ATTACHMENT C

Biological Resource Evaluation

BIOLOGICAL RESOURCE EVALUATION FOR MAGNOLIA CROSSING II CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

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HANA RESOURCES™
Environmental Enterprise Solutions

March 27, 2024

CERTIFICATION STATEMENT

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

March 27, 2024

Date

Sloane Sanchez

Sloane Sanchez
Senior Biologist

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APPENDICES

SECTION 1. INTRODUCTION

HANA Resources, Inc. (HANA) was retained by Warmington Residential California to prepare an updated Biological Resources Evaluation (BRE) report for the proposed Magnolia Crossing II Project (Project). Following completion of the reconnaissance-level biological surveys, HANA prepared this BRE that: 1) summarized existing conditions; 2) assessed the potential presence of sensitive biological resources; 3) analyzed the potential impacts on those resources from project development; 4) recommended, as appropriate, best management practices (BMPs), avoidance and protection measures, and mitigation measures to avoid, eliminate and/or reduce environmental impacts to less than significant levels; and 5) identified biological permits or approvals that the project may need. The BRE includes: 1) methods and results of the literature review and field surveys; 2) figures depicting the size and location of plant communities and other sensitive biological resources; 3) a complete flora and fauna compendium; and 4) site photographs. The Survey Area includes the project site and a 500-foot zone out from the project site. This survey area is referred to as the Biological Study Area (BSA). The proposed project will impact the entire Survey Area.

1.1. PROJECT LOCATION

The Project covers 6.44 acres in the City of Riverside, Riverside County, CA (**Exhibit I,** *Project Vicinity Map*). The project is located near the intersection of 91 freeway and Van Buren Street and is on the APNs 234-140-018, 234-140-019 and 234-150-046 (**Exhibit II,** *Project Location Map*). The project site is located on the United States Geological Survey (USGS) Riverside West Quadrangle, 7.5-Minute Topographic map. The surface elevation of the site ranges from approximately 798 to 813 feet above mean sea level (MSL). The project area is located within Section 18 in Township 3 South-Range 5 West, San Bernardino Meridian.

1.2. PROJECT DESCRIPTION

The proposed Project is for the multi-family development project at 3510 Van Buren Blvd. The project is in line with the General Plan Land Use Designation of the MU-V-SP-Mixed Use-Village and Specific Plan (Magnolia Avenue) Overlay Zone. The proposed Project is planned at 23.14 du/ac, consistent with the general plan and zoning allowed under MU-V-SP. A part of the site has a General Plan designation of MDR (parcel 3), however the site will be involved in a Density Bonus agreement for the proposed below-market-rate housing that is planned on-site. No homes are planned on Parcel 3 (3469 Myers Street), and it is only included to allow a secondary access point. The discretionary and ministerial components of the Project will allow the property owner, Warmington Residential, establishment of a Mixed-Use development on the property (**Exhibit III**, *Concept Plan Map*).

The Mixed-Use Development will have the following:

- 23 three-story buildings that include 149 units,
- 331 parking spaces (298 garage spaces (two per household) and 33 guest spaces),
- 280,431 square feet lot area,
- 240,723 square feet floor area,
- 80,129 square feet of common open space, and
- 24,774 square feet of private open space.

Identified necessary improvements for the Project include removing the existing structures and trees, moderate grading operation, construction of retaining walls, wet/dry utilities, street work, landscaping, and flatwork.

Exhibit I: Project Vicinity Map

Exhibit II: Project Location Map

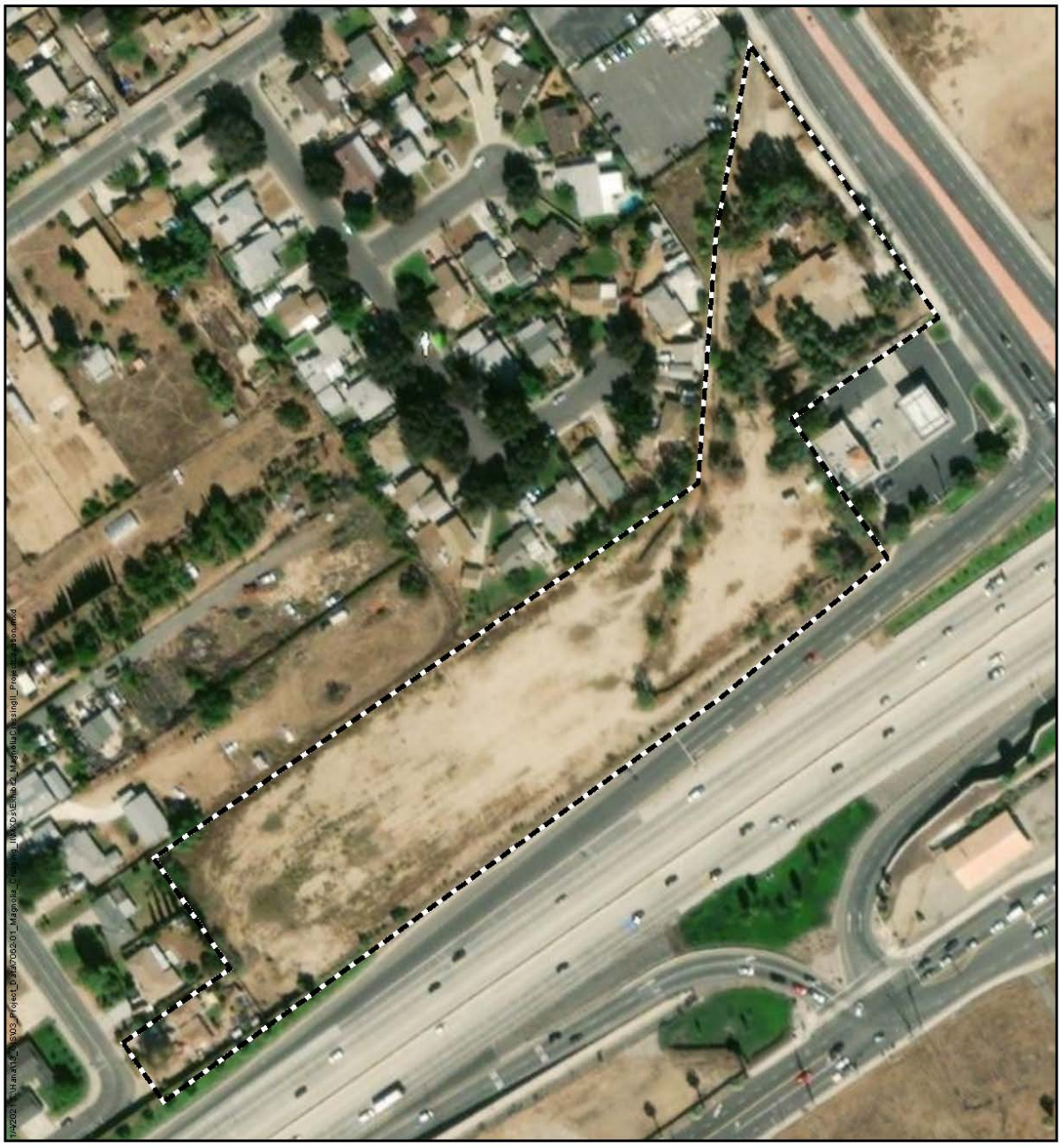


Exhibit III: Site Plan Map

SECTION 2. REGULATORY OVERVIEW

2.1. Federal Statutes, Regulations and Executive Orders

Endangered Species Act (ESA)

The federal Endangered Species Act of 1973 (Title 16, United States Code [U.S.C.] §§ 1531-1543) (ESA), as amended, designates and provides for protection of listed threatened and endangered plant and animal species, and their critical habitat. The USFWS, in the Department of the Interior, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), in the Department of Commerce, share responsibility for administration of the ESA. These responsibilities include listing and delisting species, designating critical habitat, and formulating recovery plans. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife.

Section 9 (Prohibited Acts)

Once a species is listed, section 9 of the ESA makes it unlawful for any person, including private and public entities, to "take species listed as endangered or without a permit issued pursuant to section 10 or an incidental take statement issued pursuant to section 7. Section 9 defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include substantial habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."

ESA section 9's take prohibitions apply to listed wildlife and fish species, but not to plants. Endangered plants are not protected from take, although it is unlawful to remove, possess, or maliciously damage or destroy them on federal lands. Removing or damaging listed plants on state and private lands in knowing violation of state law, or in the course of violating a state criminal trespass law, also is illegal under the ESA.

Section 10 (Incidental Take Permits and Habitat Conservation Plans)

An incidental take permit pursuant to section 10(a)(1)(B) is required when non-Federal, otherwise lawful activities, including lawful project development, will result in take of threatened or endangered wildlife. Under this provision, the USFWS and/or NMFS may, where appropriate, authorize the taking of federally listed wildlife or fish if such taking occurs incidentally during otherwise legal activities. Section 10(a)(2)(B) requires an application for an incidental take permit to include a Habitat Conservation Plan (HCP). The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate avoidance, minimization and mitigation measures to address the effects of the authorized incidental take. Section 10 provides a clear regulatory mechanism to permit the incidental take of federally listed fish and wildlife species by private interests and non-Federal governmental agencies.

The County of Riverside is a Permittee pursuant to the MSHCP and related section 10(a)(b)(1) permit. Payment of the mitigation fee and compliance with the requirements of the MSHCP are intended to provide full mitigation under CEQA, the National Environmental Policy Act (NEPA), the ESA and the California Endangered Species Act (CESA) for the impacts on the species and habitats covered by the MSHCP (MSHCP, Vol. I, p. 6-3).

Migratory Bird Treaty Act (MBTA)

The Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, U.S.C. sections 703 - 712), as amended, implements various treaties and conventions between the United States (U.S.) and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. The MBTA makes it unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined in regulations implementing the MBTA as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to carry out these activities." The MBTA prohibits the collection and destruction of a migratory bird, its nest, and birds or eggs contained in the nest. The USFWS' Migratory Bird Permit Memorandum (MBPM-2) dated April 15, 2003, clarifies that destruction of most unoccupied bird nests is permissible under the MBTA; exceptions include nests of federally listed threatened or endangered migratory birds, bald eagles, and golden eagles. Take under the MBTA does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The USFWS has statutory authority and responsibility for enforcing the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds. If compatible with the preservation of bald and golden eagles, the Secretary of the Interior may permit the taking, possession and transportation of bald and golden eagles and nests for scientific or religious purposes, or for the protection of wildlife, agricultural or other interests. The Secretary of the Interior may authorize the take of golden eagle nests, which interfere with resource development or recovery operations. Bald eagles may not be taken for any purpose unless the Secretary issues a permit prior to the taking.

Clean Water Act (CWA)

The federal Clean Water Act (33 U.S.C. §§ 1251-1376) (CWA) is the principal federal law governing pollution control and water quality of the nation's waterways. It establishes the basic structure for regulating discharges of pollutants into "Waters of the United States" (Waters of the U.S.) and for regulating water quality and establishing water quality standards for surface waters. Sections 401, 402, and 404 of the CWA are pertinent to surface and coastal, Waters of the U.S. For purposes of Section 404 permitting under the CWA, "Waters of the U.S.", are comprised of those wetland and non-wetland bodies of water that meet the criteria set forth in 33 Code of Federal Regulations (CFR) § 328.3, as interpreted by a number of court opinions and guidance, including Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (SWANCC), consolidated cases Rapanos v. United States (Rapanos), and Carabell v. United States (Carabell), 547 U.S. 715 (2006), and joint guidance issued by USACE and United States Environmental Protection Agency (EPA) in light of judicial decisions, including the joint guidance memorandum regarding Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States and Carabell v. United States (December 12, 2008)(2008 Regulatory Guidance).

Section 404 – Discharge of Dredge and Fill Requirements

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into Waters of the U.S. The USACE implementing regulations define "dredged material" as material that is excavated or dredged from Waters of the U.S. The CWA implementing regulations define "Fill material" as material placed in Waters of the U.S. where the material has the impact of either replacing any portion of Waters of the U.S. with dry land or changing the bottom elevation of any portion of a Waters of the

U.S. Examples include discharges of rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure for development projects in Waters of the U.S.

Section 401 – Water Quality Certification

Although the CWA is a federal law, Section 401 of that law recognizes that states have the primary authority and responsibility for setting surface water quality standards, and requires the U.S. Army Corps of Engineers to obtain a state certification that their permits for discharge or dredge and fill material do not violate state water quality standards. Section 401 of the CWA requires every applicant for a Section 404 permit resulting in any discharge of dredge or fill material into Waters of the U.S. to provide a certification that any discharges will comply with the applicable state water quality standards set pursuant to the CWA and applicable state law.

2.2. State Statutes and Regulations

California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) (California Fish and Game Code § 2050 et seq.) was enacted in 1984 to parallel the federal ESA and allows the Fish and Game Commission to designate species, including plants, as “threatened” or ”endangered.” The CESA states that all native species of fishes, amphibians, reptiles, birds, mammals, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. Unlike the ESA, the CESA does not include listing provisions for invertebrate species.

CESA makes it illegal to import, export, take, possess, purchase, sell, or attempt to do any of those actions to species that are designated as threatened, endangered, or candidates for listing, unless permitted by CDFW. Section 2080 of the California Fish and Game Code prohibits take of any species that the Commission determines to be an endangered species or a threatened species. “Take” is defined in section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

Under section 2081 of CESA, CDFW may permit take or possession of threatened, endangered, or candidate species for scientific, educational, or management purposes, and may also permit take of these species that is incidental to otherwise lawful activities if certain conditions are met. Some of the conditions for issuance of permits allowing incidental take are that the adverse effects of the take must be minimized and fully mitigated, adequate funding must be ensured for implementation of identified mitigation, and that the activity shall not jeopardize the continued existence of the listed species. CESA emphasizes early consultation to avoid potential impacts on candidate and listed endangered and threatened species, and to develop appropriate mitigation to offset project caused losses of listed species populations and their essential habitats.

California Fish and Game Code §§ 1600-1616

Pursuant to §§ 1600–1616 of the California Fish and Game Code, the CDFW regulates all substantial diversions, obstructions, or changes to the natural flow or the bed, channel, or bank of any river, stream, or lake, which provides habitat and supports fish or wildlife. CDFW defines a “stream” (including creeks and rivers) as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation” (California Code of Regulations, Title

14, Division 1, Subdivision 1, Chapter 1, § 1.72). “Bank” means the slope or elevation of land that bounds the bed of the stream in a permanent or longstanding way, and that confines the stream water up to its highest level. “Lake” includes “natural lakes or man-made reservoirs.”

Rivers, streams, lakes, and riparian vegetation that provide habitat for fish and wildlife species are subject to jurisdiction by the CDFW under §§ 1600-1616 of the California Fish and Game Code. Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Section 2785(e) defines "riparian habitat" as lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source. CDFW regulates the bed, bank to bank, as well as associated riparian vegetation, and fish and wildlife resources. CDFW has interpreted jurisdictional boundaries to be defined by the tops of stream banks (i.e., the limit of stream influence) and/or the limit of the canopy of riparian vegetation (outer drip line) that is hydrologically connected to river, stream, or lake, whichever is greatest. As a result, the area of CDFW jurisdiction is usually greater than the active channel and overlaps and extends beyond the USACE jurisdiction. Isolated wetlands not associated with a river, stream or lake are not protected under §§ 1600 et seq. of the California Fish and Game Code. In addition, CDFW does not have regulatory authority on Tribal Lands.

2.3. Regional and Local Ordinances, Plans and Policies

City of Riverside General Plan

Implementation of the General Plan policies will assist in minimizing adverse conditions to biological resources for the City. A key objective of the overall General Plan 2025 Program is to preserve the City’s natural and historic assets by focusing new development within already urbanized areas along major transportation corridors. The General Plan enacts policies that actively discourage intensive “greenfield” development at the urban periphery as a means of reducing urban sprawl. The General Plan, in particular, the Open Space and Conservation, Air Quality and Land Use and Urban Design Elements include the following policies designed to limit potential impacts on biological resources over the long term.

City of Riverside Urban Forest Tree Policy

The City of Riverside is known as a “City of Trees.” The City’s Urban Forest Tree Policy Manual provides guidelines for the preservation and protection of the City of Riverside’s tree heritage.

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

The MSHCP is a comprehensive, multi-jurisdictional regional plan adopted under the ESA and the NCCP Act focusing on conservation of species and associated habitats to address biological and ecological diversity conservation needs, while development is simultaneously approved on non-federal lands in western Riverside County (Riverside County, 2003). The MSHCP serves as an HCP pursuant to section 10(a)(1)(B) of the ESA, as well as a NCCP under the NCCP Act. A total of 146 species are covered by the MSHCP.

The final MSHCP was approved by the Riverside County Board of Supervisors on June 17, 2003. The MSHCP was approved by the USFWS and CDFW through the execution of an Implementing Agreement. The Implementing Agreement outlines the specific enforceable measures and mechanisms that are required to effectively implement the MSHCP. The federal and state incidental take permits (Permits) were issued by the USFWS and CDFW on June 22, 2004 and implementation of the MSHCP began on June 23, 2004. The term of the permits is 75 years.

