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1.0) INTRODUCTION

The following report was prepared by L&L Environmental, Inc. (L&L) for Landbuild. It describes the results of biological surveys, including a biological resources assessment, protocol breeding season survey for burrowing owl, and review of the jurisdictional areas on the parcel and the actual boundaries of the Prenda Arroyo. The Project site consists of ± 5.74 acres, per TPM 38174. No off-site areas are included.

Our assessment consisted of (1) a records search and literature review, conducted to determine the species of concern in the project area and proximity to documented special status species occurrences, (2) field reconnaissance, intended to identify plants and animals on the property and presence/absence of habitat for species of concern, (3) a protocol breeding season survey for burrowing owl, (4) mapping of the jurisdictional waters/wetlands on the site, and (5) a desktop review of the actual boundaries of the Prenda Arroyo.

1.1) Project Description

The Project is Alpine Meadows Estates, Tentative Parcel Map (TPM) 38174, a division of a single parcel into four (4) lots (see TPM 38174 and Fire Protection Plan Exhibit in Appendix E). An existing residence is present on the westernmost lot (Lot 1) and will remain. Three single-family homes will be constructed on Lots 2 through 4. Areas outside the grading footprint and road dedication area on Lots 2 through 4 will be included in an open space easement.

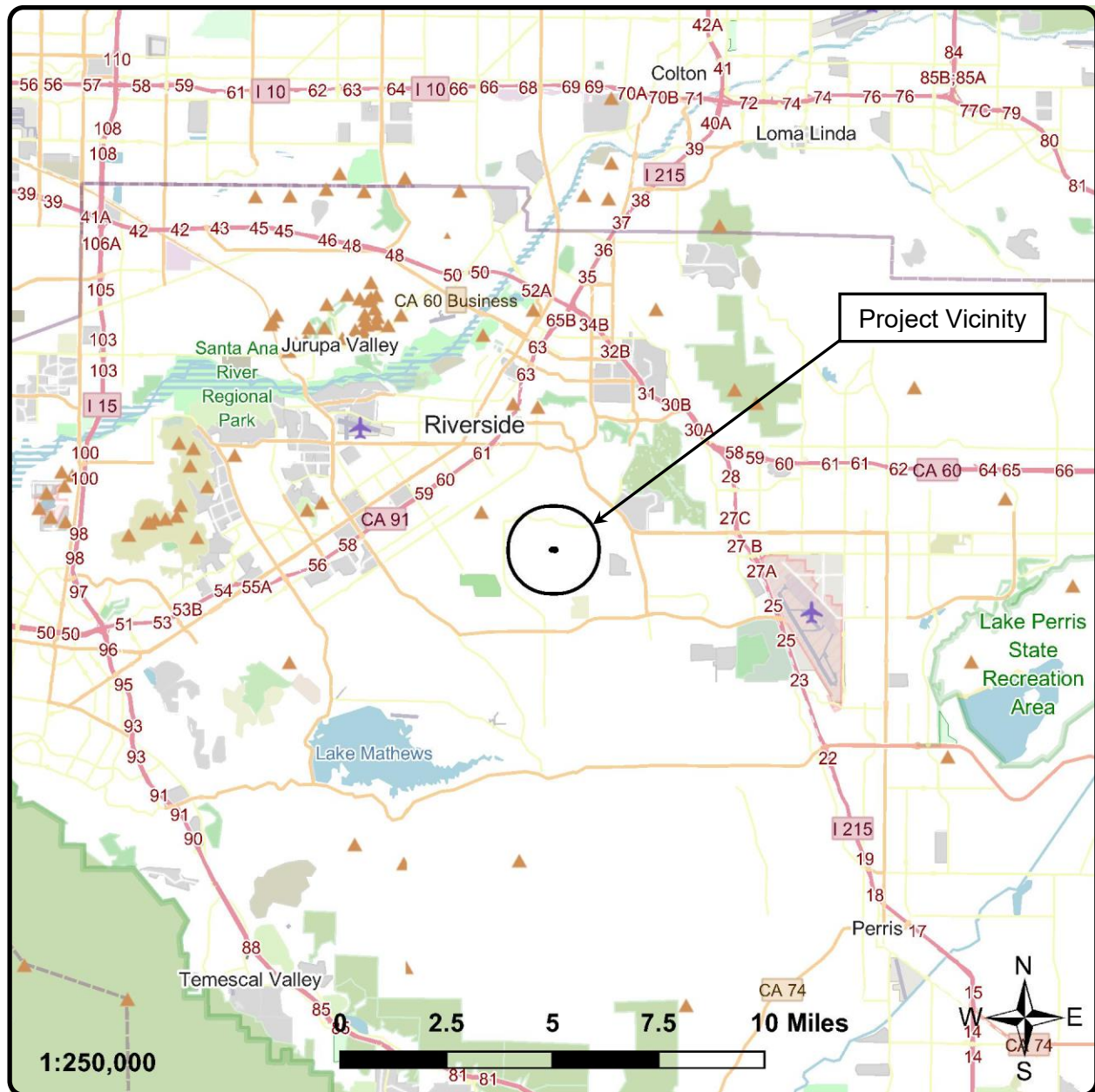
Based on the TPM and information provided by the Project proponent, net acreage for Lots 1, 2, and 3 is 1.07 acres each and Lot 4 is 2.14 acres. Net acreage does not include the road dedication area along the northern edge of the parcel.

