

Photo 2: Overview of eastern portion of the project site, facing south from the northeast corner.

Photo 3: Overview of the concrete slab in the northern portion of the project site, facing west.

Photo 4: Overview of western portion of the project site, facing north from the southwest corner.

Appendix C:
Special-status Species Tables

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Table 1: Special-status Plant Species Potentially Occurring within the Project

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Lichens						
Texosporium sancti-jacobi Woven-spored lichen	—	—	3	Crustose lichen that occurs in openings of chaparral on the soil surface (terricolous). Elevation: 60–660 m	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Bryophytes						
Tortula californica California screw moss	—	—	1B.2	Moss that occurs in chenopod scrub and valley and foothill grasslands. Elevation: 10–1460 m	**None:** There is no suitable habitat for this species on the project site. There are two recent records between 5 and 10 miles from the project site.	No
Monocots						
Allium munzii Munz's onion	FE MSHCP	CT	1B.1	Perennial herb (bulb) that occurs in valley and foothill grasslands, coastal scrub, chaparral, cismontane woodland, and pinyon and juniper woodland. Elevation: 297–1070 m Bloom period: March–May	**None:** There is no suitable habitat for this species on the project site. There are five recent records between 5 and 10 miles from the project site.	No
Brodiaea filifolia Thread-leaved brodiaea	FT MSHCP	SE	1B.1	Perennial herb (bulb) that occurs in openings on clay soils in chaparral, cismontane woodland, coastal scrub, playas, valley and foothill grasslands, and vernal pool habitats. Elevation: 15–1020 m Bloom period: March–June	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site, and eight recent records between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Calochortus plummerae Plummer's mariposa-lily	— MSHCP	—	4.2	Perennial herb (bulb) that occurs on rocky and sandy sites, usually of granitic alluvial material, in coastal sage and Riversidean alluvial fan sage scrub, chaparral, valley and foothill grassland, cismontane woodland, and lower montane coniferous forest habitats. Can be very common after fire. Elevation: 100–1700 m Bloom period: May–July	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Hordeum intercedens Vernal barley	— MSHCP	—	3.2	Annual grasslike herb found in coastal dunes, coastal scrub, depressions and saline flats in valley and foothill grasslands, and vernal pools. Elevation: 5–1000 m Bloom period: March–June	**None:** There is no suitable habitat for this species on the project site.	No
Dicots						
Abronia villosa var. *aurita* Chaparral sand-verbena	—	—	1B.1	Annual herb that occurs on sandy soils in chaparral, coastal scrub, and desert dunes. Elevation: 75–1600 m Bloom period: January–September	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site, and one recent record between 5 and 10 miles from the project site.	No
Ambrosia pumila San Diego ambrosia	FE MSHCP	—	1B.1	Perennial herb (rhizomatous) that occurs on upper terraces of rivers and drainages. Also found in openings in coastal sage scrub and areas adjacent to vernal pools, seeps, and playas. Elevation: 33–1950 m Blooming period: April–October	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Atriplex coronata var. *notatior* San Jacinto Valley crownscale	FE MSHCP	—	1B.1	Annual herb that occurs in freshwater wetlands, playas, vernal pools, alkali sink, and wetland-riparian communities. Elevation: 180–1000 m Bloom period: April–August	**None:** There is no suitable habitat for this species on the project site. There are two recent records within 5 miles of the project site, and 12 recent records between 5 and 10 miles from the project site.	No
Atriplex parishii Parish's brittlescale	— MSHCP	—	1B.1	Annual herb that occurs in chenopod scrub, playas, and vernal pools Elevation: 25–1900 m Bloom period: June–October	**None:** There is no suitable habitat for this species on the project site. There is one historical record within 5 miles of the project site, and two historical records between 5 and 10 miles from the project site.	No
Atriplex serenana var. *davidsonii* Davidson's saltscale	— MSHCP	—	1B.2	Annual herb that occurs in coastal bluff scrub and coastal scrub. Elevation: 10–200 m Bloom period: April–October	**None:** There is no suitable habitat for this species on the project site, and the site is outside of the known elevational range of the species. There are five recent records between 5 and 10 miles from the project site.	No