The goal of the MSHCP is to provide for conservation of approximately 500,000 acres of land supporting

the habitat and life history requirements for the 146 species and their habitats (MSHCP Conservation Area). The plan would provide for the creation of a reserve system that would protect and manage 153,000 acres of habitat for Covered Species. This reserve system would be acquired from existing private landowners and complement the approximately 347,000 acres of land already conserved and managed on existing public/quasi-public lands.

The City is a permittee to the MSHCP. As part of the General Plan Update, continued participation of the MSHCP is desired, and any new proposed project is required to comply with applicable provisions of the plan.

SECTION 3. METHODOLOGY

3.1. LITERATURE REVIEW

Prior to performing the field surveys, a desktop literature review was performed to review existing documentation relevant to the Biological Study Area (BSA). The BSA is defined as the project area and a 500-foot buffer zone outside of but contiguous with the project site. The most recent records of the Information for Planning and Consultation (IPaC) database, managed by the U.S. Fish and Wildlife Service (USFWS 2021); California Natural Diversity Database (CNDDB), managed by the California Department of Fish and Game (CDFG 2021); and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2021) were reviewed for the quadrangles containing (i.e., Riverside West, California USGS 7.5 minute quadrangles) and surrounding the Survey Area (i.e., Guasti, Fontana, San Bernardino South, Corona North, Riverside East, Corona South, Lake Mathews, Steele Peak; California USGS 7.5 minute quadrangles). These databases contain records of reported occurrences of federal- or state-listed as endangered or threatened species, proposed endangered or threatened species, former Federal Special of Concern (FSC), California Species of Special Concern (CSC), or otherwise special-status species or sensitive habitat that may occur within or in the immediate vicinity of the BSA.

3.2. SOILS

Soil maps for the Project were referenced online to determine the types of soil found on the site from the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2021). Soils are determined in accordance with categories set forth by the U.S. Department of Agriculture (USDA) Soil Conservation Service and by referencing the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2021).

3.3. POTENTIAL FOR OCCURRENCE

3.3.1. Criteria

A vegetation community or special-status species is considered to potentially occur in a BSA if its known geographic range includes part of the BSA or an adjacent USGS 7.5-minute quadrangle and/or if the general habitat or environmental conditions (e.g., soil type, etc.) required for the species are present. The criteria for evaluating the potential for occurrence (PFO) on a site is presented in **Table 1**, *Criteria for Evaluating Special-status Species Occurrences*.

Table 1. Criteria for Evaluating Special-status Species Occurrences

Potential for Occurrence	Criteria
Absent	Species was not observed during focused surveys conducted at an appropriate time for identification of the species, or species is restricted to habitats or environmental conditions that do not occur within the site.
Low	Historical records for this species do not exist within the immediate vicinity of the site (approximately 5 miles), and/or habitats or environmental conditions needed to support the species are of poor quality.

Potential for Occurrence	Criteria
Moderate	Either a historical record exists of the species within the immediate vicinity of the site (approximately 5 miles) and marginal habitat exists on the site, or the habitat requirements or environmental conditions associated with the species occur within the site, but no historical records exist within 5 miles of the site.
High	Both a historical record exists of the species within the site or its immediate vicinity (approximately 5 miles), and the habitat requirements and environmental conditions associated with the species occur within the site.
Present	Species was detected within the site at the time of the survey.

3.3.2. Status Codes

A list of abbreviations used to help determine the significance of biological resources potentially occurring in the BSA is provided in Table 2, *Abbreviations for Federal- and State-listed Special-status Species*.

Table 2. Abbreviations for Federal- and State-listed Special-status Species

Designation	Abbreviation	Explanation
Federal	**FE**	Federally listed; Endangered
	FT	Federally listed; Threatened
	FC	Federal Candidate for listing
	BGEPA	Bald and Golden Eagle Protection Act
State	**SE**	State listed; Endangered
	ST	State listed; Threatened
	SC-T	State Candidate for Threatened listing
	SC-E	State Candidate for Endangered listing
	RARE	State listed; Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
	SC-RARE	State Candidate for Rare listing
	SSC	State Species of Special Concern
	SNC	State Natural Communities rarity ranking: 1-3 are considered sensitive, R is Rare.
	BCC	Bird of Conservation Concern
CNPS CRPR	**List 1A**	Plants presumed to Extinct in California
	List 1B	Plants Rare and Endangered in California and throughout their range
	List 2	Plants Rare, Threatened or Endangered in California but more common elsewhere in their range
	List 3	Plants about which we need more information; a review list
	List 4	Plants of limited distribution; a watch list
CNPS CRPR Extensions	**0.1**	Seriously Endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)
	0.2	Fairly Endangered in California (20-80 percent of occurrences threatened)
	0.3	Not Very Endangered in California (less than 20 percent of occurrences threatened)

3.4. BIOLOGICAL RECONNAISSANCE-LEVEL SURVEY

The field survey was conducted in the BSA in order to identify any potential for occurrence of sensitive species, vegetation communities, or habitats to support sensitive wildlife species. The survey was conducted on foot between 0750 and 1005 hours on March 12, 2021. Photographs of the BSA were recorded to document existing conditions (**Appendix A**). Weather conditions during the survey included temperatures ranging from approximately 43 to 51 degrees Fahrenheit with 0 percent cloud cover, precipitation and wind. HANA Senior Biologist, Ms. Sloane Sanchez conducted the general reconnaissance survey. The Biological Reconnaissance Survey Field Form can be found in **Appendix B**.

3.4.1. Vegetation

Plant communities in the BSA were identified, qualitatively described, and mapped onto an aerial photograph. Plant communities were determined in accordance with the categories set forth in Holland (1986) or Sawyer and Keeler-Wolf (1995). Plant nomenclature follows that of *The Jepson Manual: Higher Plants of California* (Hickman 2012). A comprehensive list of the plant species observed during the survey is presented in **Appendix C**.

3.4.2. Wildlife

All wildlife and wildlife signs observed and detected, including tracks, scat, carcasses, burrows, excavations, and vocalizations, were recorded. Additional survey time was spent in those habitats most likely to be utilized by wildlife (undisturbed native habitat, wildlife trails, etc.) or in habitats with the potential to support state- and/or federal-listed or proposed listed species. Notes were made on the general habitat types, species observed, and the conditions of the site. A list of the wildlife species observed during the site visit is included as **Appendix C.**

3.4.3. USACE, SWRQCB, and CDFG Preliminary Jurisdictional Assessment

Prior to beginning the field preliminary delineation, a 50-foot-to-the-inch scaled topographic map, scaled aerial photograph, and the Riverside 7.5-minute USGS topographic quadrangle map were examined to determine the locations of potential areas of U.S. Army Corps of Engineers (USACE), California State Water Resources Quality Control Board (SWRQCB), and/or California Department of Fish and Game (CDFG) jurisdiction. HANA biologists examined the BSA to identify potential USACE jurisdiction pursuant to Section 404 and 401 of the Clean Water Act and CDFG jurisdiction pursuant to Section 1602 of the State of California Fish and Game Code. No jurisdictional drainages/areas were found onsite.

SECTION 4. RESULTS

4.1. LITERATURE REVIEW

4.1.1. Soils

After review of the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2021) (**Appendix D**), it was determined that the BSA is composed of the following two (2) soil types:

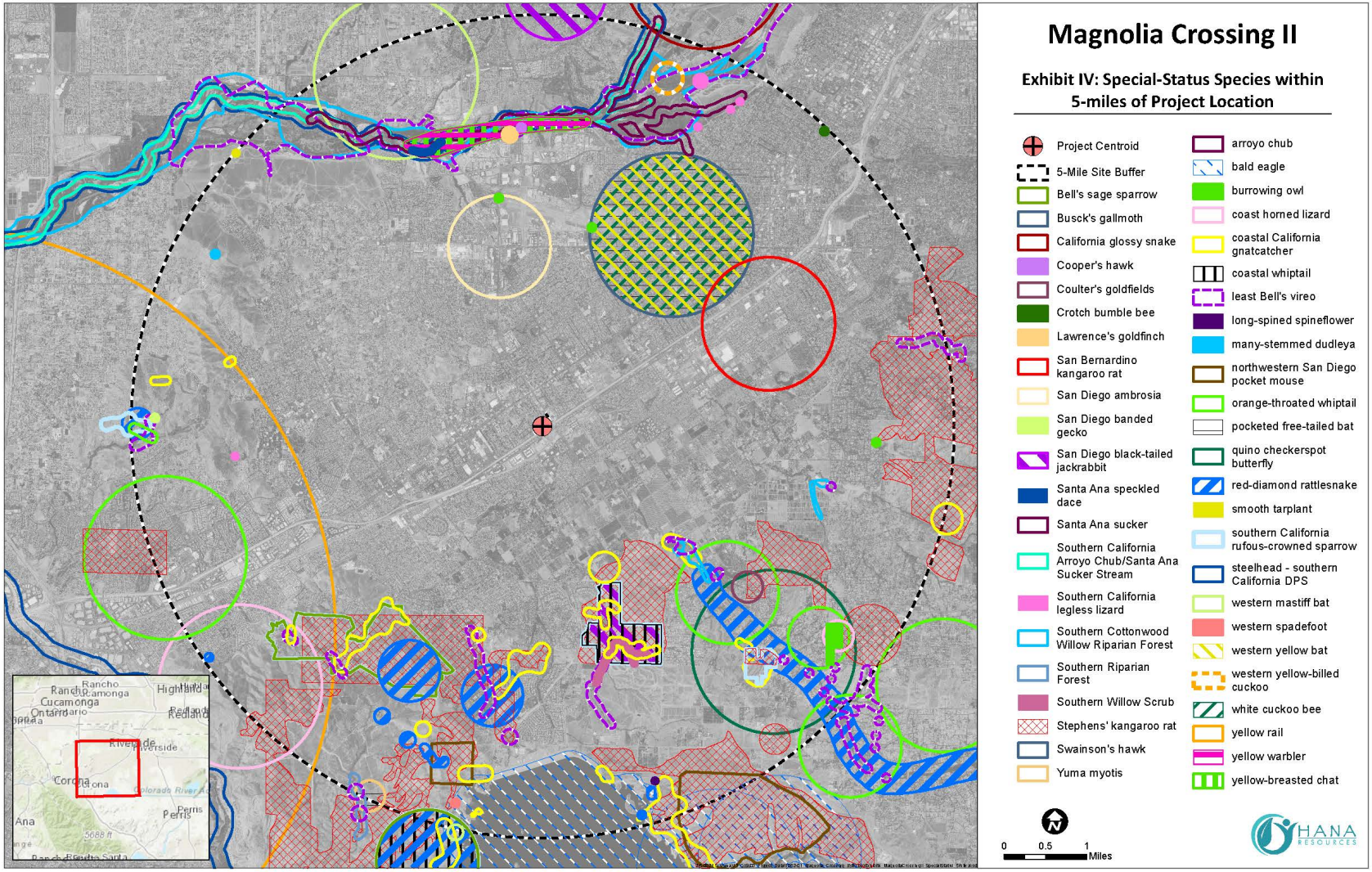
Hanford coarse sandy loam (HcA) 0 to 2 percent slopes
Hanford coarse sandy loam is a very deep, somewhat excessively drained soil with very low runoff potential and moderately rapid permeability. The parent material is alluvium derived from granite. These soils can be found at elevations between 150 to 900 feet. Hanford soils have a mean annual precipitation 12 inches and a mean temperature of 63°F. These soils are not hydric. Hanford soils have pale brown, slightly acid A horizons and pale brown to light yellowish brown, slightly alkaline C horizons. This soil is present in a limited area near the southwestern portion of the project site.

Hanford coarse sandy loam (HcC) 2 to 8 percent slopes
Hanford coarse sandy loam is a very deep, well-drained soil with low runoff potential and moderately rapid permeability. The parent material is alluvium derived from granite. These soils can be found at elevations between 150 to 900 feet. Hanford soils have a mean annual precipitation 12 inches and a mean temperature of 63°F. These soils are not hydric. Hanford soils have pale brown, slightly acid A horizons and pale brown to light yellowish brown, slightly alkaline C horizons. This soil is present in the majority of the project site.

4.2. POTENTIAL FOR OCCURRENCE

A map of the CNDDB database occurrences is included in **Exhibit IV,** *Special-Status Species within 5-Miles of Project Location*.

Exhibit IV: Special-Status Species within 5-Miles of Project Location



4.2.1. Vegetation

Vegetation

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status plants or their habitat.

The literature review resulted in a list of nine (9) vegetation communities that have been known to occur within the twelve-quadrangle area, which is presented in Table 3, *Vegetation Communities*. None of these vegetation community types were considered to have *high* or *moderate* potential to occur within the BSA. All nine (9) have *low* potential for occurrence.

Table 3. Vegetation communities

Plant Community Name	PFO	Description	Site Factors
Southern California Arroyo Chub/Santa Ana Sucker Stream	Low	Perennial streams that contain essential habitat elements of Santa Ana Suckers (*Catostomus santaanae*) and Southern California arroyo chubs (*Gila orcuttii*). Both species tend to complement each other's distributions within the Santa Ana River Watershed.	Arroyo chubs prefer low gradient portions of streams with sand and mud substrates and often spawn in warmer water compared to the Santa Ana sucker. Santa Ana suckers are found in higher elevations and higher gradient portions of stream segments.
Southern Interior Cypress Forest	Low	Moderately dense, fire-maintained, low forest dominated by Piute cypress (*Hesperocyparis nevadensis*), Cuyamaca cypress (*H. stephensonii*) and Tecate cypress (*H. forbesii*). The canopy is open to intermittent.	Dry, ultramafic substrates. Soils can be deep or shallow, often over alkaline clay, sandstone, granitic, mafic, and ultramafic substrates. Most often found on northern exposures. Exposed mineral soil allows for germination and establishment.
South Coast Live Oak Riparian Forest	Low	Dense riparian woodland dominated by coast live oak (*Quercus agrifolia*). Other tree species occurring in this community include California Sycamore (*Platanus racemosa*), Fremont's cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), and arroyo willow (*Salix lasiolepis*). Species that occur in the understory include poison-oak (*Toxicodendron diversilobum*), mulefat (*Baccharis salicifolia*), and California goldenrod (*Solidago californica*).	Valley bottoms and outer floodplains along larger streams, in sandy soils or alluvium.
Southern Cottonwood Willow Riparian Forest	Low	Cottonwood (*Populus spp.*) is dominant or co-dominant in the tree canopy with complete to relative cover. Other potentially co-dominant species include boxelder (*Acer negundo*), desert broom (*Baccharis sergiloides)*, California Sycamore (*Platanus racemose*), coast live	On floodplains, along low-gradient rivers, perennial or seasonally intermittent streams, springs, in lower canyons in desert mountains, in alluvial fans, and in valleys with a dependable subsurface water supply that varies considerably during the year.

Plant Community Name	PFO	Description	Site Factors
		oak (*Quercus* agrifolia), Goodding's willow (*Salix gooddingii*), red willow (*S. laevigata*), arroyo willow (*S. lasiolepis*) and pacific willow *(S. lucida ssp. lasiandra).*	
Southern Riparian Forest	Low	Comprised of winter-deciduous trees that require water near the soil surface. Fremont's cottonwood (*Populus fremontii*) and California Sycamore (*Platanus racemosa*) form a dense medium height forest. Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica ssp. holosericea*), and wild grape (*Vitis girdiana*).	Sub-irrigated and frequently overflowed lands along rivers and streams. Found in moist canyons and drainage bottoms.
Southern Riparian Scrub	Low	Riparian zones dominated by small trees or shrubs, lacking taller riparian trees. Characteristic species include arroyo willow (*Salix lasiolepis*), other willow species (*Salix spp.*), and desert broom (*Baccharis sarothroides*).	Mostly in major river systems where flood scour occurs. Expanded from increased urban and agricultural run-off.
Southern Sycamore Alder Riparian Woodland	Low	A tall, open, broad-leafed, winter-deciduous streamside woodland dominated by California Sycamore (*Platanus racemose*) and often also black alder (*Alnus rhombirolia*). These stands seldom form closed canopy forests, and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Lianas include pacific blackberry (*Rubus ursinus*) and poison oak (*Toxicodendron diversilobum*)	Very rocky streambeds subject to seasonally high-intensity flooding. Alnus increases in abundance on more perennial streams, while Platanus favors more intermittent hydrographs
Southern Willow Scrub	Low	Dense, broadleaved, winter-deciduous stands of trees dominated by arroyo willow (*Salix lasiolepis*) in association with mule fat (*Baccharis salicifolia*) and scattered emergent cottonwood (*Populus fremontii*) and California Sycamores (*Platanus racemosa*).	Loose sandy, or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest.
Riversidean Alluvial Fan Sage Scrub	Low	Desert subshrub species with a mixture of Scalebroom (*Lepidospartum squamatum*), white sage (*Salvia apiana*), buckwheat (*Eriogonum spp*.) and *Encelia* spp. In disturbed areas, *Oputnia* spp., Chaparral Yucca (*Yucca whipplei*), *Rhus* spp. may be present.	Alluvial fans and dry washes in interior areas of the Mojave Desert Section, found near developed areas and often have a history of ground disturbance. Mapped sparsely in the High Desert Plains and Hills Subsection on low-gradient slopes.