1.2) Location

The property is generally located southeast of the 91 Freeway and north of Van Buren Boulevard in the City of Riverside, Riverside County, California (Figure 1). The site is located at 841 Alpine Meadows Lane in the Alessandro Heights neighborhood of the City of Riverside, just southwest of the intersection of Alpine Meadows Lane and Kingdom Drive and about 0.3 mile east of and upstream from the Prenda Dam. The site is within Section 13 of Township 3 South, Range 5 West, as shown on the USGS Riverside East 7.5' topographic quadrangle (Figure 2).

The site is generally bounded as follows: to the west by a residential property and Harbart Drive, with Prenda Dam, a blueline stream (Prenda Creek), a mixture of undeveloped lands, residential

subdivisions, and Washington Street beyond; to the north by Alpine Meadows Lane, a blueline stream (unnamed), and a mixture of residential developments and undeveloped lands, with the 91 Freeway and the City of Riverside beyond; to the east by Kingdom Drive and a mixture of residential developments and undeveloped lands, with Trautwein Road beyond; and to the south by disturbed vacant lands, Prenda Creek, and residential developments, with additional undeveloped lands, residential and commercial developments, and Van Buren Boulevard beyond (Figure 3).



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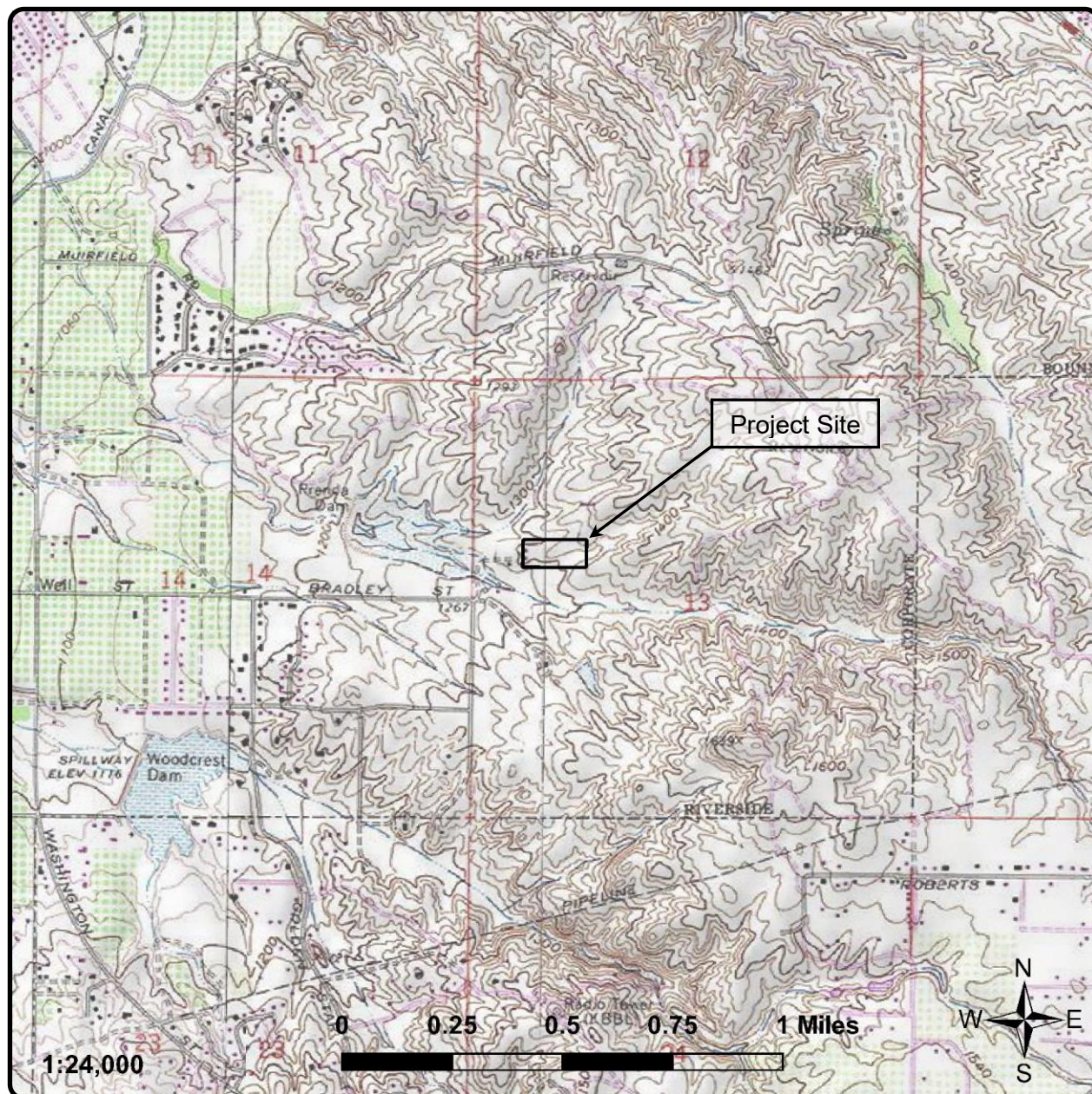
BIOLOGICAL AND CULTURAL
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QUIN-05-752

Figure 1

Project Vicinity Map

*Alpine Meadows Lane, City of Riverside
 Riverside County, California*



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Figure 2

Project Location Map

(USGS Riverside East [1980] quadrangle,
 Section 13, Township 3 South, Range 5 West)

Alpine Meadows Lane, City of Riverside
 Riverside County, California



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Figure 3

Aerial Photograph

(Aerial obtained from Google Earth, August 2018)

*Alpine Meadows Lane, City of Riverside
Riverside County, California*

1.3) Vegetation and Setting

The western portion of the site is developed and contains a single-family residence with detached garage and irrigated landscaping that includes a grass lawn, ornamental trees, shrubs, and flowers. The residence was unoccupied during the surveys but the onsite ornamental landscaping was generally well-maintained. There is a row of ornamental trees on the northern site boundary along Alpine Meadows Lane. Two wells are present on the site, one in the northeast quadrant and a second on the south-central portion of the site. The wells are approximately 345 feet apart at either end of an onsite unimproved dirt road. The entire site perimeter is fenced with rail fencing, chain link, or barbed wire.