Caulanthus simulans Payson's jewelflower	— MSHCP	—	4.2	Annual herb that occurs in sandy and granitic soils in chaparral and coastal scrub habitats. Elevation: 90–2200 m Bloom period: March–May	**None:** There is no suitable habitat for this species on the project site. There are five historical records between 5 and 10 miles from the project site.	No
Centromadia pungens ssp. *laevis* Smooth tarplant	— MSHCP	—	1B.1	Annual herb that occurs in alkali meadow, alkali scrub, and disturbed places in valley and foothill grassland, chenopod scrub, meadows, playas, and riparian woodland habitats. Elevation: 0–640 m Bloom period: April–September	**Low:** There is marginally suitable habitat for this species on the project site. There are three recent records within 5 miles of the project site, and 19 recent records between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Chorizanthe parryi var. *parryi* Parry's spineflower	— MSHCP	—	1B.1	Annual herb that occurs on sandy soils in chaparral, coastal sage and Riversidean alluvial fan sage scrub habitats. Elevation: 90–800 m period: April–June	**None:** There is no suitable habitat for this species on the project site. There are 11 recent records between 5 and 10 miles from the project site.	No
Chorizanthe polygonoides var. *longispina* Long-spined spineflower	— MSHCP	—	1B.2	Annual herb that occurs in valley and foothill grassland, coastal scrub, chaparral, meadows and seeps, and vernal pools. Elevation: 30–1530 m Bloom period: April–July	**None:** There is no suitable habitat for this species on the project site. There are five recent records between 5 and 10 miles from the project site.	No
Deinandra paniculate Paniculate tarplant	—	—	4.2	Annual herb that occurs in vernally mesic soils and sometimes sandy soils in coastal scrub, valley and foothill grassland, and vernal pool habitats. Elevation: < 1320 m Blooming period: March–December	**None:** There is no suitable habitat for this species on the project site.	No
Harpagonella palmeri Palmer's grapplinghook	— MSHCP	—	4.2	Annual herb that occurs in valley and foothill grasslands, coastal scrub, and chaparral. Elevation: 20–955 m Bloom period: March–May	**None:** There is no suitable habitat for this species on the project site. There are three historical records between 5 and 10 miles from the project site.	No
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	— MSHCP	—	1B.1	Annual herb that occurs on alkaline soils in playas, sinks, grasslands, coastal salt marshes, and vernal pools. Elevation: 1–1200 m Bloom period: February–July	**None:** There is no suitable habitat for this species on the project site. There are 17 recent records between 5 and 10 miles from the project site.	No
Lepidium virginicum var. *robinsonii* Robinson's pepper-grass	—	—	4.3	Annual herb that occurs on dry soils in chaparral and coastal sage and Riversidean alluvial fan sage scrub habitats. Elevation: 1–855 m Blooming period: January–July	**None:** There is no suitable habitat for this species on the project site. There are two recent records between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status			Habitat Description[4]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]	CNPS[3]			
Myosurus minimus ssp. *apus* Little mousetail	— MSHCP	—	3.1	Annual herb that occurs on alkaline soils in in valley and foothill grassland and vernal pools. Elevation: 20–640 m Bloom period: March–June	**None:** There is no suitable habitat for this species on the project site. There is one historical record between 5 and 10 miles from the project site.	No
Navarretia fossalis Spreading navarretia	FT	—	1B.1	Annual herb that occurs in mesic, alkaline soils in valley and foothill grasslands, chenopod scrub, and vernal pool habitats. Elevation: < 2100 m Blooming period: March–June	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site, and 10 recent records between 5 and 10 miles from the project site.	No
Trichocoronis wrightii var. *wrightii* Wright's trichocoronis	— MSHCP	—	2B.1	Annual herb that occurs in meadows and seeps, marshes and swamps, riparian forests, and vernal pools. Elevation: 5–435 m Bloom period: May–September	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No