4.2.2. Plants

The literature review resulted in a list of forty-five (45) special-status plant species that have been known to occur within the BSA and surrounding twelve-quadrangles, presented in Table 4, *Special Status Plant Species*. No plant species was considered to have *high* potential**,** none to have *moderate* potential, and all forty-five (45) were considered to have *low* to no potential to occur in the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDB and Jepson eFlora occurrence records. Reconnaissance plant surveys were conducted to determine if they are present or absent in the BSA.

Table 4. Special Status Plant Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
Listed Endangered, Threatened, Candidate and State Rare Plants: Plants with official status under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and/or the Native Plant Protection Act (NPPA). A species may have other sensitive designations in addition to their federal or state listing.								
Ambrosia pumila	San Diego ambrosia (=dwarf burr ambrosia)	FE, CRPR: 1B.1, WRCMSHCP: Covered (b)	San Diego ambrosia is a perennial rhizomatous herb. Creek beds, seasonally dry drainages, and floodplains are the preferred historical habitat; usually on the periphery of willow woodlands without a protective tree canopy. River wash and sandy alluvium underlie these locales. San Diego ambrosia occurs in open habitats such as chaparral and coastal sage scrub in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated with open, gently-sloped grasslands and is generally associated with alkaline soils. This listed plant flowers from April to October.	No	66 – 1,361	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA is within this species historical range; however, there is no suitable habitat for this species in the BSA. This species is likely extirpated from the area.
Berberis nevinii (=*Mahonia nevinii*)	Nevin's barberry	FE, SE, CRPR: 1B.1, WRCMSHCP: Covered (d)	Nevin's barberry is a perennial evergreen shrub that grows in two habitat types. In the alluvial scrub community, it grows on sandy and gravelly substrates along the margins of dry washes. In the chaparral community, it grows on steep, north-facing slopes with coarse soils and rocky slopes. It has also been found in cismontane woodlands, riparian scrub, and coastal sage scrub. This listed plant flowers from March to June.	No	899 – 2,706	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA is within this species historical range; however, there is no suitable habitat for this species in the BSA. This species is not expected to occur in the Survey Area.
Phacelia stellaris	Brand's star phacelia (=Brand's phacelia)	FC, CRPR: 1B.1, WRCMSHCP: Covered (a, b)	Brand's star phacelia is an annual herb that is found on open areas in coastal dunes and coastal scrub. This species typically occurs in sandy openings, sandy benches, dunes, sandy washes, or flood plains of rivers. This listed plant flowers from March to June.	No	3 – 1,312	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA is within this species historical range; however, there is no suitable habitat for this species in the BSA. This species is not expected to occur in the Survey Area.
Nasturtium gambelii (=*Rorippa gambelii*)	Gambel's water cress	FE, ST, CRPR: 1B.1	Gambel's watercress is a perennial rhizomatous herb that is found in freshwater and brackish marshes or swamps and grows on the margins of lakes and slowly flowing streams in or just above the water level and requires a permanent source of water, often where other vegetation is absent, but with bulrush, cattails or willows nearby. In drought, plants can be found growing on mud. This listed plant flowers from April to October.	No	16 – 1,082	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable wetland habitat to support this species.
Arenaria paludicola	marsh sandwort	FE, SE, CRPR: 1B.1	Marsh sandwort is a perennial stoloniferous herb that grows on saturated, acidic bog soils, freshwater marshes, swamps, and fens, mostly sandy with a high organic content, and seems to prefer unshaded settings with dense undergrowth. It grows up through dense mats of *Typha*, *Juncus*, *Scirpus*, etc. in freshwater marshes. It occurs almost always under natural conditions in wetlands. This listed plant flowers from May to August.	No	10 – 558	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable wetland habitat to support this species.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
Chloropyron maritimum ssp. *maritimum* (=*Cordylanthus maritimus* ssp. *maritimus*)	salt marsh bird's-beak	FE, SE, CRPR: 1B.2	Salt marsh bird's-beak is an annual herb (hemiparasitic) that grows in portions of salt marshes subject to periodic inundation from high tides. Salt marsh bird's-beak grows in the higher reaches of coastal salt marshes to intertidal and brackish areas influenced by freshwater input. Some plants occur in non-tidal areas or in areas of perched water tables. It is parasitic on salt grass, alkali bulrush, cattail, and other individuals of its own species. This listed plant flowers from May to October.	No	0 - 98	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable wetland habitat to support this species.
Eriastrum densifolium *ssp.* sanctorum	Santa Ana River woollystar	FE, SE, CRPR: 1B.1, WRCMSHCP: Covered (a)	Santa Ana River woollystar is a perennial herb that is found only within open washes and early-successional alluvial fan scrub on open slopes above main watercourses on fluvial deposits where flooding and scouring occur at a frequency that allows the persistence of open shrublands. Suitable habitat is comprised of a patchy distribution of gravelly soils, sandy soils, rock mounds and boulder fields. Suitable habitat typically contains low amounts of clay, silt and micro-organic materials. These areas typically maintain a perennial plant cover of less than 50%. This listed plant flowers from April to September.	No	298 – 2,001	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA is heavily altered by human disturbance and lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Dodecahema leptoceras	slender-horned spineflower	FE, SE, CRPR: 1B.1, WRCMSHCP: Covered (a, b)	Slender-horned spineflower is an annual herb that grows on sandy soil of alluvium in flood plains and in washes. This spineflower is associated with the eastern-most occurrence of coastal sage scrub, known as alluvial fan sage scrub. Cryptogrammic crusts are frequently present in areas occupied by this plant. This listed plant flowers from April to June.	No	656 – 2,493	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable alluvial sage scrub habitat to support this species. This species is not expected to occur in the Survey Area.
Allium munzii (=*Allium fimbriatum* var. *munzii*)	Munz's onion	FE, ST, CRPR: 1B.1, WRCMSHCP: Covered (b)	Munz's onion is a perennial bulbiferous herb that is found on mesic exposures or seasonally moist microsites in grassy openings in coastal sage scrub, chaparral, juniper woodlands, cismontane woodlands, valley and foothill grasslands in clay soils. This listed plant flowers from March to May.	No	974 – 3,510	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable habitat to support this species.
Sensitive Plants: **These plants have no official status under the ESA, the CESA, and/or the NPPA; however they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.**								
Texosporium sancti-jacobi	woven-spored lichen	CRPR: 3	Woven-sported lichen is a lichen that is found in arid intermountain areas. It attaches to soil and animal feces, often rabbit pellets.	No	100—2,000	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable habitat to support this species.
Centromadia pungens ssp. *laevis* (=*Hemizonia pungens* ssp. *laevis*)	smooth tarplant	CRPR: 1B.1, WRCMSHCP: Covered (a, d)	Smooth tarplant is an annual herb that occurs in a variety of alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodlands, and valley and foothill grasslands. It is also found in disturbed places. This sensitive plant flowers from April to September.	No	0 – 2,099	Yes	Yes	**Low potential for occurrence in the BSA.** Occurrences of this species have been documented near the BSA; however, this species requires alkaline soils. The soils within the BSA are slightly acidic. This species is not expected to occur in the survey area.
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	CRPR: 1A	Los Angeles sunflower is a perennial rhizomatous herb that is found in coastal salt and freshwater marshes and swamps. Usually occurs in wetlands, but occasionally found in non-wetlands. This sensitive plant flowers from August to October.	No	33 – 5,494	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable wetland habitat to support this species.
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	CRPR: 1B.1, WRCMSHCP: Covered (a, d)	Coulter's goldfields is an annual herb that is associated with low-lying alkali habitats along the coast and in inland valleys. The majority of the populations are associated with coastal salt marshes and swamps. Coulter's goldfields occur primarily in the alkali vernal plains community. These are floodplains dominated by alkali scrub, alkali playas, vernal pools, and, alkali grasslands. These habitats form mosaics that are largely dependent on salinity and micro-elevational differences. This sensitive plant flowers from February to June.	No	3 – 4,002	Yes	Yes	**Low potential for occurrence in the BSA**. The BSA lacks suitable habitat and soils to support this species. This species is not expected to occur in the Survey Area.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Description in California	BSA Contains Potential Suitable Habitats	Plant Elevation Range (feet amsl)	BSA is Located Within the Plant Species' Known:		Potential For Occurrence in the BSA
						Elevation Range	General Distribution	
Pseudognaphalium leucocephalum (=*Gnaphalium leucocephalum*)	white rabbit-tobacco	CRPR: 2B.2	White rabbit-tobacco is a perennial herb that occurs in chaparral, cismontane woodlands, coastal scrub and riparian woodlands in sandy and gravelly sites. This sensitive plant flowers from (July) August to November (December). Months in parentheses are uncommon.	No	0 – 6,888	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Senecio aphanactis	chaparral ragwort (=rayless ragwort)	CRPR: 2B.2	Chaparral ragwort is an annual herb that is found in chaparral, cismontane woodlands, coastal scrub (sometimes alkaline) and drying alkaline flats. This sensitive plant flowers from January to April.	No	49 – 2,624	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Symphyotrichum defoliatum (=*Aster bernardinus*)	San Bernardino aster	CRPR: 1B.2	San Bernardino aster is a perennial rhizomatous herb that is found in cismontane woodlands, coastal scrub, lower montane coniferous forests, meadows and seeps, marshes and swamps, and vernally mesic valley and foothill grasslands. While this species usually occurs in meadows, springs, and streams, it also occurs in upland habitats. Grows in seasonally moist fine alluvial soils. This sensitive plant flowers from July to November.	No	7 – 6,691	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable meadow, springs, stream, or upland habitat to support this species. This species is not expected to occur in the Survey Area.
Harpagonella palmeri (=*Pectocarya palmeri*)	Palmer's grapplinghook	CRPR: 4.2, WRCMSHCP: Covered	Palmer's grapplinghook is an annual herb that is associated with clay and cobbly clay soils on dry slopes and mesas in open coastal sage scrub, chaparral, valley and foothill grasslands, and scrub oak woodlands. It is easily found after fires in sparsely vegetated openings and near outcrops in native grasslands when present. This sensitive plant flowers from March to May.	No	66 – 3,133	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and lacks suitable habitat to support this species.
Phacelia keckii (=*Phacelia suaveolens* ssp. *keckii*)	Santiago Peak phacelia	CRPR: 1B.3	Santiago Peak phacelia is an annual herb that is found in closed-cone coniferous forests and chaparral often in open areas and sometimes around creeks. This sensitive plant flowers from May to June.	No	1,787 – 5,248	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	CRPR: 4.3	Robinson's pepper-grass is an annual herb that is found in dry soils on chaparral and coastal sage scrub often around rock outcrops. This sensitive plant flowers from January to July.	No	3 – 2,903	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	CRPR: 2B.2	Peruvian dodder is an annual parasitic vine that is found in freshwater marshes and swamps. This sensitive plant flowers from July to October.	No	49 - 918	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Dudleya multicaulis	many-stemmed dudleya	CRPR: 1B.2, WRCMSHCP: Covered (b)	Many-stemmed dudleya is a perennial herb that is often associated with clay soils in barrens, rocky places, and ridgelines as well as thinly vegetated openings in chaparral, valley and foothill grasslands, and coastal sage scrub in heavy soils, often clay. This sensitive plant flowers from April to July.	No	49 – 2,591	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat and clay soils to support this species. This species is not expected to occur in the Survey Area.
Astragalus hornii var. hornii	Horn's milk-vetch	CRPR: 1B.1	Horn's milk-vetch is an annual herb found in riparian habitat and along salty flats. It can be found in meadows and seeps, playas along alkaline lake margins This plant flowers from May to October.	No	195—2,790	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Ribes divaricatum *var.* parishii	Parish's gooseberry	CRPR: 1A	Parish's gooseberry is a perennial deciduous shrub that was found in willow swales in riparian woodlands. This sensitive plant flowers from February to April.	No	213 – 984	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species. Since this species is a perennial shrub, it most likely would have been observed during the field surveys conducted within the project site.

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						Elevation Range	General Distribution	
Lepechinia cardiophylla	heart-leaved pitcher sage (=Santa Ana pitchersage)	CRPR: 1B.2, WRCMSHCP: Covered (d), OC NCCP/ HCP: Identified Species	Heart-leaved pitcher sage is a perennial shrub that occurs in chaparral, cismontane woodlands, and closed-cone coniferous forests. It often o*ccurs in canyons and north-facing slopes near the coast.* This sensitive plant flowers from April to July.	No	1,706 – 4,494	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species.
Monardella hypoleuca ssp. *intermedia*	intermediate monardella	CRPR: 1B.3	Intermediate monardella is a perennial rhizomatous herb that is found in the understory of chaparral, cismontane woodlands, and lower montane coniferous forests. This sensitive plant flowers from April to September.	No	1,312 – 4,100	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species.
Monardella pringlei	Pringle's monardella	CRPR 1.A	Pringle's monardella is an annual rhizomatous herb that is presumed extirpated in California. It occurs in coastal sage scrub, interior sand dunes, sandy soils in Riverside and San Bernardino coutnies. This sensitive plant flowers from April to July.	No	980 - 1,310	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species. Since this species is a perennial shrub, it most likely would have been observed during the field surveys conducted within the project site.
Malacothamnus parishii	Parish's bush-mallow	CRPR: 1A	Parish's bush mallow is a perennial deciduous shrub that is found in chaparral and coastal scrub habitats. This sensitive plant flowers from June to July.	No	1,000 – 1,492	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species. Since this species is a perennial shrub, it most likely would have been observed during the field surveys conducted within the project site.
Sidalcea neomexicana	salt spring checkerbloom (=mountain sidalcea)	CRPR: 2B.2	Salt spring checkerbloom is a perennial herb that is found in alkaline, mesic sites in chaparral, coastal scrub, lower montane coniferous forests, Mojavean desert scrub, alkali playas, and brackish marshes. This sensitive plant flowers from March to June.	No	49 – 5,018	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Abronia villosa var. aurita	chaparral sand-verbena	CRPR: 1B.1	Chaparral sand-verbena is an annual herb that is found in sandy soils of chaparral, coastal scrub, and desert dunes. This sensitive plant flowers from January to September.	No	262 – 5,248	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Navarretia prostrata	prostrate vernal pool navarretia (=prostrate navarretia)	CRPR: 1B.1, WRCMSHCP: Covered (a, d)	Prostrate vernal pool navarretia is an annual herb that is found in coastal scrub, valley and foothill grasslands (alkaline washes), meadows and seeps, and vernal pools. This sensitive plant flowers from April to July.	No	49 – 3,969	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Chorizanthe parryi var. parryi	Parry's spineflower	CRPR: 1B.1, WRCMSHCP: Covered (e)	Parry's spineflower is an annual herb that is found in sandy or rocky soils and openings in coastal scrub, chaparral, cismontane woodlands, and valley and foothill grasslands. Sometimes it is found at an interface of two vegetation types such as chaparral and oak woodlands. Often it is associated with alluvial conditions. This sensitive plant flowers from April to June.	No	902 – 4,002	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution and elevation for this species and lacks suitable habitat to support this species.
Chorizanthe polygonoides var. longispina	long-spined spineflower (=knotweed spineflower)	CRPR: 1B.2, WRCMSHCP: Covered	Long-spined spineflower is an annual herb that is associated primarily with heavy, often rocky, clay soils in vernal pools, meadows and seeps, valley and foothill grasslands, and openings in coastal scrub, and chaparral. This sensitive plant flowers from April to July.	No	98 – 5,018	Yes	Yes	**Low potential for occurrence in the BSA.** Although the BSA is within of the general distribution for this species, the BSA lacks suitable habitat to support this species. Most documented occurrences have been in gravelly openings of grasslands near Lake Mathews. This