The western and north-central areas of the site have been cleared and have virtually no vegetation. Native vegetation is present in the east, southeast, and south-central portions of the site and consists of coastal scrub. Several rock piles are present on the northeastern corner of the site, including rock and concrete debris. The rock piles are visible in aerial photographs going back to 1967 before the surrounding area was developed and appear to be naturally occurring outcrops.

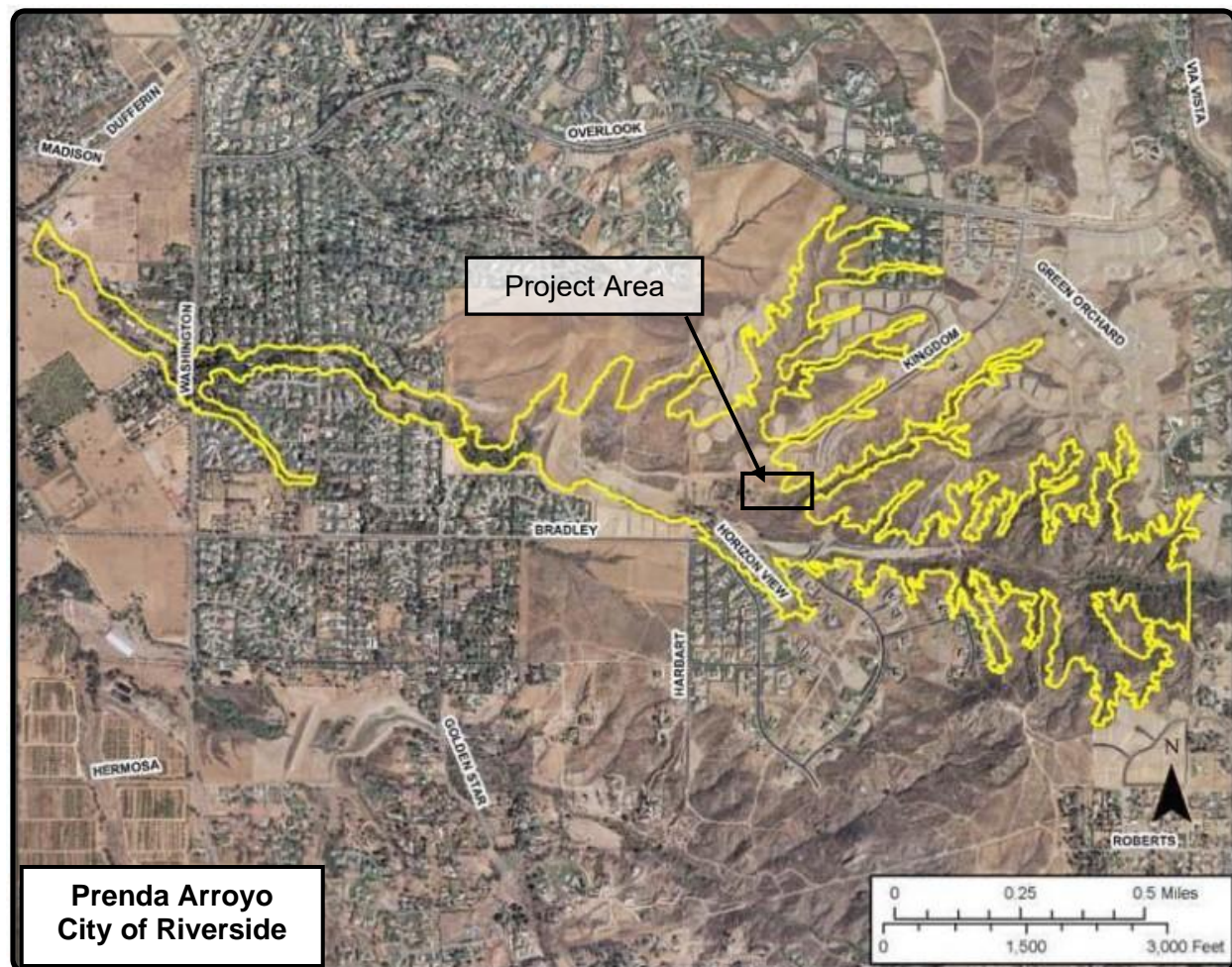
The Project is located within the Santa Ana River watershed. An unnamed ephemeral streambed (not a blueline stream) runs through the southeast portion of the site from east to west. There has been disturbance to the drainage, particularly on the west end. On the east end, vegetation in and along the drainage is brittlebush scrub. On the west end, it is either unvegetated or non-native and ruderal. The only riparian vegetation is one native willow tree with a canopy which extends over the property boundary.