Code Designations

[1] Federal Status: 2022 USFWS Listing

FE = Listed as endangered under the Endangered Species Act
FT = Listed as threatened under the Endangered Species Act
FC = Candidate for listing (threatened or endangered) under Endangered Species Act
FD = Delisted in accordance with the Endangered Species Act
MSHCP= covered under the Western Riverside County MSHCP
— = Not federally listed

[2] State Status: 2022 CDFW Listing

SE = Listed as endangered under the California Endangered Species Act
ST = Listed as threatened under the California Endangered Species Act
SSC = Species of Special Concern as identified by CDFW
CFP = Listed as fully protected under FGC
CR = Species identified as rare by CDFW
— = Not state listed

[3] CNPS: 2022 CNPS Listing

Rank 1A Plants presumed Extinct in California.
Rank 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
Rank 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
Rank 3 Plants about which we need more information—A Review List.
Rank 4 Plants of limited distribution—A Watch List.
Blooming period: Months in parentheses are uncommon.

[4] **Habitat description:** Habitat description adapted from CNDDB (CDFW 2022) and CNPS online inventory (CNPS 2022).

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Table-2: Special-status Species Wildlife

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Crustaceans					
Branchinecta lynchi Vernal pool fairy shrimp	FT MSHCP	—	Small vernal pools with cool water (10ºC), moderate alkalinity and conductivity, and less than 1 m deep.	**None:** There is no suitable habitat for this species on the project site.	No
Streptocephalus woottoni Riverside fairy shrimp	FE MSHCP	—	Vernal pools on the Santa Rosa Plateau on Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils.	**None:** There is no suitable habitat for this species on the project site. There are two recent records within 5 miles of the project site.	No
Insects					
Bombus crotchii Crotch's bumble bee	—	—	Grasslands and scrub communities. Prefers hotter and drier environments than other bumblebee species. Nests underground, often in abandoned rodent dens.	**Low:** The grassland habitat on project site is disturbed and comprised of predominantly non-native species, but a few native annuals are present. There is one recent record of this species within 5 miles of the project site and four recent records between 5 and 10 miles from the project site.	No
Danaus plexippus Monarch butterfly	FC	—	Grasslands, scrub communities, and open forests. Adults cluster on pine, cypress and eucalyptus trees during migration and lay eggs on milkweed species. Long-distance migrant.	**Low:** The grassland habitat on project site is disturbed and comprised of predominantly non-native species, but a few native annuals are present. Eucalyptus trees on the project site may provide resting habitat for adults.	No
Euphydryas editha quino Quino checkerspot butterfly	FE MSHCP	—	Grasslands, coastal sage scrub, chaparral, juniper woodland, semi-desert scrub, and desert canyons and washes. Requires *Plantago erecta* as a host plant for larvae.	**None:** There is no suitable habitat for this species on the project site, and no host plants. There is one recent record between 5 and 10 miles from the project site.	No
Neolarra alba White cuckoo bee	—	—	Unknown habitat requirements, but probably inhabits a variety of grassland and scrub habitats. Parasitizes nests of other bees.	**None:** This species may be extinct and is considered Possibly Extirpated by CDFW. There is one historical record within 5 miles of the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Amphibians					
Spea hammondii Western spadefoot	— MSHCP	— SSC	Grasslands and valley-foothill hardwood woodlands with nearby vernal pools or other temporary fishless pools for breeding and egg-laying.	**None:** There is no suitable habitat for this species on the project site, and no water source in the vicinity. There are five recent records within 5 miles of the project site, and 24 recent records between 5 and 10 miles from the project site.	No
Reptiles					
Actinemys pallida *(*formerly *Emys marmorata)* Southwestern pond turtle	— MSHCP	— SSC	Freshwater ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation and either rocky or muddy bottoms in woodlands, forests, and grasslands. In streams, prefers deeper pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking.	**None:** There is no suitable habitat for this species on the project site. There is one historical record within 5 miles of the project site, and one historical record between 5 and 10 miles from the project site.	No
Anniella stebbinsi Southern California legless lizard	—	— SSC	Coastal sand dunes, sandy washes, and alluvial fans with sandy soils.	**None:** There is no suitable habitat for this species on the project site. There are 13 recent records between 5 and 10 miles from the project site.	No
Arizona elegans occidentalis California glossy snake	—	— SSC	Arid scrub, rocky washes, grasslands, and chaparral withy open areas and loose soil for burrowing.	**None:** There is no suitable habitat for this species on the project site. There are three recent records within 5 miles of the project site, and two recent records between 5 and 10 miles from the project site.	No
Aspidoscelis hyperythra Orangethroat whiptail	— MSHCP	— WL	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Prefers termites.	**None:** There is no suitable habitat for this species on the project site. There are two recent records within 5 miles of the project site, and six recent records between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Aspidoscelis tigris stejnegeri San Diegan tiger whiptail	— MSHCP	— SSC	Open scrublands and dry washes. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site, and one recent record between 5 and 10 miles from the project site.	No