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						Elevation Range	General Distribution	
								species is not expected to occur in the Survey Area.
Myosurus minimus ssp. apus	little mousetail	CRPR: 3.1, WRCMSHCP: Covered (a, d)	Little mousetail is an annual herb that is found in alkaline vernal pools and in valley and foothill grasslands. In southern California, little mousetail occurs in association with vernal pools and within the alkali vernal pools and alkali annual grasslands components of alkali vernal plains. Little mousetail is found in areas that have semi-regular inundation. This sensitive plant flowers from March to June.	No	66 – 2,099	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Horkelia cuneata var. puberula *(=Horkelia cuneata ssp. puperula)*	mesa horkelia	CRPR: 1B.1	Mesa horkelia is a perennial herb that is found in sandy or gravelly sites of maritime chaparral, coastal scrub, and cismontane woodlands. This sensitive plant flowers from February to September.	No	230 – 2,657	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Galium californicum ssp. primum	Alvin Meadow bedstraw (=California bedstraw)	CRPR: 1B.2, WRCMSHCP: Covered (f)	Alvin Meadow bedstraw is a perennial herb that occurs on granitic or sandy soils in shaded areas of trees and shrubs at the ecotone of chaparral and lower montane coniferous forests and in the lower edge of the pine belt. This sensitive plant flowers from May to July.	No	4,428 – 5,576	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Lycium parishii	Parish's desert-thorn	CRPR: 2B.3	Parish's desert-thorn is a perennial shrub that is found in coastal scrub and Sonoran desert scrub. This sensitive plant flowers from March to April.	No	443 – 3,280	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species. Since this species is a perennial shrub, it most likely would have been observed during the field surveys conducted within the project site.
Allium marvinii	Yucaipa onion	CRPR: 1B.1, WRCMSHCP: Covered (b)	Yucaipa onion is a perennial bulbiferous herb that is found in openings of chaparral habitat in clay soils. This sensitive plant flowers from April to May.	No	2,493 – 3,493	No	Yes	**No potential for occurrence in the BSA.** The BSA is within the general distribution for this species; however, the Survey Area is outside of the general elevation for this species and lacks suitable habitat to support this species.
Carex comosa	bristly sedge	CRPR 2B.1	Bristly sedge is a perennial rhizomatous herb that is found in freshwater wetlands and wetland-riparian lake margins and edges. This plant flowers from May to September.	No	0—2,050	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Cladium californicum	California sawgrass	CRPR: 2B.2	California sawgrass is a perennial rhizomatous herb that is found in meadows and seeps and alkaline or freshwater marshes and swamps. This sensitive plant flowers from June to September.	No	197 – 2,837	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Calochortus plummerae	Plummer's mariposa lily	CRPR: 4.2, WRCMSHCP: Covered (e)	Plummer's mariposa lily is a perennial bulbiferous herb that prefers openings in chaparral, cismontane woodlands, coastal scrub, valley and foothill grasslands, and lower montane coniferous forests. It is found on dry, rocky slopes and soils and brushy areas and can be very common after fire. This sensitive plant flowers from May to July.	No	328 – 5,576	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.
Calochortus weedii var. intermedius	intermediate mariposa lily (=Weeds mariposa lily)	CRPR: 1B.2, WRCMSHCP: Covered	Intermediate mariposa lily is a perennial bulbiferous herb that occurs on dry, rocky open slopes and rock outcrops in coastal scrub and chaparral. Intermediate mariposa lily occurs in valley and foothill grasslands only after burns. Sandstone outcrops in chaparral habitats below 2,000 feet are preferred habitats. This sensitive plant flowers from May to July.	No	344 – 2,804	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA lacks suitable habitat to support this species. This species is not expected to occur in the Survey Area.

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Muhlenbergia californica	California muhly	CRPR: 4.3, WRCMSHCP: Covered (a, e)	California muhly is a perennial rhizomatous herb that occurs in chaparral, coastal scrub, lower montane coniferous forests, and meadows, usually near mesic seeps or along streambanks. This sensitive plant flowers from June to September.	No	328 – 6,560	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Muhlenbergia utilis	Aparejo grass	CRPR: 2B.2	Aparejo grass is a perennial rhizomatous herb that is found in coastal sage scrub, creosote bush scrub, wetland-riparian, wet sites along streams, and ponds. This sensitive plant flowers from October to March.	No	79—3,653	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Sphenopholis obtusata	prairie wedge grass	CRPR: 2B.2	Prairie wedge grass is a perennial herb that is found in mesic sites within cismontane woodlands and meadows and seeps. It is found in open moist sites, along rivers and springs, alkaline desert seeps. This sensitive plant flowers from April to July.	No	984 – 6,560	No	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species.
Nolina cismontana	chaparral nolina (=Peninsular nolina and =California beargrass)	CRPR: 1B.2	Chaparral nolina perennial evergreen shrub that is found in chaparral and coastal scrub in sandstone or gabbro soils. This sensitive plant flowers from March to July.	No	459 – 4,182	Yes	No	**No potential for occurrence in the BSA.** The BSA is outside of the general distribution for this species and lacks suitable habitat to support this species. Since this species is a perennial evergreen shrub, it most likely would have been observed during the field surveys conducted within the project site.

Legend and Notes

Notes:

- The BSA contains approximate elevations of 798 to 815 feet above mean sea level (amsl).
- The BSA encompasses disturbed habitat with non-native grassland and non-native tree groves dominating the Survey Area.
- **Yes** = the BSA is located within the plant species' known distribution, elevation range, and/or the BSA contains suitable habitats and/or soils to support the plant species. The plant species has a potential to occur within the BSA. Further evaluation is needed.
- **No** = the BSA is located outside the plant species' known distribution, elevation range, and/or the BSA lacks suitable habitats and/or soils to support the plant species. It is highly unlikely for the plant species to have a potential to occur within the BSA. No further evaluation is needed.
- A CNPS elevation range is provided for each taxon in feet. The stated range is for the California portion of a plant's range only (if the taxon also occurs outside the state). These CNPS elevation range data are accumulated from literature, herbarium specimens, and field survey information.

Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened plants is published in 50 CFR § 17.12.

- **FE = federally listed as endangered:** any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.
- **FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.
- **FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- **FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPD = federally proposed for delisting:** a species that has been proposed by USFWS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) and California Native Plant Protection Act (NPPA) Listing Codes: the CESA and NPPA are administered by CDFW. The official listing of *Plants of California Declared to Be Endangered, Threatened or Rare* is contained in the California Code of Regulations, Title 14, § 670.2. Species, subspecies and varieties of California native plants are declared to be endangered, threatened as defined by § 2062 and § 2067 of the Fish and Game Code or rare as defined by § 1901 of the Fish and Game Code.

- **SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- **ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- **SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).

Legend and Notes

- **SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species to either list.
- **SR = state rare:** A species, subspecies, or variety of native plant is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens (Fish and Game Code § 1901).

California Rare Plant Ranks (Formerly known as CNPS Lists): the CNPS is a statewide, nonprofit organization that maintains, with CDFW, an Inventory of Rare and Endangered Plants of California. In the spring of 2011, CNPS and CDFW officially changed the name "CNPS List" or "CNPS Ranks" to "California Rare Plant Rank" (or CPRP). This was done to reduce confusion over the fact that CNPS and CDFW jointly manage the Rare Plant Status Review Groups and the rank assignments are the product of a collaborative effort and not solely a CNPS assignment.

- **CRPR: 1A = California Rare Plant Rank 1A - plants presumed extirpated in California and either rare or extinct elsewhere:** the plants with a CRPA of 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes plants that are both presumed extinct as well as those plants which are presumed extirpated in California. All of the plants constituting CRPR 1A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 1B = California Rare Plant Rank 1B - plants rare, threatened, or endangered in California and elsewhere:** plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. All of the plants constituting CRPR 1B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2A = California Rare Plant Rank 2A - plants presumed extirpated in California, but more common elsewhere:** the plant taxa of CRPR 2A are presumed extirpated because they have not been observed or documented in California for many years. This list includes only those plant taxa that are presumed extirpated in California, but more common elsewhere in their range. All of the plants on List 2A meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. Should these taxa be rediscovered, it is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 2B = California Rare Plant Rank 2B - plants rare, threatened, or endangered in California, but more common elsewhere:** except for being common beyond the boundaries of California, plants with a CRPR of 2B would have been ranked 1B. From the federal perspective, plants common in other states or countries are not eligible for consideration under the provisions of the ESA. All of the plants constituting CRPR 2B meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
- **CRPR 3 = California Rare Plant Rank 3 - plants about which more information is needed - a review list:** the plants that comprise CRPR 3 are united by one common theme – CNPS and CDFW lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting CRPR 3 are taxonomically problematic. Some of the plants constituting CRPR 3 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and are eligible for state listing. CNPS strongly recommends that CRPR 3 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **CRPR 4 = California Rare Plant Rank 4 - plants of limited distribution - a watch list**: the plants in this category are of limited distribution or infrequent throughout a broader area in California. While CNPS and CDFW cannot call these plants "rare" from a statewide perspective, they are uncommon enough that their status should be monitored regularly. Should the degree of endangerment or rarity of a CRPR 4 plant change, CNPS and CDFW will transfer it to a more appropriate rank. Some of the plants constituting CRPR 4 meet the definitions of § 2062 and § 2067 (CESA) of the Fish and Game Code, and few, if any, are eligible for state listing. Nevertheless, many of them are significant locally, and CNPS strongly recommends that CRPR 4 plants be evaluated for consideration during preparation of environmental documents relating to CEQA.
- **Considered But Rejected =** plants that have been considered for inclusion into the CNPS *Inventory*, but were not included for various reasons.

California Native Plant Society (CNPS) Threat Ranks: The CNPS Threat Rank is an extension added onto the California Rare Plant Rank (CRPR) (as a decimal code) and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. A Threat Rank is present for all CRPR 1B's, 2B's, 4's, and the majority of CRPR 3's. CRPR 4 plants are seldom assigned a Threat Rank of .1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a CRPR. In addition, all CRPR 1A and 2A (presumed extirpated in California), and some CRPR 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension.

- **.1** = seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- **.2** = moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- **.3** = not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP):

The WRCMSHCP provides regulatory coverage for a total of 146 individual species. Under the WRCMSHCP, regulatory coverage means that future incidental take of these species would be permitted for new development and that no additional mitigation under the CESA or ESA would be required over the mitigation provided for by the plan. The following species are identified as "Covered Species" by the WRCMSHCP and the Implementing Agreement. The WRCMSHCP permits would provide take authorization for Covered Species.

- **WRCMSHCP: Covered:** no further surveys are required.
- **WRCMSHCP: Covered (a):** surveys may be required for these species as part of wetlands mapping (Section 6.1.2 of WRCMSHCP).
- **WRCMSHCP: Covered (b):** surveys may be required for these species within Narrow Endemic Plant Species survey area (Section 6.1.3 of WRCMSHCP).
- **WRCMSHCP: Covered (d):** surveys may be required for these species within Criteria Area as (Section 6.3.2 of WRCMSHCP).
- **WRCMSHCP: Covered (e):** these Covered Species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species specific conservation objectives for these species are presented in Section 9.0 of the WRCMSHCP. Please refer to Table 9-3 of the WRCMSHCP for specific conservation objectives that must be met for the 16 species prior to including them on the list of Covered Species Adequately Conserved.

Legend and Notes

- **WRCMSHCP: Covered (f):** these Covered Species will be considered to be Covered Species Adequately Conserved when a memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land. Please refer to Table 9-3 of the WRCMSHCP.

Other:

- **Annual**: grows from seed and reproduce within a single year.
- **Perennial**: lives more than one year.
- **Deciduous**: plants shed their leaves for part of the year.
- **Evergreen:** plants retain their leaves for an entire year.
- **Mesic habitat:** a habitat with a moderate or well-balanced supply of moisture.
- **Hemiparasitic:** plants that are connected to host plants and derive energy, water, and minerals from them, but also maintain their own functional root systems or photosynthetic surfaces.
- **Parasitic:** plants that are connected to host plants and rely solely on them for energy, water, and nutritional requirements.
- **Carnivorous:** plants that trap insects and other small animals and derive nourishment from them.
- **Herbs**: plants that are herbaceous and lack above-ground woody tissue.
    - **Bulbiferous herb**: plants that have fleshy underground storage organs typically derived from scale leaves (this category includes cormiferous and other similar plants in which storage organs have other origins).
    - **Rhizomatous herb**: plants that have underground stems (rhizomes), typically bearing shoots which develop into new plants.
    - **Stoloniferous herb:** plants that have above-ground runners (stolons) which typically root and produce new plants.
- **Shrubs:** smaller woody perennials that retain most of their above-ground woody tissue and are typically many-stemmed.
    - **Leaf succulents:** succulents with thick, fleshy leaves.
    - **Stem succulents:** succulents with thick, fleshy stems and reduced or absent leaves.
- **Trees:** larger woody perennials that retain all of their above-ground wood tissue and are typically single-stemmed.
- **Vines:** twining woody perennials requiring external support for growth.
- **Mosses:** small green plants (one of three groups of bryophytes) with structures that resemble miniature leaves and stems. The leaves generally have a midrib called a costa. The sporophyte (the spore-bearing structure) is persistent for weeks.
- **Liverworts:** small green plants (one of three groups of bryophytes). There are both leafy and thalloid types - leafy liverworts lack a midrib on the leaves, while thalloid liverworts have no leaves. The sporophyte is short-lived.

4.2.2.1. Weeds

California Invasive Plant Council (Cal-IPC) is a nonprofit organization that is dedicated to protecting California's lands and waters from ecologically damaging invasive plants through science, education, and policy. It maintains an inventory that categorizes non-native invasive plants that threaten the state's wildlands. Exotic vegetation with a Cal-IPC high rating has severe ecological effects on physical processes, plant and animal communities, and vegetation structure. These exotic species' reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically (Cal-IPC, 2017). Exotic vegetation with a Cal-IPC moderate rating has substantial and apparent (but generally not severe) ecological effects on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread. Exotic vegetation species with a Cal-IPC limited rating are invasive, but their ecological effects are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic (Cal-IPC, 2006).

Twelve (12) of the fifteen (15) plant species recorded are non-native. Ten (10) of the (12) non-native plant species recorded have a Cal-IPC rating (Cal-IPC, 2017). They include the following listed below in **Table 5.**

Table 5. Recorded Cal-IPC Rating Plants

Scientific Name (=Synonym)	Common Name (=Synonym)	Cal-IPC Rating
Schinus terebinthifolius	Brazilian pepper tree	Moderate
Salsola tragus	Russian thistle	Limited
Erodium cicutarium	red-stemmed filaree	Limited
Eucalyptus globulus	blue eucalyptus	Limited
Olea europaea	olive tree	Limited
Ailanthus altissima	tree of heaven	Moderate
Nicotiana glauca	tree tobacco	Moderate
Tamarix ramosissima	tamarisk	High
Washingtonia robusta	Mexican fan palm	Moderate
Arundo donax	giant reed	High

No federally listed noxious weeds were observed onsite during the field surveys per the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Federal Noxious Weed List.[1]

[1] http://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/downloads/weedlist.pdf

4.2.3. Wildlife

The literature review resulted in a list of fifty-seven (57) special-status wildlife species that have been known to occur within the BSA and surrounding twelve-quadrangles, which is presented in Table 5, *Special Status Wildlife Species*. None of these special-status wildlife species were considered to have *high* potential**,** three (3) have *moderate* potential, and fifty-four (54) were considered to have *low* to no potential to occur in the BSA. Factors used to determine potential for occurrence include quality of habitat, soil type, impact from previous land use, and the date and location of prior CNDDB occurrence records. Reconnaissance wildlife surveys will be conducted to determine if they are present or absent in the BSA.