The onsite stream is tributary to Prenda Creek, a blueline stream that is about 150 feet south of the site. A second blueline stream (unnamed) is about 350 feet north of the site and converges with Prenda Creek at the Prenda Dam, about 0.3 mile west and downstream of the site. Most of the site is within the mapped extent of the Prenda Arroyo, although the Project disturbance area is not within the watercourse as it currently exists (see Section 4.6 and Figures 4, 12a, and 12b).

1.4) Soils and Topography

The northwestern portion of the site and the southeastern corner are relatively flat, sloping downward to the drainage running through the site. The elevation onsite ranges from 1279 feet (390 meters) above mean sea level (AMSL) in the southwest corner to 1334 feet (407 meters) AMSL in the northeast corner.

Soils onsite are mapped as Buren fine sandy loam (BuD2), Cienega rocky sandy loam (CkF2), Hanford coarse sandy loam (HcC), and terrace escarpments (TeG) (NRCS 2021) (Figure 5).



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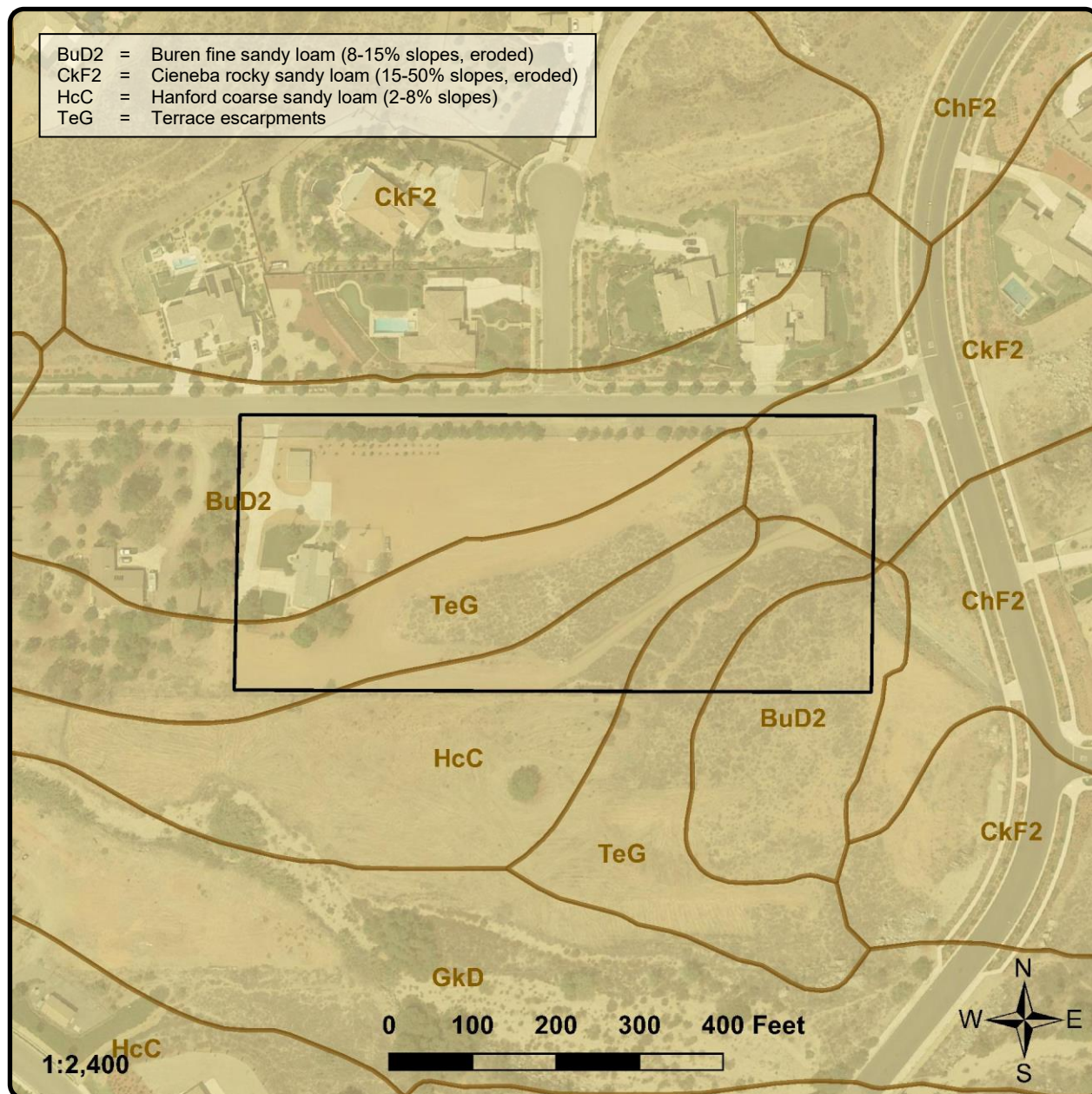
*BIOLOGICAL AND CULTURAL
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**Figure 4
Mapped Area of
Prenda Arroyo**

(Riverside, California Code of Ordinances / Title 17
https://library.municode.com/ca/riverside/codes/code_of_ordinances)

*Alpine Meadows Lane, City of Riverside
County of Riverside, California*



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Figure 5

Soils Map

(Aerial obtained from Google Earth, August 2018,
 USDA Nat. Res. Cons. Serv. SSURGO Data)

*Alpine Meadows Lane, City of Riverside
 Riverside County, California*

2.0) REGULATORY ENVIRONMENT

The following summary of the regulatory environment is provided for information purposes and is not intended for review or comment by the lead or wildlife agencies.

2.1) Federal Endangered Species Act