Crotalus ruber Red-diamond rattlesnake	— MSHCP	— SSC	Grasslands, coastal scrub, chaparral, woodland, grassland, and desert scrub, often in in rocky areas with dense vegetation. Requires rodent burrows, rock crevices, or rock shelters for cover sites.	**None:** There is no suitable habitat for this species on the project site. There are four recent records within 5 miles of the project site, and 15 recent records between 5 and 10 miles from the project site.	No
Diadophis punctatus modestus San Bernardino ringneck snake	—	—	Rocky hillsides, grasslands, coastal scrub, chaparral, mixed coniferous forests, and woodlands, often at relatively mesic sites.	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site, and one recent record between 5 and 10 miles from the project site.	No
Phrynosoma blainvillii Coast horned lizard	— MSHCP	— SSC	Open grasslands, scrub, chaparral, woodlands, and coniferous forests in areas of low vegetation and sandy soils.	**None:** The grassland habitat on project site is disturbed and soils are compacted. The project site is surrounded by land uses that are incompatible with occurrence of this species. There are four recent records of this species within 5 miles of the project site and four recent records between 5 and 10 miles from the project site.	No
Salvadora hexalepis virgultea Coast patch-nosed snake	—	— SSC	Open, scrubby habitats in canyons, rocky hillsides, and alluvial fans in coastal scrub and chaparral communities. Will burrow in loose soil, which may be an important habitat component.	**None:** The grassland habitat on project site is disturbed and soils are compacted. The project site is surrounded by land uses that are incompatible with occurrence of this species. There is one recent record between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Birds					
Accipiter cooperii Cooper's hawk	— MSHCP	— WL	Occurs and nests in deciduous and mixed forests and open woodland habitats. Year-round resident in southern California.	**Low:** There is marginal nesting habitat for this species in ornamental trees adjacent to the project site. There is one recent record between 5 and 10 miles from the project site.	No
Agelaius tricolor Tricolored blackbird	— MSHCP	ST SSC	Occurs and nests in large freshwater marshes with dense stands of hydrophytic vegetation (cattails, bulrushes, etc.). Short-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There are 11 recent records between 5 and 10 miles from the project site.	No
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	— MSHCP	— WL	Occurs and nests on steep, often rocky hillsides with grass and forb patches in coastal sage and Riversidean alluvial fan sage scrub and sparse mixed chaparral habitats. Year-round resident in southern California.	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site and nine recent records between 5 and 10 miles from the project site.	No
Aquila chrysaetos Golden eagle	— BCC; MSHCP	— FP; WL	Open areas in grasslands and scrublands, especially around mountains, hills, and cliffs. Year-round resident in southern California.	**None:** There is no suitable habitat for this species on the project site. There is one historical record between 5 and 10 miles from the project site.	No
Artemisiospiza belli Bell's sparrow	— MSHCP	— WL	Occurs and nests in coastal sage and Riversidean alluvial fan sage scrub and chaparral habitats. Year-round resident in southern California.	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site and three recent records between 5 and 10 miles from the project site.	No
Asio otus Long-eared owl	—	— SSC	Roost in dense woodlands during the day and forages over nearby grasslands and open scrublands at night. Year-round resident in southern California.	**None:** There is no suitable habitat for this species on the project site. There are two historical records between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Athene cunicularia Burrowing owl	— MSHCP	— SSC	Occurs and nests in open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. A subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel. Short-distance migrant.	**Moderate:** There is marginal burrowing habitat for this species under a large concrete slab in the grassland area in the northern portion of the project site and suitable foraging and burrowing/nesting habitat on undeveloped lands west and north of the project site. There are 11 recent records within 5 miles of the project site and 40 recent records between 5 and 10 miles from the project site.	Yes
Buteo regalis Ferruginous hawk	— BCC; MSHCP	— WL	Forages in open areas in grasslands, desert scrub, low foothills surrounding valleys, and edges of pinyon-juniper woodlands. Short-distance migrant and winter resident in southern California.	**Low:** The project site does not provide sufficient openness for this species, but undeveloped lands west of the project site may provide foraging opportunities. There is one recent record between 5 and 10 miles from the project site.	No
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT MSHCP	SE	Occurs and nests in riparian forest along the broad lower flood-bottoms of larger river systems. Found in riparian jungles of willow, often mixed with cottonwoods; understory consists of blackberry, nettles, and wild grape. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Elanus leucurus White-tailed kite	— MSHCP	— FP	Grasslands and open coastal scrub in coastal and valley lowlands; rarely found away from agricultural areas. Inhabits herbaceous, open stages of most habitats mostly in cismontane California. Year-round resident in southern California.	**Low:** The project site does not provide sufficient openness for this species, but undeveloped lands west and north of the project site may provide foraging opportunities. There is one historical record between 5 and 10 miles from the project site.	No
Empidonax traillii extimus Southwestern willow flycatcher	FE MSHCP	SE	Occurs and nests in dense thickets in riparian woodlands. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Eremophila alpestris actia California horned lark	— MSHCP	— WL	Occurs and nests in open areas with sparse vegetation. Year-round resident in southern California.	**Moderate:** There is marginal foraging habitat for this species in the grassland area in the northern portion of the project site and suitable foraging and nesting habitat on undeveloped lands west and north of the project site. There is one recent record within 5 miles of the project site and three recent records between 5 and 10 miles from the project site.	Yes