Table 6. Special Status Wildlife Species

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
Listed Endangered, Threatened, and Candidate Wildlife: Wildlife with official status under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA). A species may have other sensitive designations in addition to their federal or state listing.						
Listed Invertebrates						
Streptocephalus woottoni	Riverside fairy shrimp	FE, WRCMSHCP: Covered (a),	This species is only found in deep, long-lived, cool lowland vernal pools, vernal pool like ephemeral ponds, and stock ponds that retain water through the warmer weather of late spring. The animal is also occasionally found in depressions (road ruts and ditches). All the swimming holes in which the Riverside fairy shrimp are found are seasonally astatic and are typically quite large. The pools usually have a minimum depth of 30 cm at maximum filing and the water is usually moderately turbid. This species cannot tolerate salty, muddy, or alkaline water. The pools that support Riverside fairy shrimp are found in seasonal grasslands some of which are interspersed among chaparral or coastal sage scrub vegetation.	No	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable vernal pool or vernal pool like aquatic environments to support this species.
Rhaphiomidas terminatus abdominalis	Delhi sands flower-loving fly	FE, WRCMSHCP: Covered	Found in sparsely vegetated areas of partly consolidated dunes composed of unique, fine, sandy soils known as the "Delhi series: sands." The specific native plants important to this fly are unknown, but California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), deerweed (*Acmispon glaber*), and California evening primrose (*Oenothera californica*) and telegraph weed (*Heterotheca grandiflora*) are dominant in its habitat. It spends most of the year underground in sandy soils where vegetation is generally low growing, providing sparse ground cover (10-20%). It emerges during an eight-to-ten-week period during the summer for reproduction. They probably live only a week or two.	No	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable soil (Delhi sands) or vegetation habitats to support this species.
Euphydryas editha quino (=*Euphydryas editha wrighti*)	quino checkerspot butterfly	FE, WRCMSHCP: Covered	Found in grasslands, remnant forbland, open coastal sage scrub, open chamise chaparral, open red shank chaparral, juniper woodland, and semi-desert scrub that support larval host plants. Adult quino checkerspot butterflies often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops of chaparral and coastal sage scrub. Quino checkerspot butterfly populations appear to be associated with loamy soils with moderate to high amounts of clay, located within sparsely vegetated areas that contain potential host plants and nectar sources, and a moderate to high percentage of native plants. Adult butterflies will only deposit eggs on species they recognize as host plants. Quino oviposition (i.e., egg deposition) has been documented on California plantain (=dwarf plantain) (*Plantago erecta*), Patagonian plantain (*Plantago patagonica*), and white snapdragon (*Anterrhinum coulterianum*). In 2008, oviposition and larval development were recorded for the first time on a new species of host plant, Chinese houses (*Collinsia concolor*). Quino egg clusters and pre-diapause larval clusters have also been documented in the field on thread-leaved bird's beak (*Cordylanthus rigidus*) and purple owl's-clover (*Castilleja exserta*). However, use of these plants is rare, and these species alone are not believed to support Quino breeding. Adults nectar primarily on annuals including goldfields (*Lasthenia* sp.), cryptantha (*Cryptantha* sp.), gilia (*Gilia* sp.), linanthus (*Linanthus* sp.), and trefoil (*Lotus* sp.).	No	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable habitats, larval host plants or food sources to support this butterfly.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
Catostomus santaanae	Santa Ana sucker	FT[2], SSC, WRCMSHCP: Covered	The Santa Ana sucker generally lives in small, shallow streams, less than 25 feet in width, with currents ranging from swift in the canyons to sluggish in the bottom lands. They are found in permanent streams in water ranging in depth from a few centimeters to a meter or more. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of filamentous algae, but occasionally they are found on sand/mud substrates. It appears to be most abundant where the water is cool, clean, and clear, although the species can tolerate seasonally turbid water. Streams in which the species is found are subject to periodic, severe flooding.	Yes	No	**No potential for occurrence in the BSA.** The BSA does not contain aquatic habitats to support this fish. Due to lack of water on site fish are not expected.
Oncorhynchus mykiss irideus	steelhead – southern California DPS	FE[3], SSC[4]	The southern steelhead is a highly migratory, seagoing trout that ascends coastal streams to spawn during the late fall and winter months. Southern steelheads spawn in cool, clear, well-oxygenated streams. Successful reproduction of southern steelhead generally requires a gravel riffle, where the female buries the eggs. Higher-elevation headwaters are primary spawning and rearing areas.	Yes	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable aquatic habitats to support this fish. Due to lack of water on site fish are not expected.
Listed Amphibians						
Anaxyrus californicus (=*Bufo californicus*)	arroyo toad	FE, SSC, WRCMSHCP: Covered (c),	A toad of sandy riverbanks, streams, washes, and arroyos. Breeds in and near streams. It frequents riparian areas grown to mule fat (*Baccharis salicifolia* ssp. *salicifolia*), willows (*Salix* sp.), cottonwoods (*Populus* sp.), and/or California sycamores (*Platanus racemosa*) or coast live oaks (*Quercus agrifolia*) in valley-foothill and desert riparian as well as a variety of more arid habitats including desert wash, palm oasis, and Joshua tree, mixed chaparral and sagebrush. It requires shallow (3 -10 inches deep), exposed streamside, quiet water stretches, or overflow pools with silt-free sandy or gravelly bottoms especially favored for breeding. Nearby sandy terraces, dampened in places by capillary action, and with some scattered vegetation providing surface sheltering and burrowing sites and foraging areas.	No	No	**No potential for occurrence in the BSA.** The BSA does not contain suitable foraging riparian, oak, or scrub habitats and it lacks suitable aquatic breeding sites to support this toad. Any occurrence would most likely be restricted to passing through the BSA. Due to lack of available water on site amphibians are not expected.
Listed Birds						
Haliaeetus leucocephalus	bald eagle	SE, fully protected, BCC, WRCMSHCP: Covered Season of Concern: nesting & wintering	The bald eagle is federally delisted. Range-wide, bald eagles occur primarily in or near seacoasts, rivers, wetlands swamps, and large lakes. Requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches and nesting sites to support them. Perching sites need to be composed of large trees or snags with heavy limbs or broken tops. It roosts communally in winter in dense, sheltered, remote conifer stands. The State's breeding habitats are mainly in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers. Large nests are normally built in the upper canopy of large trees, usually conifers.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain adequate large bodies of water, or free flowing rivers with abundant fish for foraging. In addition, suitable perching sites, roosting sites, and breeding habitats are absent from the BSA. Any occurrence would mostly likely be restricted to fly-overs.
Buteo swainsoni	Swainson's hawk	ST, BCC, WRCMSHCP: Covered Season of Concern: nesting	Swainson's hawks require large, open areas with abundant prey in association with suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures and croplands, open deserts, sparse shrub lands. Swainson's hawks often nest peripherally to riparian systems of the valley as well as utilizing lone trees or groves of trees, such as oaks, cottonwoods (*Populus* sp.), California black walnuts (*Juglans californica*) and willows (*Salix* sp.), adjacent to their hunting areas. In the Great Basin, they typically nest in juniper trees of juniper-sage flats not near riparian zones.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding tree habitats or foraging native grasslands, grazed pastures, croplands, open deserts, or sparse shrubland habitats to support this species. Any occurrence would mostly likely be restricted to fly-overs.

[2] The federal listing applies to populations in the Los Angeles, San Gabriel, and Santa Ana River basins.
[3] Federal listing refers to fish in the coastal basins from the Santa Maria River (inclusive), south to the U.S. Mexico border.
[4] SSC designation refers to southern steelhead trout.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
Laterallus jamaicensis coturniculus	California black rail	ST, fully protected, BCC	Occurs in various habitats, from high coastal marshes to freshwater marshes along the lower Colorado River. Along the coast, they favor marshland with unrestricted tidal influence (estuarine, intertidal, emergent, and regularly flooded). The rails often make their homes in tidal salt marshes dominated by pickleweed, but they inhabit brackish and freshwater marshes as well. In coastal and estuarine saltmarshes, their favored areas are dominated by pickleweed, bulrushes, and matted salt grass (*Distichlis spicata*) and other marsh vegetation. Along the Colorado River, they use areas of shallow water with relatively stable water levels and flat shoreline supporting dense stands of three-square bulrush.	Yes	No	**No potential for occurrence in the BSA**. The BSA does not contain suitable breeding coastal salt marsh or freshwater marsh habitats and aquatic mudflat foraging habitats to support this species.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT, SE, BCC, WRCMSHCP: Covered (a)	The western yellow-billed cuckoo (cuckoo) is a neotropical migratory bird, whose nesting habitat is restricted to relatively dense growths of trees and shrubs in riparian habitats that lines rivers and streams. They are confined to large blocks, or contiguous areas, of cottonwood-willow riparian forests adjacent to sloughs and slow-moving rivers. Cuckoos have large home ranges, often exceeding 50 acres, and sometimes approaching 100 acres, in extent. Few cuckoos are found in forest habitat of less than 25 acres, and dense, low-level foliage is an important determination of nesting habitat. Sites with less than 40% canopy closure are unsuitable, those with 40%-65% are marginal to suitable, and those with greater than 65% are optimal.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging dense, wide riparian blocks with aquatic habitats to support this species. Cuckoos generally arrive in California during June, though there are a few early records for May. Fall migration begins in early August and most cuckoos have departed California by mid-September.
Empidonax traillii extimus	southwestern willow flycatcher	FE, SE, WRCMSHCP: Covered (a), Season of Concern: nesting	Southwestern willow flycatcher (SWFLs) breed and forage in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes (e.g., reservoirs). SWFL suitable habitat contains surface water, saturated soil, or herbaceous wetland plants present during the early summer months; woody riparian vegetation is present and covers a minimum aerial extent of 20 percent over a 0.5 acre section of floodplain or adjacent streamside terrace; dense clumps or stands of woody vegetation are present. SWFLs also nests in thickets dominated by the non-native tamarisk and Russian olive and in habitats where native and non-native trees and shrubs are present in essentially even mixtures.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging dense riparian and aquatic habitats to support this species. The SWFL arrives in spring usually in early May and in the fall, the adults depart mainly during the last half of August. Juveniles remain later in September, but all have departed by 1 October.
Vireo bellii pusillus	least Bell's vireo	FE, SE, WRCMSHCP: Covered (a), Season of Concern: nesting	The least Bell's vireo (LBV) is a migratory songbird restricted to willow dominated riparian woodlands. LBVs primarily occupy willow-dominated riverine riparian habitats with well-developed overstories, understories, and low densities of aquatic and herbaceous cover. The understory frequently contains dense subshrub or shrub thickets 3-6 feet off the ground. LBV are associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodland, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, but also inhabits thickets along dry, intermittent streams. On the desert slopes mesquite (*Prosopis* sp.) and sandbar willow in canyon locations may be occupied.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging riparian and aquatic habitats to support this species. From their wintering ground in southern Baja California, Mexico, LBVs migrate between mid-March and early April to southern California, where they remain until July or August.
Polioptila californica californica	coastal California gnatcatcher	FT, SSC, WRCMSHCP: Covered	The coastal California gnatcatcher (CAGN) is a small, non-migratory, permanent resident of coastal sage scrub habitat, which is a broad category of vegetation that includes the following plant communities; Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. In addition to coastal sage scrub, CAGNS use chaparral, grassland and riparian habitats next to coastal sage scrub, but these habitats are used for dispersal and foraging, especially in the non-breeding season.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging coastal sage scrub habitats to support this species.

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Agelaius tricolor	tricolored blackbird	ST, SSC , BLMS, BCC, WRCMSHCP: Covered Season of Concern: nesting colony	The tricolored blackbird breeds near fresh water, preferably in emergent wetland with tall, dense cattails (*Typha* sp.) or tules, but also in thickets of willow, blackberry, wild rose, tall herbs and forages in grassland and cropland habitats. Breeding colonies may attract thousands of birds to a single site. These colonies require nearby water, a suitable nesting substrate, and open-range foraging habitat of natural grassland, woodland, or agricultural cropland. The species is not migratory but is nomadic and highly colonial.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable wetland, grassland, or cropland habitat to support breeding or foraging activities for this species.
Listed Mammals						
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE, SSC, WRCMSHCP: Covered (c)	The San Bernardino kangaroo rat typically is found in Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans, river and stream terraces, flood plains, and along washes with nearby sage scrub. Sandy loam substrates allow for the digging of simple, shallow burrows. They require open, sparse shrub vegetation and they actively avoid rocky substrates and areas with dense vegetation.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable flood plain or sage scrub habitat to support this species.
Dipodomys stephensi	Stephens' kangaroo rat	FE, ST, WRCMSHCP: Covered	The Stephens' kangaroo rat is found almost exclusively in open annual and perennial grasslands or sparse shrublands such as coastal sage scrub with cover of less than 50%. They prefer areas with buckwheat, chamise, brome grass and filaree. They avoid areas with dense grass cover. As a fossorial (burrowing) animal, it typically is found in well drained, gravelly or sandy and sandy loam soils with a low clay to gravel content, although there are exceptions where they can utilize the burrows of pocket gophers and California ground squirrel. They also tend to avoid rocky soils and they use flatter slopes.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable open or sage scrub habitat to support this species.
Sensitive Wildlife: **These animals have no official status under the ESA and/or the CESA; however they are designated as sensitive or locally important by federal agencies, state agencies, and/or local conservation agencies and organizations.**						
Sensitive Invertebrates						
Bombus crotchii	Crotch bumble bee	SCE	Inhabits open grassland and scrub habitats. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable foraging habitat to support this species.
Eugnosta busckana	Busck's gallmoth	None	Busck's gallmoth is a small moth with a wingspan of 24mm. The forewings are covered with white and brown scales with a peppered appearance. A dark brown spot runs across the center of the wing. This species can be found in coastal dune and coastal scrub habitat. It forms galls in the stems of bush sunflower (*Encelia californica*).	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable habitat to support this species. There are no bush sunflowers in the Survey Area.
Neolarra alba	White cuckoo bee	None	White cuckoo bees are			
Sensitive Fish						
Gila orcuttii	arroyo chub	SSC, WRCMSHCP: Covered	Arroyo chubs are found in slow-moving or backwater sections of warm to cool (10-24 C) streams with mud or sand substrates. Depths are typically greater than 40 cm.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable aquatic habitats to support this fish.
Rhinichthys osculus ssp. 3	Santa Ana speckled dace	SSC	The Santa Ana speckled dace requires permanent flowing streams with summer water temperatures of 17-20 C. Typically these streams are maintained by outflows of cool springs. The dace inhabits shallow cobble and gravel riffles. Overhanging riparian plants, mainly alders (*Alnus* sp.) and sedges, provide cover for fish.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable aquatic habitats to support this fish.
Sensitive Amphibians						

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Spea hammondii	western spadefoot	SSC, BLMS, WRCMSHCP: Covered	May be found in coastal sage scrub, open chaparral, pine-oak woodlands and grassland habitats, but is most common in grasslands with vernal pools or mixed grassland/coastal sage scrub areas. Within these habitats, they require rain pools/vernal pools in which to reproduce and that persist with more than three weeks of standing water in which to metamorphose successfully. They can also breed in slow-moving streams (e.g., areas flooded by intermittent streams). Water breeding sites must lack fish, bullfrogs, and crayfish in order for to successfully reproduce and metamorphose. They estivate in sandy, gravelly soil in upland habitats adjacent to potential breeding sites in burrows approximating 1 meter in depth.	Yes	No	**Low potential to occur in the BSA.** The BSA lacks suitable aquatic and vernal pool breeding sites to support this toad. Any occurrence would most likely be restricted to passing through the BSA.
Sensitive Reptiles						
Actinemys marmorata (=*Actinemys marmorata marmorata*)	north western pond turtle (=northern western pond turtle)	SSC	Requires stagnant or slow-moving water in aquatic habitats. Uncommon in high gradient streams. Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail (*Typha* sp.) mats, and exposed banks are required for basking. May enter brackish water and even seawater.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable aquatic habitats or basking sites to support this turtle.
Anniella stebbinsi	southern California legless lizard	SSC	Found in broadleaved upland forest, chaparral, coastal dunes, coastal scrub, sandy washes, alluvial fans. Variety of habitats; generally, in moist, loose soil. Occurs in sandy or loose loamy soils under sparse vegetation. They prefer soils with a high moisture content.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable upland forest, chaparral, dune, coastal scrub or alluvial fan habitat to support this species.
Coleonyx variegatus abbotti	San Diego banded gecko	SSC, WRCMSHCP: Covered	This species is found in granite or rocky outcrops in coastal scrub and chaparral habitats within coastal and cismontane southern California.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable rocky outcrops, coastal scrub or chaparral habitat to support this species.
Phrynosoma blainvillii	Blainville's horned lizard (=coast horned lizard)	SSC, WRCMSHCP: Covered	Found in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (e.g., floods, fire, roads, grazed areas, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	No	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable foraging and basking scrub and grassland habitats.
Aspidoscelis hyperythra	orange-throated whiptail	SSC, WRCMSHCP: Covered	They are found within semi-arid brushy areas typically with loose soil and rocks, including washes, stream sides, rocky hillsides, and coastal chaparral. Habitat types include low elevational chaparral, non-native grassland, (Riversidian) coastal sage scrub, juniper woodland and oak woodland. Associations include alluvial fan scrub and riparian areas. Friable soil appears to be a necessary requirement for excavating burrows and hiding eggs.	Yes	Yes	**Low potential for occurrence in the BSA**. Open, disturbed habitat present in the BSA may support this species and occurrences have been documented within 5 miles; however, the BSA is below the elevation range for this species.
Aspidoscelis tigris stejnegeri	San Diegan whiptail (=coastal whiptail)	SSC, WRCMSHCP: Covered	The coastal western whiptail is found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage such as deserts, chaparral and semiarid. Also found in woodland and riparian areas. The western whiptail can be found in open, often rocky areas with little vegetation or sunny microhabitats within shrub or grassland associations. The ground may be firm soil, sandy, or rocky.	No	Yes	**Low potential for occurrence in the BSA**. Open, disturbed habitat present in the BSA may support this species; however, the BSA is below the elevation range for this species.
Arizona elegans occidentalis	California glossy snake	ND, SSC	California glossy snakes are known to occur in all ecological zones, from the coast to the mountain foothills. It is absent, or very rare, from the mountains. It occurs in a variety of habitats including light shrubby to barren desert, sagebrush flats, grassland, chaparral-covered slopes, and woodlands, preferring open areas; these habitats include a substrate that is often sandy or loamy suitable for burrowing. It also occurs in rocky areas where there are patches of loose soil. Refugia takes the form of mammal burrows, rock outcrops, and to a lesser extent, under surface objects.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable desert, sagebrush, grassland, chaparral or woodland habitat to support this species.