Section 9 of the federal Endangered Species Act (FESA), 1973 (as amended) prohibits “take” of federally listed threatened and endangered species. Candidate species receive no protection under FESA, but the USFWS encourages conservation of these species. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. “Harm” is further defined to include habitat modification or degradation when it actually kills or injures wildlife by impairing essential behavioral patterns including breeding, feeding, or sheltering.

Incidental take is take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Incidental take of federally listed species may be authorized under Section 7 of FESA for federal properties or where federal actions (i.e., federal permitting or federal funding) are involved or under Section 10 of FESA for non-federal actions.

Section 7 requires all Federal agencies, in "consultation" with the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. The Section 7 process requires preparation of a federal Biological Assessment to determine whether a proposed major construction activity under the authority of a Federal action agency is likely to adversely affect listed species, proposed species, or designated critical habitat. After formal consultation, the USFWS will issue a Biological Opinion stating whether or not a Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

Section 10 lays out the guidelines under which a permit may be issued to authorize take of endangered or threatened species (in the absence of any federal nexus). Application for an incidental take permit under Section 10 is subject to certain requirements, including preparation by the permit applicant of a conservation plan, generally known as a "Habitat Conservation Plan" or "HCP." An HCP is a plan that outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species. The plan usually includes measures to minimize impacts, such as provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area.