Haliaeetus leucocephalus Bald eagle	FD MSHCP	SE FP	Occurs and nests near large water bodies such as coastal estuaries and inland lakes and rivers. Typically found within 3 km of a water source. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There are five historical records between 5 and 10 miles from the project site.	No
Icteria virens Yellow-breasted chat	— MSHCP	— SSC	Occurs and nests in riparian thickets of willow and other bushy tangles near watercourses. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Lanius ludovicianus Loggerhead shrike	— MSHCP	— SSC	Occurs and nests in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, desert scrub, and dry desert washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. Year-round resident in southern California.	**Low:** The project vicinity is likely too heavily urbanized for occurrence of this species. The grassland in the northern portion of the project site may provide marginal foraging habitat for the species. Undeveloped lands west and north of the project site may provide marginal foraging opportunities. There is one historical record within 5 miles of the project site and one historical record between 5 and 10 miles from the project site.	No
Plegadis chihi White-faced ibis	— MSHCP	— WL	Inhabits and nests in extensive freshwater marshes with an abundance of emergent vegetation. Long-distance migrant and summer resident in southern California.	**None:** There is no suitable habitat for this species on the project site. There is one historical record between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Polioptila californica californica Coastal California gnatcatcher	FT MSHCP	— SSC	Occurs and nests in arid washes, on mesas, and slopes in coastal sage scrub below 2500 ft. Year-round resident in California.	**None:** There is no suitable habitat for this species on the project site. There are three recent records within 5 miles of the project site and 16 recent records between 5 and 10 miles from the project site.	No
Setophaga petechia Yellow warbler	— MSHCP	— SSC	Occurs and nests in willow shrubs and thickets, cottonwoods, sycamores, ash, and alders, predominantly in riparian habitats. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Spinus lawrencei Lawrence's goldfinch	—	—	Occurs and nests in oak and pine woodlands and chaparral, usually near water. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Vireo bellii pusillus Least Bell's vireo	FE MSHCP	SE	Occurs and nests in low riparian habitat in the vicinity of water or in dry river bottoms. Long-distance migrant.	**None:** There is no suitable habitat for this species on the project site. There are four recent records within 5 miles of the project site and 26 recent records between 5 and 10 miles from the project site.	No
Mammals					
Chaetodipus fallax fallax Northwestern San Diego pocket mouse	— MSHCP	— SSC	Occurs in sandy, herbaceous areas, usually in association with rocks or coarse gravel, in coastal sage and Riversidean alluvial fan sage scrub, chaparral, and grasslands.	**None:** There is no suitable habitat for this species on the project site. There is one recent record within 5 miles of the project site and six recent records between 5 and 10 miles from the project site.	No
Dipodomys merriami parvus San Bernardino kangaroo rat	FE MSHCP	CSE SSC	Occurs on sandy loam substrates on first terraces and floodplains of washes in Riversidean alluvial fan sage scrub habitat.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Dipodomys stephensi Stephens' kangaroo rat	FE MSHCP	ST	Found in arid and semi-arid grassland and coastal scrub with less than 50% protective cover in Riverside and San Diego Counties. They require soft, well-drained sandy soils for building burrows.	**None:** There is no suitable habitat for this species on the project site. There are two recent records within 5 miles of the project site and 20 recent records between 5 and 10 miles from the project site.	No
Eumops perotis californicus Western mastiff bat	—	— SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**None:** There is no suitable habitat for this species on the project site. There are three historical records within 5 miles of the project site and two historical records between 5 and 10 miles from the project site.	No
Lasiurus xanthinus Western yellow bat	—	— SSC	Prefers open habitats or habitat mosaics, with access to trees for cover, and open areas or habitat edges for feeding. Roosts in dense foliage of medium-to-large trees. Feeds primarily on moths. Requires a water source nearby.	**None:** There is no suitable habitat for this species on the project site. There is one historical record within 5 miles of the project site and four historical records between 5 and 10 miles from the project site.	No
Lepus californicus bennettii San Diego black-tailed jackrabbit	— MSHCP	— SSC	Occurs in intermediate canopy stages of shrub habitats, open shrub, herbaceous tree, and herbaceous edges.	**Low:** There is marginal habitat for this species on the project site. There are ten recent records between 5 and 10 miles from the project site.	No
Neotoma lepida intermedia San Diego desert woodrat	— MSHCP	— SSC	Occurs in rock outcrops, rocky cliffs, and slopes in coastal sage and Riversidean alluvial fan sage scrub with moderate to dense canopies.	**None:** There is no suitable habitat for this species on the project site. There is one recent record between 5 and 10 miles from the project site.	No
Nyctinomops femorosaccus Pocketed free-tailed bat	—	— SSC	Occurs in pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian habitats. Roosts in caves, crevices, mines, tunnels, and man-made structures.	**None:** There is no suitable habitat for this species on the project site. There is one historical record between 5 and 10 miles from the project site.	No