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Crotalus ruber	red diamond rattlesnake	SSC, WRCMSHCP: Covered	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the red-diamond rattlesnake, however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats. They need rodent burrows, cracks in rocks or surface cover objects.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable rocky, dense chaparral, sage scrub, woodland or desert habitat to support this species.
Diadophis punctatus modestus	San Bernardino ring-necked snake	USFS:S	A snake of moist habitats including oak woodlands, mixed coniferous forests, grassland, wet meadows, rocky hillsides, coastal sage scrub, chaparral, riparian areas, farms and gardens. It requires soil that is slightly damp, but not wet or soggy, abundant shelter in the form of a surface mat of dead vegetation and/or loose objects such as flat rocks, boards, or trash and screening shrubs or trees with open canopies sparse enough to permit abundant sunshine to reach the ground. They appear to be most common in open, relatively rocky areas near streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous vegetation.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable woodland, forest, grassland or meadow habitat to t support this species.
Sensitive Birds						
Pandion haliaetus	osprey	WL, CDF:S, WRCMSHCP: Covered Season of Concern: nesting	Ospreys require a sizeable body of open, clear water, well-stocked with large fish for foraging. They are restricted to rivers, large streams, lakes, reservoirs, marshes, bays, estuaries, and surf zones. Ospreys use large trees, snags, and dead-topped trees in open forest habitats for cover and nesting. Nest sites are usually near water and in the tops of large trees (often with dead or broken tops), but nests are also placed on man-made structures such as platforms, duck blinds, channel markers, navigation aids, and even on telephone poles and small wooden docks. Nests are usually within 1,312 feet of fish-producing water, but they may nest up to one to five miles from foraging waters.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable adequate large bodies of water with abundant fish for foraging or suitable trees or man-made structures for nest sites.
Elanus leucurus	white-tailed kite	fully protected, WRCMSHCP: Covered Season of Concern: nesting	White-tail kites forage in undisturbed, open grasslands, meadows, emergent wetlands, farmlands, crops, pastures, and other cultivated habitats. Nesting habitat consists mainly of oak and sycamore woodlands, but the birds also use mature willows, along with citrus and possibly avocado orchards. Nest trees have a dense canopy or are within a dense group of trees, such as riparian forest or oak woodland. Adjacent to their nesting woodland must be open foraging grasslands, where the birds can find their small mammal prey.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable undisturbed open grasslands or cultivated habitats. Any occurrence would mostly likely be restricted to fly-overs.
Accipiter cooperii	Cooper's hawk	WL, WRCMSHCP: Covered Season of Concern: nesting	The Cooper's hawk is a robust, medium sized, agile woodland accipiter. They hunt in broken woodland and habitat edges. They have been found breeding at low densities virtually throughout the state, predominantly in deciduous, conifer, and mixed woodlands typically those with tall trees and with openings or edge habitat nearby. In southern California it generally favors extensive riparian bottomlands and oak woodlands, but is also found in montane forests, and desert oases. Most nests in a California study were in groves of six or more deciduous trees, with two or more trees close enough together that the crowns formed one continuous canopy. The Cooper's hawk seems much more tolerant of human activities near the nest and is seen more often nesting in urban/residential areas. In winter and during migration, they may be observed briefly at any location throughout the state in a wide variety of habitats.	Yes	Yes	**Moderate potential for occurrence in the BSA.** This species is a habitat generalist and may make use of marginal habitat present in the BSA.
Coturnicops noveboracensis	yellow rail	SSC, BCC	Grassy marshes, meadows. In summer, favors large wet meadows or shallow marshes dominated by sedges and grasses, typically in fresh or brackish marsh with water no more than a foot deep. In winter mostly in coastal salt marsh, especially drier areas with dense stands of spartina; also rice fields, damp meadows near coast. These habitats are seasonally flooded with	Yes	No	**Low potential for occurrence within the BSA.** This species historical range is within 5 miles of the BSA, however no suitable habitat exists within the Survey Area.

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			water at depths of 2-30 cm, have saturated and poorly drained soils, and are bordered by coniferous forests. Nest site is in shallow part of marsh, on damp soil or over water less than 6" deep. Nest is shallow cup of sedges and grasses, with concealing canopy of dead plants above it. Presence of senescent vegetation is considered an important requirement for nests.			
Athene cunicularia	burrowing owl	SSC, BCC, WRCMSHCP: Covered (c), Season of Concern: burrowing sites and some wintering sites	The burrowing owl (BUOW) is a small, ground-inhabiting owl. Typical BUOW habitat is open, dry, flat ground or low rolling hills with sparse vegetation and available burrows. BUOWs are generally found in open country, where tree or shrub canopies cover less than 30% of the habitat. Typical habitats include annual and perennial grasslands, shortgrass prairies open agricultural areas (particularly rangelands), deserts floors, and vacant lots in residential areas and university campuses. Other habitats include oak savannah; grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitat; sandy beaches and coastal dunes; and river bottom lands. BUOWs inhabiting urban landscaped areas may live in vacant fields/lots, pastures, airports, athletic fields, golf courses, cemeteries, city parks, road shoulders, drainage sumps, railroad beds, irrigation ditches, and road cuts. Nest and roost burrows of the BUOW in California are most commonly dug by California ground squirrels (*Spermophilus beecheyi*). BUOWs in Imperial County often use the small holes of round-tailed ground squirrels (*Citellus tereticaudus*) and Botta's pocket gophers (*Thomomys bottae*), but they also can dig their own burrows in the soft banks of irrigation canals and ditches. Where burrows are scarce, man-made structures, such as culverts, piles of concrete, rubble, or debris, pipes, asphalt, artificial nest boxes, and openings beneath cement or asphalt pavement also are used as nest sites.	Yes	No	**Low potential for occurrence in the BSA.** The Survey Area does not contain suitable habitat for this species. No burrows existed onsite.
Asio otus	long-eared owl	SSC Season of Concern: nesting	Long-eared owls nest in conifer, oak, riparian, pinyon-juniper, and desert woodlands that are either open or are adjacent to grasslands, meadows, or shrublands. Key habitat components are some dense cover for nesting and roosting, suitable nest platforms, and open foraging areas. The long-eared owl appears to be more associated with forest edge habitat than open or forest habitat.	Yes	No	**Low potential for occurrence in the BSA.** The Survey Area does not contain suitable conifer, oak, riparian, pinyon-juniper, or desert woodland breeding, roosting, or foraging habitats to support this species.
Falco columbarius	merlin	WL, WRCMSHCP: Covered Season of Concern: nesting	The merlin does not breed in California but breeds in Alaska and Canada. Merlins winter in California from September to May and they use a wide variety of habitats from annual grasslands to open ponderosa pine and montane hardwood-conifer habitats, and coastlines, savannahs, woodlands, lakes, and wetlands. Within California, birds are rarely found in heavily wooded areas or over open deserts. Dense tree stands may be used for cover and are frequently close to bodies of water.	Yes	Yes	**Low potential for occurrence in the BSA.** The Survey Area contains suitable foraging winter habitat to support this species; however, the merlin does not breed in California. Nesting merlins are not expected in the BSA.
Lanius ludovicianus	loggerhead shrike	SSC, BCC, WRCMSHCP: Covered Season of Concern: nesting	The loggerhead shrike is a large, predatory songbird. They are known to inhabit and forage over open country within areas of short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures with fence rows, old orchards, savannas, prairies mowed roadsides, cemeteries, golf courses, riparian areas, open woodland, desert washes, desert scrub, grassland, broken chaparral and beach with scattered shrubs. They prefer tall shrubs or trees (also fences or power lines) for hunting perches and territorial advertisement; open areas of short grasses, forbs, or bare ground for hunting; and large shrubs or trees for nest placement. Human disturbance does not seem to be a major concern with this species.	Yes	Yes	**Moderate potential for occurrence in the BSA.** This species is not deterred by human disturbance. The Survey Area contains suitable foraging and nesting habitat for this species.
Eremophila alpestris actia	California horned lark	WL, WRCMSHCP: Covered	California horned larks are residents of a variety of open habitats, usually where trees and large shrubs are absent. They are found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. They prefer short, sparsely vegetated prairies, deserts, and agricultural lands. With regards to agricultural land, it may be recently plowed land, with or without emerging crops, or land used the previous year for crops, and then mowed short and left fallow, or very sparse, heavily grazed annual grassland. Or it may simply be a large	Yes	Yes	**Moderate potential for occurrence in the BSA.** The Survey Area contains suitable open weedy habitats to support breeding or foraging California horned larks.

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			expanse of mowed weeds. These birds breed primarily in open fields from March through July, with peak activity in May. They usually build a cup-shaped grass-lined nest an in depression on the ground in the open. These birds forage on the ground in either bare areas or in agricultural fields with short vegetation.			
Setophaga petechia (=*Dendroica petechia*)	yellow warbler	SSC, BCC, WRCMSHCP: Covered Season of Concern: nesting	For breeding, the yellow warbler is restricted to the deciduous trees of the riparian woodland from coastal desert woodlands to the Sierra Nevada – willows (*Salix* sp.), cottonwoods (*Populus* sp.), aspens (*Populus* sp.), California sycamores (*Platanus racemosa*), and alders (*Alnus* sp.). Yellow warblers generally occupy riparian vegetation in close proximity to water along streams and in wet meadows and nesting habitat must contain dense understory vegetation, such as shrubby willows, California wild rose (*Rosa californica*) or mule fat (*Baccharis salicifolia* ssp. *salicifolia*). They have also been known to breed in montane chaparral, and in open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Territory often includes tall trees for singing and foraging and a heavy brush understory for nesting. Nests are deep cups, placed in an upright fork in a deciduous sapling or shrub, typically 2 to 16 feet high.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging riparian, montane chaparral, or mixed conifer habitats to support this species. Yellow warblers occur principally as a migrant and summer resident in California from late March through early October and breeds from April to late July.
Icteria virens	yellow-breasted chat	SSC, WRCMSHCP: Covered Season of Concern: nesting	Yellow-breasted chats nest and forage in dense riparian thickets of willows, vines, and brush associated with streams and other wetland habitats. Nesting habitat is usually restricted to the narrow border of streams, creeks, sloughs, rivers, and the borders of small ponds. Nesting habitat must have dense understory vegetation and larger trees that are used for singing perches. California Wild Rose (*Rosa californica*), blackberry (*Rubus* sp.), wild grape (*Vitis* sp.), mule fat (*Baccharis salicifolia* ssp. *salicifolia*), various shrubby willows (*Salix* sp.), and other plants that form dense thickets and tangles are frequently selected as nesting strata. Cottonwoods (*Populus* sp.), alders (*Alnus* sp.), and larger willows typically form the canopy and are required for song perches. The nest is an open cup typically placed in dense shrubs or thickets within 3 to 8 feet above ground along a stream or river. Chats will also nest in tamarisk (*Tamarix* sp.), Himalayan blackberry (*Rubus discolor*), Russian olive (*Elaeagnus angustifolius*), and other non-native plants that provide dense shrub layers.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging riparian habitats with adequate strata to support breeding yellow-breasted chats. In California, the yellow-breasted chat occur as a migrant and summer resident primarily from late March to late September and breeds from late April through early August.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	WL, WRCMSHCP: Covered	Southern California rufous-crowned sparrows are usually found on dry, steep sloping land and hillsides with a moderate density of low, scattered shrubs (50% - 70% shrub cover), usually coastal sage scrub, interspersed with grasses and forbs and occasional rock outcrops for song perches. The herbaceous cover between the shrubs is used for foraging. Areas without this cover will not support these birds. They tend to avoid chaparral or dense unbroken stands of coastal sage scrub. This sparrow often occurs in coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but also may occur in coastal bluff scrub, low chaparral on serpentine outcrops, open land recovering from a burn, and edges of tall chaparral. Nests are placed in small depressions on the ground usually at base of grass or forb patches, rocks, under a shrub, and very rarely in a shrub.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable breeding and foraging habitats with low shrub cover interspersed with grasses/forbs and rock outcrops.
Artemisiospiza belli belli (=*Amphispiza belli belli*)	Bell's sage sparrow	WL, BCC, WRCMSHCP: Covered	Bell's sage sparrow is a breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains. In transmontane California, it occupies sagebrush, alkali desert scrub, desert scrub, and similar habitats. In cismontane California, it frequents chaparral dominated by chamise, and coastal scrub dominated by sage. The preference for chamise chaparral appears to occur only in the more northern parts of its range. Bell's sage sparrow is also found in big sagebrush at higher elevations in southern mountains.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable chaparral and coastal sage scrub habitat to support this species.
Spinus lawrencei	Lawrence's goldfinch	BCC	Habitats include oak woodland, chaparral, riparian woodland, valley foothill hardwood-conifer, pinyon-juniper woodlands, palm oasis, usually near water. Breeding occurs predominately in open woodlands of arid and semiarid foothills and valleys, usually near water from sea level near the coast and in some interior valleys to nearly 2,900 meters in southern California. Nearby	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable chaparral or woodland habitat near water to support this species.

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			herbaceous habitats often used for feeding. Nests are in evergreen oaks, conifers, or deciduous trees.			
Sensitive Mammals						
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	SSC, WRCMSHCP: Covered	A common resident of sandy herbaceous areas, usually in association with rocks or course gravel. It inhabits coastal sage scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California. It generally exhibits a strong microhabitat affinity for moderately gravelly and rocky substrates, and, to a lesser extent, shrubby areas. In western Riverside County, the San Diego pocket mouse also commonly is found in disturbed grassland and open sage scrub vegetation with sandy-loam to loam soils.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable sage scrub, chaparral or grassland habitat to support this species.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC, WRCMSHCP: Covered (c)	This species probably inhabits open ground of fine, sandy soils and may utilize these soil types for burrowing. It may be restricted to lower elevation grassland and coastal sage scrub. It probably prefers sparsely vegetated habitats. Pocket mice usually avoid dense grass cover because of difficulty locomoting and finding seeds.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable grassland or coastal sage scrub habitat to support this species.
Neotoma lepida intermedia	San Diego desert woodrat	SSC, WRCMSHCP: Covered	The San Diego desert woodrat is found in a variety of shrub and desert habitats primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth. Desert woodrats commonly inhabit Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, coastal sage scrub, and desert habitats. Desert woodrats actively avoid open areas that do not provide adequate refuge sites. The desert woodrat often is associated with large cactus patches, rocky outcroppings and boulder-covered hillsides. In rocky outcrops, desert woodrats are known to construct dens in the cracks between boulders. Cactus patches are also a favorite den site.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable shrub, woodland, chaparral, or desert habitat and rocky outcroppings to support this species.
Onychomys torridus ramona	southern grasshopper mouse	SSC	The southern grasshopper mouse rangewide is found in low arid scrub and semi-scrub vegetation desert areas, especially scrub habitats with friable soils for digging. It prefers low to moderate shrub cover. It is also found in grasslands and sparse coastal sage scrub habitats. They nest in burrows, and while they may dig their own burrows in sandy or other friable substrates, they often use burrows dug by other rodents.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable arid scrub or desert habitat to support this speciesl
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC	The black-tailed jackrabbit is a habitat generalist occurring in open areas or semi-open country, typically in grasslands, agricultural fields or sparse coastal scrub. It primarily is found in arid regions supporting shortgrass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to locomote, and the openness of open scrub habitat probably is preferred over dense chaparral. They have also been found in annual grassland, Riversidean sage scrub, alluvial fan sage scrub, Great Basin sagebrush, chaparral, disturbed habitat, southern willow scrub and juniper woodland. They are not found in high mountain forests. It prefers valley bottoms or intermontane valleys.	Yes	No	**Low potential for occurrence in the BSA.** This species has been seen in disturbed habitat within 5 miles of the BSA; however, the BSA lacks the open, rural habitat to support this species.
Eumops perotis californicus	western mastiff bat	SSC	Western mastiff bats are found in a variety of habitats, such as semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban, but the species' distribution may be geomorphically determined, occurring primarily where there are significant rock features offering suitable roosting habitat. A cliff dwelling species, where maternity colonies of 30 to several hundred roost generally under exfoliating rock slabs and rock crevices along cliffs. Western mastiff bats can also be found in similar crevices in large boulders and buildings. When roosting in rock crevices they require a sizable drop from their roost in order to achieve flight. Western mastiff bats prefer deep crevices that are at least 15 or 20 feet above the ground.	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA does contain suitable foraging habitat for this species due to its vicinity to Lake Matthews. Any occurrence would likely be a flyover.
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC	Habitats used include pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, chaparral, and palm oasis. They are found in rocky, desert areas with relatively high cliffs, not far from riparian areas. This species is a crevice dwelling species, usually associated with high cliffs and rugged rock outcroppings.	Yes	Yes	**Low potential for occurrence in the BSA.** The BSA does not contain optimal suitable habitat for this species. Any occurrence would likely be a flyover.