2.2) Jurisdictional Waters and Wetlands

Three agencies generally regulate activities within streams, wetlands, and riparian areas in California: (1) the U.S. Army Corps of Engineers (USACE) regulates activities under Section 404 of the federal Clean Water Act; (2) the Regional Water Quality Control Board (RWQCB) regulates activities under Section 401 of the federal Clean Water Act and the State Porter-Cologne Water Quality Control Act; and (3) the California Department of Fish and Wildlife (CDFW) regulates activities under California Fish and Game Code Sections 1600-1616.

2.2.1) Federal Clean Water Act, Section 404

Section 404 of the federal Clean Water Act applies to "Waters of the United States" (WoUS). By definition these include waterways that could be used for interstate commerce and their tributaries, including any waters that flow into traditional navigable waters. In non-tidal waters, the limits of jurisdiction are "ordinary high water marks" (OHWM) such as stream banks.

There have been recent changes to the definition of WoUS and the agencies are interpreting WoUS consistent with the pre-2015 regulatory regime until further notice. Under this rule, WoUS includes:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - c. Which are used or could be used for industrial purposes by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Final determination and delineation of federal jurisdiction is made by the USACE and not by the project biologists. Therefore, fieldwork and documentation of the site conditions are done as a preliminary delineation until the USACE reviews and concurs with the results.

2.2.2) Federal Clean Water Act, Section 401 and Porter-Cologne

The RWQCB has jurisdiction over wetlands, WoUS, and Waters of the State under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne) under the California Water Code (§ 13000, et seq.) Permitting is required for activities that will result in a discharge of soils, nutrients, chemicals, detrital materials, or other pollutants into WoUS, Waters of the State, or adjacent wetlands that will affect the water quality of those bodies and the watershed.

2.2.3) California Fish and Game Code, Section 1600

The CDFW, through provisions of the California Fish and Game Code (Sections 1600-1616), is empowered to issue agreements ("Lake and Streambed Alteration Agreements") for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. The Lake and Streambed Alteration Agreement will typically include required measures to mitigate impacts.

Sections 1600-1616 of the California Fish and Game Code apply to stream channels, defined elsewhere in the Code as follows:

"A stream is a body of water that flows at least periodically through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation."

The state definition does not specify a flow rate or inundation frequency and provides no clear distinction between jurisdictional and non-jurisdictional lands.

While the federal USACE criteria (hydrology, soils, and vegetation) are used to evaluate the presence or absence of wetlands within the project site, the determination of state wetland status is not based on the combined presence of the three criterion because the state can take jurisdiction of any one of the three: (1) the presence of open water or saturated soils, (2) presence of vegetation including riparian or wetland species, and/or (3) water-modified or oxygen-depleted soils.

2.3) California Endangered Species Act

California Endangered Species Act (CESA) definitions of endangered and threatened species parallel those defined in the FESA. The CESA defines an endangered species as “. . . 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, over exploitation, predation, competition or disease.” Endangered species are in serious danger of becoming extinct and threatened species are likely to become endangered species in the foreseeable future (according to Sections 2062 and 2067, respectively, of the California Fish and Wildlife Code). Candidate species are those under formal review by the CDFW for listing as endangered or threatened (Section 2067). Prior to being considered for protected status, the CDFW designates a species as being of special concern. Species of Special Concern are those for which the CDFW has information indicating population decline.

2.4) California Environmental Quality Act

The California Environmental Quality Act (CEQA) and CEQA Guidelines (§ 15000 et seq.) require identification of environmental effects from discretionary projects. Significant effects are to be mitigated by avoidance, minimization, rectification, or compensation whenever possible.