Scientific Name Common Name	Status		Habitat Description[3]	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS[1]	CDFW[2]			
Onychomys torridus ramona Southern grasshopper mouse	—	— SSC	Occurs on sandy soils on flat valley floor grassland and open coastal sage scrub habitats.	**None:** There is no suitable habitat for this species on the project site. There are two historical records within 5 miles of the project site and three historical records between 5 and 10 miles from the project site.	No
Perognathus longimembris brevinasus Los Angeles pocket mouse	— MSHCP	— SSC	Occurs in open areas with fine, sandy soils in lower elevation grasslands and coastal sage and Riversidean alluvial fan sage scrub habitats.	**None:** There is no suitable habitat for this species on the project site. There are two recent records between 5 and 10 miles from the project site.	No
Taxidea taxus American badger	—	— SSC	Occurs in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Requires sufficient food sources (rodents), friable soils, and open, uncultivated ground. Digs large burrows.	**None:** There is no suitable habitat for this species on the project site. There are three historical records between 5 and 10 miles from the project site.	No

Code Designations

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FT = Listed as threatened under the FESA.
FC = Candidate for listing (threatened or endangered) under FESA.
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FPD = Federally Proposed to be Delisted.
MSHCP= covered under the Western Riverside County MSHCP
— = Not federally listed

[2] State Status: 2022 CDFW Listing

SE = Listed as endangered under the CESA.
ST = Listed as threatened under the CESA.
SSC = Species of Special Concern as identified by the CDFW.
FP = Listed as fully protected under FGC.
CFG = FGC =protected by Fish and Game Code 3503.5
CSE = Candidate for listing as endangered under the CESA.
WL = On CDFW watchlist
— = Not state listed

[3] **Habitat description**: Habitat description adapted from CNDDB (CDFW 2022).

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