Scientific Name (=Synonym)	Common Name (=Synonym)	Status	General Habitat Descriptions in California	The BSA: Located Within Species' Distribution and/or Elevation Range (if known)	The BSA: Contains Suitable Foraging, Roosting, and/or Breeding Habitats	Potential For Occurrence in the BSA
			Colonies can be located in caves, rock crevices in cliff faces or human-made structure. They prefer rock crevices in cliffs as roosting sites.			
Lasiurus xanthinus	western yellow bat	SSC	The western yellow bat can be found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. This bat roosts in dead palm tree fronds and other trees. It roosts and feeds in, and near, palm oases and riparian habitats. It forages over water and among trees. It is sometimes found in urban areas. This species occurs year-round in California.	Yes	Yes	**Moderate potential for occurrence in the BSA.** The BSA does contain suitable habitat (breeding, foraging, and roosting) for this species including large palm trees.
Taxidea taxus	American badger	SSC	Badgers occur from alpine meadows to elevations as low as Death Valley, which is below sea level. Essentially the badger is an animal of open places. It shuns forests. In California, badgers occupy a diversity of habitats. The principal requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, openings in desert scrub, and grassy mountain meadows near timberline are preferred. They can also occur in treeless pastures and drained marshes. Badgers are generally associated with dry, open, treeless regions, prairies, parklands, and cold desert areas. They seem to occur primarily in areas of low to moderate slope.	Yes	No	**Low potential for occurrence in the BSA.** The BSA does not contain suitable habitat for this species.

Legend and Notes

Notes

- **Yes** = the BSA is located within the wildlife species' known distribution, elevation range, and/or the BSA contains suitable habitats or conditions to support the species. The wildlife species has a potential to occur within the BSA. Further evaluation is needed.
- **No** = the BSA is located outside the wildlife species' known distribution, elevation range, and/or the BSA lacks suitable habitats or conditions to support the species. It is highly unlikely for the wildlife species to have a potential to occur within the BSA. No further evaluation is needed.
- **DPS = distinct population segment:** A DPS, or a distinct population segment, is a vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species. The ESA provides for listing species, subspecies, or distinct population segments of vertebrate species.
- **ESU = evolutionarily significant unit:** a Pacific salmon population or group of populations that is substantially reproductively isolated from other conspecific populations and that represents an important component of the evolutionary legacy of the species.

Federal Endangered Species Act (ESA) Listing Codes: the ESA is administered by the USFWS and NMFS. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. For the purposes of the ESA, Congress defined species to include subspecies, varieties, and, for vertebrates, distinct population segments. The official federal listing of Endangered and Threatened animals is published in 50 CFR § 17.11.

- **FE = federally listed as endangered:** any species of plant or animal that is in danger of extinction throughout all or a significant portion of their range.
- **FT = federally listed as threatened:** any species of plant or animal that is considered likely to become endangered throughout all or a significant portion of its range within the foreseeable future.
- **FC = federal candidate for listing:** candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them for listing as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by higher priority listing actions to address species in greater need. A proposed regulation has not yet been published in the Federal Register for these species.
- **FPE = federally proposed for listing as endangered:** a candidate species that has been proposed by USFWS or NMFS for listing as endangered and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPT = federally proposed for listing as threatened:** a candidate species that has been proposed by USFWS or NMFS for listing as threatened and the proposed rule, but not a final rule, to list has been published in the Federal Register.
- **FPD = federally proposed for delisting:** a species that has been proposed by USFWS or NMFS for delisting (or down listing from endangered to threatened) and the proposed rule to delist has been published in the Federal Register.

California Endangered Species Act (CESA) Listing Codes: the CESA is administered by CDFW. The official listing of *Animals of California Declared To Be Endangered or Threatened* is contained in the California Code of Regulations, Title 14, § 670.5. Species and subspecies of California native animals are declared to be endangered or threatened as defined by §§ 2062 and 2067 of the Fish and Game Code.

- **SE = state-listed as endangered:** "endangered species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code § 2062).
- **ST = state-listed as threatened:** "threatened species" means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts (Fish and Game Code § 2067).
- **SCE = state candidate for listing as endangered:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for addition to the list of endangered species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCT = state candidate for listing as threatened:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed by publication in the California Regulatory Notice Register as being under review by CDFW for addition to the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add the species to the list (Fish and Game Code § 2068).
- **SCD = state candidate for delisting:** a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed published in the California Regulatory Notice Register as being under review by CDFW for removal from either the list of endangered species or the list of threatened species, or a species for which the Fish and Game Commission has published a notice of proposed regulation to remove the species to either list.

Legend and Notes

California Department of Fish and Wildlife (CDFW) Designations:

For some wildlife species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nesting colonies. For many species of birds, the primary emphasis is on the breeding population in California. For some species which do not breed in California but winter here, emphasis is on wintering range. The SSC designation thus may include a comment regarding the specific protection provided such as nesting or wintering

- **SSC = species of special concern:** a species of special concern is a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally-, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- **Fully protected:** fully protected animal species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Lists were created for fish (Fish and Game Code § 5515), amphibians and reptiles (Fish and Game Code § 5050), birds (Fish and Game Code § 3511) and mammals (Fish and Game Code § 4700).
- **WL = watch list:** this list includes birds identified in the *California Bird Species of Special Concern* (Shuford and Gardali, 2008) report and are not on the current CDFW species of special concern list, but were on previous lists and they have not been state-listed under CESA; were previously state or federally listed and now are on neither list; or are on the list of fully protected species.
- **Special Animals List:** the CESA does not allow listing of insects, so despite the insect's precarious status, the insect has no protection under state legislation. CDFW includes this insect on its Special Animals List.
- **California Fish and Game Code §§ 4800 – 4810:** The mountain lion (genus Puma) is a specially protected mammal under the laws of California. It is unlawful to take, injure, possess, transport, import, or sell any mountain lion or any part or product thereof, except as specifically provided in California Fish and Game Code §§ 4800 - 4810.
- Protected by § 460 of the California Code of Regulations [CCR], Title 14

United States Fish and Wildlife Service (USFWS) Designations:

- **FSC = federal species of concern:** federal species of concern is an informal term. It is not defined in the ESA. The term commonly refers to species that are declining or appear to be in need of conservation.
- **BCC = bird of conservation concern:** a bird of conservation concern is listed in the USFWS' 2008 *Birds of Conservation Concern* report. The report identifies species, subspecies, and populations of all migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that, without additional conservation actions, are likely to become candidates for listing under the ESA. While all of the bird species included in the report is priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing.

Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP):

The WRCMSHCP provides regulatory coverage for a total of 146 individual species. Under the WRCMSHCP, regulatory coverage means that future incidental take of these species would be permitted for new development and that no additional mitigation under the CESA or ESA would be required over the mitigation provided for by the plan. The following species are identified as "Covered Species" by the WRCMSHCP and the Implementing Agreement. The WRCMSHCP permits would provide take authorization for Covered Species.

- **WRCMSHCP: Covered:** wildlife species covered under the WRCMSHCP. No further surveys are required.
- **WRCMSHCP: Covered (a):** surveys may be required for these species as part of wetlands mapping (Section 6.1.2 of WRCMSHCP).
- **WRCMSHCP: Covered (b):** surveys may be required for these species within Narrow Endemic Plant Species survey area (Section 6.1.3 of WRCMSHCP).
- **WRCMSHCP: Covered (c):** surveys may be required for this species within locations shown on survey maps (Section 6.3.2 of WRCMSHCP).
- **WRCMSHCP: Covered (d):** surveys may be required for these species within Criteria Area as (Section 6.3.2 of WRCMSHCP).
- **WRCMSHCP: Covered (e):** these Covered Species will be considered to be Covered Species Adequately Conserved when conservation requirements identified in species-specific conservation objectives have been met. Species specific conservation objectives for these species are presented in Section 9.0 of the WRCMSHCP. Please refer to Table 9-3 of the WRCMSHCP for specific conservation objectives that must be met for the 16 species prior to including them on the list of Covered Species Adequately Conserved.
- **WRCMSHCP: Covered (f):** these Covered Species will be considered to be Covered Species Adequately Conserved when a memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land. Please refer to Table 9-3 of the WRCMSHCP.

4.3. BIOLOGICAL RECONNAISSANCE SURVEY

4.3.1. Vegetation

4.3.1.1. Vegetation Communities Descriptions

Three (3) plant communities occur within the Study Area. Descriptions of each community found within the Study Area are discussed below. A map that illustrates all onsite plant communities is included in **Exhibit V,** *Plant Communities.*

Disturbed/Developed
Disturbed areas are those areas that are either devoid of vegetation (cleared or graded), such as dirt roads, or those areas that have a high percentage of non-native weedy species (i.e., greater than 25 percent of the species cover).

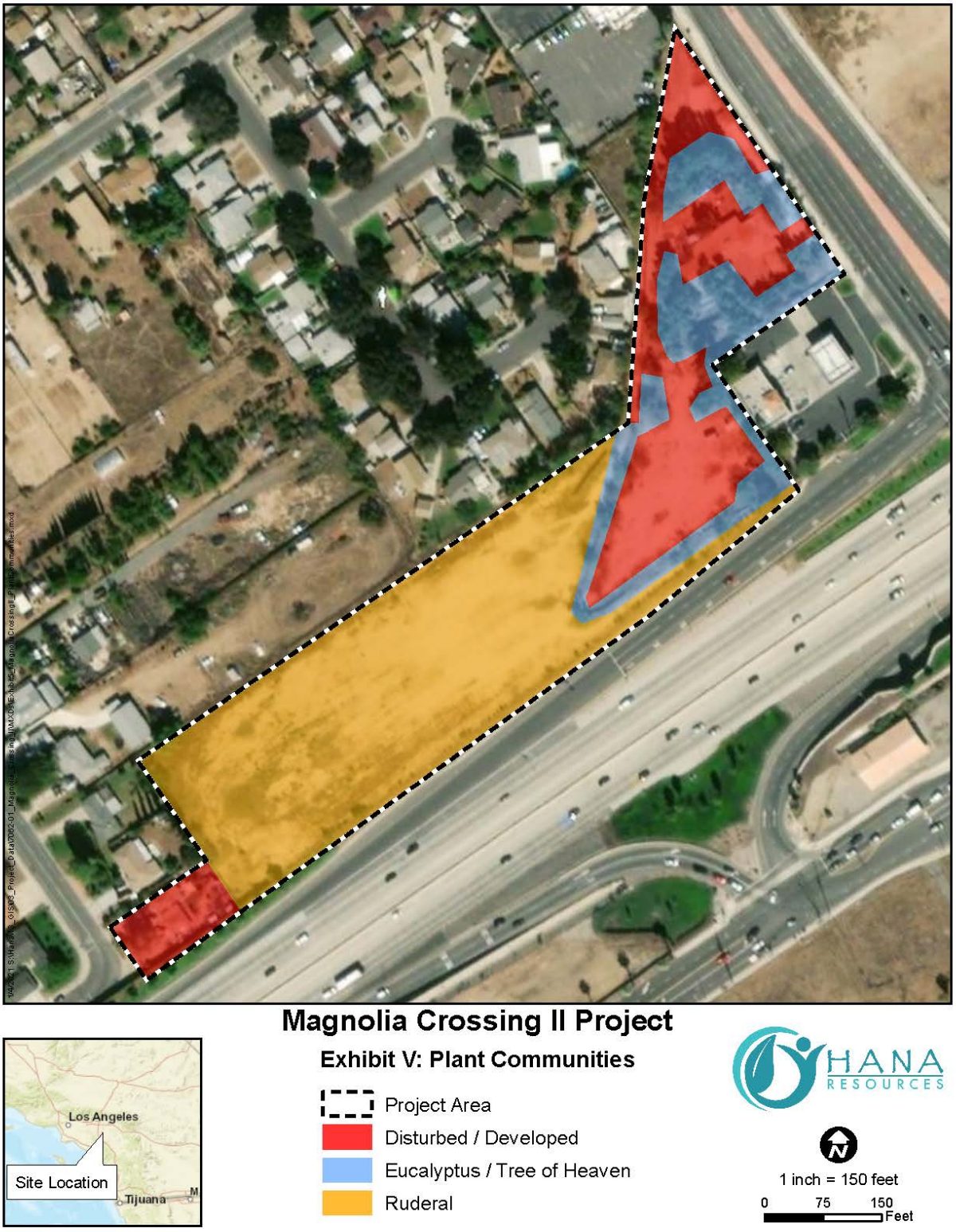
Eucalyptus/Tree of Heaven
Tree of heaven (*Ailanthus altissima*), Eucalyptus spp. are dominant in the tree canopy. These non-native species are often planted as groves or windbreaks and become naturalized in upland or bottomland areas adjacent to streams or lakes. Stands in this alliance tend to occur in agricultural and urban land use areas, though semi-natural incidence of stands occurs widely beyond these, typically in disturbance areas including roadside verges and upper terraces of floodplains.

Ruderal Herbaceous Scrub
This upland cool semi-desert scrub and grassland macrogroup contains disturbed dry grasslands and shrublands dominated by non-native species or ruderal native species and is found from low-elevation basins to foothills. Vegetation of the macrogroup can be a monoculture of a single non-native graminoid species, or a mix of several non-native forbs and graminoids. This macrogroup can also include vegetation dominated by native ruderal species when vegetation is the result of anthropomorphic disturbance. These are dry grasslands, forb-dominated meadows or shrublands that occur in cool semi-arid climates. Stands occur on flat to moderately steep ground that can be large areas or narrow strips adjacent to roadsides or under powerlines and other disturbed areas. Soils are mostly mineral and well-drained. Soils may be compacted and eroded with biological crusts absent because of disturbance.

4.3.1.2. Sensitive Natural Communities

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status plants or their habitat. The literature review resulted in a list of nine (9) vegetation communities that have been known to occur within the twelve-quadrangle area, which is presented in Table 3, *Vegetation Communities*. None of these vegetation community types were located onsite.

Exhibit V: Plant Communities



4.3.2. Plant Species

4.3.2.1. General

Plant species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the plant species detected within the Survey Area is included in **Appendix D**.

4.3.2.2. Special-Status Species

All special status plant species in the literature review have a low to no probability of occurrence in the Survey Area. The BSA was found to either be outside of the ranges of the special status species or did not contain suitable habitat to support the species. The smooth tarplant (*Centromadia pungens ssp. laevis*) can occur in disturbed places, and while the BSA consists of disturbed/ruderal habitat, no aquatic resources are located on or adjacent to the BSA. Payson's jewel-flower (*Caulanthus simulans*) can also occur in disturbed places, and while the BSA consists of disturbed/ruderal habitat, no rocky steep slopes are located on or adjacent to the BSA. Long-spined spineflower (*Chorizanthe polygonoides var. longispina*) also has a low potential to occur within the BSA. While it can occur in disturbed places, no vernal pools, meadows and seeps, valley and foothill grasslands, and openings in coastal scrub, and chaparral occur onsite. The BSA contains heavily disturbed habitat surrounded by urban development not suitable for many sensitive species. None of these species were observed within the BSA during the biological reconnaissance survey.

4.3.3. Wildlife

4.3.3.1. General

Wildlife species observed or detected during the site survey were characteristic of the existing site conditions. A full list of the wildlife species detected within the Survey Area is included in **Appendix D.**

Birds
Twelve bird species were observed/detected in the BSA during the reconnaissance level survey. Species included northern mockingbird (*Mimus polyglottos),* American bushtit (*Psaltriparus minimus*), Nuttall's woodpecker (*Picoides nuttallii*)*,* American crow (*Corvus brachyrhynchos*)*,* American kestrel *(Falco sparverius*)*,* black phoebe (*Sayornis nigricans*), European starling (*Sturnus vulgaris*), Say's phoebe (*Sayornis saya*), white-crowned sparrow *(Zonotrichia leucophrys*), yellow-rumped warbler *(Setophaga coronata*), Eurasian collared dove *(Streptopelia decaocto*), and rock pigeon *(Columba livia*).

Mammals
One mammal species was observed in the BSA during the survey. Species included desert cottontail (*Sylvilagus audubonii*).

4.3.3.2. Sensitive Wildlife Species

Three sensitive bird species and one sensitive bat species have a moderate potential for occurrence in the BSA: Cooper's hawk, loggerhead shrike, California horned lark and western yellow bat. All three bird species are covered under the WRCMSHCP. The western yellow bat and the loggerhead shrike are California Species of Special Concern and the loggerhead shrike is a USFWS Bird of Conservation Concern.

Cooper's Hawk (*Accipiter cooperii*)
Cooper's hawks are on the California Department of Fish and Wildlife's Watch list and are covered under the WRCMSHCP with their breeding season being the season of concern. Cooper's hawks are medium-sized hawks with long banded tails and broad, rounded wings. The adults have a grayish-blue back with a white underside, horizontally streaked with rufous bars. The outer tail feathers are shorter than the rest of the tail feathers, giving the tail a rounded appearance. This species occupies wooded habitats as well as suburban areas and feeds on mammals and smaller birds. Cooper's hawks breed from southern Canada to the southern part of the United States. Cooper's hawks build a stick nest about 25 to 50 feet high in trees where they lay two to five eggs. They are known to return to the same area to nest year after year. Due to the location of the Survey Area, which is surrounded by residential properties, there is a moderate probability of Cooper's hawks to occur within the BSA.

Loggerhead Shrike (*Lanius ludovicianus*)
Loggerhead shrikes are a California Species of Special Concern, USFWS Bird of Conservation Concern and are covered under the WRCMSCP with an emphasis of concern during their breeding season. They can be found year-round in southern California. Loggerhead shrikes are stocky songbirds with a thick, hooked bills and long rounded tails. Their grey upperparts contrast with a wide black mask, black bill, and white throat. The wings are black with a white spot on each and the tail is black. Their diet consists of rodents, lizards, small birds, and insects. They often impale larger prey on thorns or barbed wire to be eaten later. They can be found in a variety of open habitats with grassland for foraging and tall trees or powerlines for perching. The shrike is often seen next to well-traveled roads and near houses built in suitable habitat. In California, loggerhead shrikes breed mainly in shrublands or open woodlands with a fair amount of grass cover and areas of bare ground. They often nest in isolated trees or large shrubs. Because the loggerhead shrike is adapted to disturbed, residential areas, they have a moderate probability of occurrence within the BSA. The BSA has marginal ruderal grassland habitat to support this species and is surrounded by fencing and powerlines suitable for perching.

California Horned Lark (*Emerophila alpestris actia*)
California horned larks are on the CDFW Watch List for sensitive species and are covered under the WRCMSCP. California horned larks are small songbirds with white and pale-yellow bodies with a black mask and black feather tufts on their head giving the appearance of horns. This species utilizes open habitats such as prairies, deserts, and agricultural fields. Horned larks do well on overgrazed or abused land, avoiding areas with dense trees or shrubs. This species breeds in California from March through July, with peak activity in May. They build an open cup nest on the ground and lay three to four eggs which are incubated from ten to fourteen days. These birds forage on the ground in flocks by walking or running on the ground, in either bare areas or in agricultural fields with short vegetation. The BSA has marginal, open, non-native grassland that may be suitable for this species. California horned larks have a moderate probability of occurrence in the Survey Area.

Western Yellow Bat (*Lasiurus xanthinus*)
Western yellow bats are a California Species of Special Concern; it is a species of vesper bat that can be found in Mexico and the southwestern United States in foothill riparian, desert riparian, desert was and palm oasis habitats. Western yellow bats get their name from the yellow coloration of their fur. They have short ears and have a slow and steady flight pattern. They roost under palm fronds individually but may form maternity colonies during breeding season. Western yellow bats are known to occur in a number of palm oases, but are also believed to be expanding their range with the increased usage of ornamental palms in landscaping. This species feeds on flying insects over water and among trees. Due to the palms planted in the BSA, this species has a moderate potential for occurrence within the Survey Area.

SECTION 5. CONCLUSIONS AND RECOMMENDATIONS

5.1. SENSITIVE SPECIES

5.1.1. Sensitive Plants

None of the forty-five (45) sensitive plant species identified in the literature review have suitable habitat present on site. Focused surveys are required for any federal and/or state listed endangered species with potential to occur on site when the species is in bloom to ensure it is both evident and identifiable during the survey. Because of the Survey Area's disturbed habitat dominated by non-native vegetation and its location next to residential development, there is low to no potential for occurrence in the Survey Area for the sensitive species identified in the literature review. No focused surveys are required.

5.1.2. Sensitive Wildlife

Of the fifty-seven (57) sensitive wildlife species identified in the literature review, three sensitive wildlife species have a moderate potential to occur in the Survey Area due to habitat onsite and/or nearby historic occurrences. None of these species were observed during the biological reconnaissance survey. In order to minimize impacts to these three California Species of Concern, vegetation clearing or ground disturbing activities should be conducted during the non-breeding season (September 1 to February 14) in order to limit impacts to nesting birds. If vegetation clearing or ground disturbing activities need to take place during breeding season (February 15 through August 31), in order to remain in compliance with the Migratory Bird Treaty Act, a pre-construction nesting bird survey(s) will be required. The last survey day should be conducted a minimum of three days prior to the start of work.

SECTION 6. CEQA ANALYSIS SECTION (THRESHOLD ANALYSIS)

6.1. Introduction

This section describes the existing biological resources for the project site and evaluates potential impacts on biological resources that would occur due to implementation of the proposed project. Mitigation measures are recommended to reduce potential impacts. The analysis is based on a literature review and surveys of the biological resources potentially associated with the project site (approximately 6.38 acres).

6.2. Thresholds of Significance

Criteria for determining the significance of impacts to Biological Resources have been developed in accordance with Appendix G of the *State CEQA Guidelines* and threshold considerations established by City of Riverside. For purposes of this Biological Resource Evaluation, the proposed project would have a significant impact on biological resources if it results in any of the following:

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

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

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native nursery sites?

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

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

6.2.1. Project Impacts and Mitigation Measures

Impact Bio-1 **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Level of Significance: ***Less than Significant with Mitigation Incorporated***

Impact Analysis: The field survey determined that suitable habitat for nesting birds exists in the project site and in surrounding areas. The project site is suitable for scrub, cavity, and ground nesting birds. Additional nesting habitat can also be found in trees surrounding the perimeter of the project site. Nesting birds are protected under both the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (Sections 3503, 3503.5, 3513, and 3800) and cannot be subjected to take (as defined in California Fish and Game Code) during the bird breeding season, which typically runs from February 1 through August 31. If construction of the proposed Project occurs during the bird breeding season, ground-disturbing construction activities could indirectly affect native and nongame birds and their nests through increased noise. The implementation of this mitigation measure would reduce potential impacts to a level of less than significant. Vegetation removal that would occur outside of the nesting season, generally the period between September 1 and January 31, would not require mitigation.

Mitigation Measures: **B-1:** Prior to any tree or vegetation removal during the nesting season (February 1 through August 31), a qualified biologist shall conduct a nesting bird survey to identify any potential nesting activity. If passerine birds are found to be nesting, or there is evidence of nesting behavior within 250 feet of the impact area, the biologist shall determine an appropriate buffer that shall be required around the nests. No vegetation removal or ground disturbance would occur within this buffer. For raptor species—birds of prey such as hawks and owls—this buffer would generally be 500 feet. A qualified biologist shall monitor the nests closely until it is determined that the nests are no longer active, at which time construction activities may commence within the buffer area. Construction activity may encroach into the buffer area at the discretion of the biological monitor. Tree or vegetation removal activities that occur outside of the nesting season (September 1 through January 31) are not subject to the requirements of this mitigation measure.

Impact Bio-2 **Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

Level of Significance: ***No Impact***

Impact Analysis: The project area consists of urban and disturbed undeveloped property; it does not contain any riparian habitat or other sensitive natural communities. This condition precludes the possibility of adverse impacts to these resources. No impact would occur.

Mitigation Measures: No mitigation is necessary.

Impact Bio-3 **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh,**

vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Level of Significance: ***No Impact***

Impact Analysis: The project site does not contain any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils and thus does not include United States Army Corps of Engineers (USACE) jurisdictional drainages or wetlands. This condition precludes the possibility of adverse impacts to these resources. No impact would occur.

Mitigation Measures: No mitigation is necessary.

Impact Bio-4 **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 nursery sites?**

Level of Significance: ***No Impact***

Impact Analysis: The project site is located within an urban built-up area surrounded by existing development and would not result in a barrier to 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. No impact would occur.

Mitigation Measures: No mitigation is necessary.

Impact Bio-5 **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

Level of Significance: ***No Impact***

Impact Analysis: Implementation of the Proposed Project is subject to all applicable Federal, State, and local policies and regulations related to the protection of biological resources and tree preservation. In addition, the Proposed Project is required to comply with Riverside Municipal Code Section 16.72.040 establishing the MSHCP mitigation fee and Section 16.40.040 establishing the Threatened and Endangered Species Fees.

Any project within the City of Riverside's boundaries that proposes planting a street tree within a City right-of-way must follow the Urban Forest Tree Policy Manual. The Manual documents guidelines for the planting, pruning, preservation, and removal of all trees in City rights-of-way. The specifications in the Manual are based on national standards for tree care established by the International Society of Arboriculture, the National Arborists Association, and

the American National Standards Institute. The Proposed Project would be implemented in compliance with the Urban Forest Tree Policy Manual. No impact would occur.

Mitigation Measures: No mitigation is necessary.

Impact Bio-6 **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

Level of Significance: ***Less than Significant with Mitigation Incorporated***

Impact Analysis: The project site is located within the Western Riverside County MSHCP. The project site is not located within a Criteria Cell or a NEPSSA and there are no specific sensitive species survey requirements. The Proposed Project would result in an action covered within the MSHCP; it is an allowable use that has been contemplated within the MSHCP. The Proposed Project is consistent with the policies and procedures of the MSHCP, with the incorporation of Mitigation Measure B-1. Mitigation Measures B-1 and B-2 address potential impacts to burrowing owl and nesting birds during project construction. With mitigation impacts are considered less than significant.

Mitigation Measures: Incorporation of Mitigation Measure B-1.

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APPENDIX A

SITE PHOTOGRAPHS

Photo 1: View of 3469 Myers Street from behind property facing southwest.

Photo 2: View of Arundo patch in southwestern end of property facing southwest.

Photo 3: View of center of project (ruderal) facing South from northern boundary.

Photo 4: View of 3510 Van Buren Boulevard front gate to single family residence facing south.

Photo 5: View of 3510 Van Buren Boulevard front driveway facing southwest along Van Buren.

Photo 6: View of 3510 Van Buren Boulevard front gate to Van Buren facing northeast.

Photo 7: View of 3510 Van Buren Boulevard eucalyptus grove facing south.

Photo 8: View of drivable path facing north.

Photo 9: View of abandoned RV facing south.

Photo 10: View of drivable path facing north.

Photo 11: View of RV space facing north. Gas station is in the background.

Photo 12: View of tree of heaven saplings lining fence northeast.

Photo 13: View of southern property facing southwest from end of drivable path.

Photo 14: View of olive tree samplings along freeway fence with remnant irrigation facing northeast.

Photo 15: View of olive tree samplings along freeway fence facing northeast.

Photo 16: View of property taken from southwestern edge facing northeast.

APPENDIX B

BIOLOGICAL RECONNAISSANCE SURVEY FIELD FORM

HANA RESOURCES

Biological Reconnaissance Survey Field Form

Date: 3/12/2021 **Project Name:** Magnolia Crossing II

Job #: 7026-01 **Client:** Infrastructure Engineers (IE)

Surveyor(s): Sloane Seferyn

LOCATION DESCRIPTION

Site Address: 3469 Meyers St. **City, State:** Riverside, CA

Habitat Types Present: Ruderal species

Current Land Uses: 2 single family dwellings + outbuildings, ruderal/disturbed lot

Start (time)	0750
Temp (ºF)	43
Cloud Cover (%)	0
Precipitation	0
Wind (mph)	0

End (time)	1005
Temp (ºF)	51
Cloud Cover (%)	0
Precipitation	0
Wind (mph)	0

NOTES: (Nest locations and species behavioral notes, disturbances, habitat conditions, etc.)

- mtg. w/ IE @ 1000 (Malia, Jamil, Yunus, Dale, Sloane, Kelsey)
- ↑ freeway noise
- no animal burrows
- feral cats near SW end of APNs
- Delapidated fencing surrounding + throughout property
- 2 dwellings occupied + not surveyed.

SPECIES OBSERVATIONS

PLANT SPECIES PRESENT
Specify plant layer as herb (h), shrub (s), or tree (t)

Species	Layer
Bromas ssp.	H
tree tobacco	T
russian thistle (dead	S
Pepper tree	T
arundo donax	T
tamarisk	T
Blue eucalyptus	T
Fan palm	T
cheeseweed	S
Olive tree	T
Fraxinus ssp	T
fiddleneck	S
Tree of Heaven	T
Brittlebush	S
Big herons bill (Erodium)	H

WILDLIFE SPECIES PRESENT
Specify observation type as aural (a), sign (s), or visual (v)

Species	Observation
EUST	V
NOMO	V
BUSH	A
NWO	V
AMCR	V
KEST	V
BLPH	V
SAPH	V
WCSP	V
YRWA	V
EVCD	V
RODI	V
desert cottontail	V

Biologist Signature: _____ **Date:** 3/12/2021

APPENDIX C

PLANT & WILDLIFE SPECIES OBSERVED/DETECTED ONSITE

PLANTS		
Scientific Name	**Common Name**	**Special Status**
EUDICOTS		
Anacardiaceae - Sumac family		
**Schinus terebinthifolius*	brazilian pepper tree	
Asteraceae - Sunflower family		
Encelia farinosa	brittlebush	
Boraginaceae - Borage family		
Amsinckia menziesii	common fiddleneck	
Chenopodiaceae - Goosefoot family		
**Salsola tragus*	russian thistle	
Geraniaceae - Geranium family		
**Erodium cicutarium*	redstem filaree	
Malvaceae -Mallow family		
**Malva parviflora*	cheeseweed	
Myrtaceae - Myrtle family		
**Eucalyptus globulus*	blue eucalyptus	
Oleaceae - Olive family		
Fraxinus spp.	ash species	
**Olea europaea*	olive tree	
Simaroubaceae - Quassia family		
**Ailanthus altissima*	tree of heaven	
Solanaceae - Nightshade family		
**Nicotiana glauca*	tree tobacco	
Tamaricaceae - Tamarisk family		
**Tamarix ramosissima*	tamarisk	
MONOCOTS		
Arecaceae - Palm family		
**Washington robusta*	Mexican fan palm	
Poacea - Grass family		
**Arundo donax*	giant reed	
**Bromus spp.*	brome species	

Legend

*= Non-native/ invasive species	CRPR – California Rare Plant Rank
	1A. Presumed extinct in California
Special Status:	1B. Rare or Endangered in California and elsewhere
Federal:	2. Rare or Endangered in California, more common elsewhere
FE = Endangered	3. Plants for which we need more information - Review list
FT = Threatened	4. Plants of limited distribution - Watch list
State:	Threat Ranks
SE = Endangered	.1 - Seriously endangered in California
ST =Threatened	.2 - Fairly endangered in California

WILDLIFE		
Common Name	**Scientific Name**	**Special Status**
Birds		
European starling*	*Sturnus vulgaris*	
northern mockingbird	*Mimus polyglottos*	
American bushtit	*Psaltriparus minimus*	
Nuttall's woodpecker	*Picoides nuttallii*	
American crow	*Corvus brachyrhynchos*	
American kestrel	*Falco sparverius*	
black phoebe	*Sayornis nigricans*	
Say's phoebe	*Sayornis saya*	
white-crowned sparrow	*Zonotrichia leucophrys*	
yellow-rumped warbler	*Setophaga coronata*	
Eurasian collared dove*	*Streptopelia decaocto*	
rock pigeon*	*Columba livia*	
Mammals		
desert cottontail	*Sylvilagus audubonii*	

Legend:

*=Non-native or invasive species

Federal:
FE = Endangered
FT = Threatened

State:
SE = Endangered
ST =Threatened
CSC = California Species of Special Concern
CFP = California Fully Protected Species

APPENDIX D

USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Western Riverside Area, California

Magnolia Crossing II

March 15, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:2,230 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 13, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 17, 2018—Jun 28, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HcA	Hanford coarse sandy loam, 0 to 2 percent slopes	0.0	0.3%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	6.4	99.7%
Totals for Area of Interest		**6.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Western Riverside Area, California

HcA—Hanford coarse sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hcw1
Elevation: 150 to 900 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 to 64 degrees F
Frost-free period: 250 to 280 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 8 inches: coarse sandy loam
H2 - 8 to 40 inches: fine sandy loam
H3 - 40 to 60 inches: stratified loamy sand to coarse sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water capacity: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R019XD035CA
Hydric soil rating: No

Minor Components

Tujunga

Percent of map unit: 5 percent
Hydric soil rating: No

Ramona
Percent of map unit: 5 percent
Hydric soil rating: No

Greenfield
Percent of map unit: 5 percent
Hydric soil rating: No

HcC—Hanford coarse sandy loam, 2 to 8 percent slopes

Map Unit Setting
National map unit symbol: hcw2
Elevation: 150 to 900 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 to 64 degrees F
Frost-free period: 250 to 280 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile
H1 - 0 to 8 inches: coarse sandy loam
H2 - 8 to 40 inches: fine sandy loam
H3 - 40 to 60 inches: stratified loamy sand to coarse sandy loam

Properties and qualities
Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.0 inches)

Interpretive groups
Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R020XD012CA - SANDY
Hydric soil rating: No

Minor Components

Greenfield
Percent of map unit: 5 percent
Hydric soil rating: No

Ramona
Percent of map unit: 5 percent
Hydric soil rating: No

Tujunga
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 2 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 1 percent
Hydric soil rating: No

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