Effects to all state and federal listed species are considered significant under CEQA. In addition to formally listed species, CEQA considers effects to species that are demonstrably endangered or rare as important or significant. These definitions can include state designated species of special concern, federal candidate and proposed species, California Natural Diversity Database (CNDDB) tracked species, and California Rare Plant Rank (CRPR) 1B and 2 plants.

Appendix G of the CEQA Guidelines specifically addresses biological resources and encompasses a broad range of resources to be considered.

2.5) California Natural Diversity Database

The California Natural Diversity Database (CNDDDB) is a database that ranks overall condition of listed and special status species and sensitive vegetation communities on global (throughout its range) and state (within California) levels. The CNDDDB includes documented occurrences of listed and special status species that have been reported to CDFW. State ranking is numerical, ranging from one to five (S1 to S5), with one indicating very few remaining individuals or little remaining habitat and five indicating a demonstrably secure to ineradicable population condition. State ranks (S ranks) may also include an extension (e.g., S1.x) indicating current threats ranging from one (very threatened) to three (no current threats known).

2.6) California Rare Plant Rank

The California Native Plant Society (CNPS) Inventory of Rare and Endangered Species includes documented occurrences of special status plant species that are available through the Consortium of California Herbaria and other sources. The CNPS, in coordination with CDFW, has cataloged California's rare and endangered plants into lists according to population distributions and viability. These lists are numbered and indicate the following California Rare Plant Ranks (CRPR): (1A) presumed extinct in California; (1B) rare, threatened, or endangered throughout their range; (2A) presumed extirpated in California, but more common in other states; (2B) threatened or endangered in California, but more common in other states; (3) more information is needed to establish rarity; and (4) plants of limited distribution in California (i.e., naturally rare in the wild), but whose populations do not appear to be susceptible to threat. A CRPR may also have an extension (e.g., 1B.x) that indicates current level of threat: seriously threatened (x.1), moderately threatened (x.2), or not very threatened (x.3).

2.7) Information for Planning and Consultation

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) is a database that includes federally listed endangered or threatened species and species proposed for listing, designated critical habitat, Birds of Conservation Concern, and other federally regulated lands and biological resources.

2.8) Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) is an international treaty that made it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in

50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Executive Order 13186 ensures that environmental analyses of federal actions required by the National Environmental Policy Act (NEPA) or other established environmental review processes evaluate the effects of actions on migratory birds, with emphasis on species of concern. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or loss of habitat upon which the birds depend could be considered "take."

2.9) California Fish and Game Code, Sections 3503 and 3513

California Fish and Game Code Section 3503 prohibits take, possession, or needless destruction of bird nests or eggs except as otherwise provided by the Code; Section 3503.5 prohibits take or possession of birds of prey or their eggs except as otherwise provided by the Code; and Section 3513 provides for the adoption of the provisions of the federal Migratory Bird Treaty Act, described above.

2.10) Western Riverside County Multiple Species Habitat Conservation Plan

The County of Riverside, including eight (8) additional land jurisdictions and 14 cities, have prepared a Multiple Species Habitat Conservation Plan (MSHCP) for western Riverside County. The MSHCP will build upon existing preserves and provide connectivity and wildlife corridors throughout the region. The MSHCP proposes to conserve approximately 500,000 acres and 146 different species.

The MSHCP was approved by the county on June 17, 2003 and an Implementation Agreement (IA) between the USFWS, the CDFW, and the County was executed and an associated USFWS Section 10(a)(1)(B) Permit (No. TE-088609) was issued on June 22, 2004. The permit grants take authorization for certain species identified in the permit as "Covered Species Adequately Conserved."

The MSHCP establishes seven (7) core reserve areas and associated linkages between proposed and existing core areas. The MSHCP divides areas into Cells using USGS coordinates. Conservation efforts for the project site will be evaluated with regard to sensitive species identified as not adequately conserved and observed onsite, riverine/riparian or vernal pool habitat and their associated sensitive species (if located onsite), fairy shrimp, jurisdictional areas, and sage scrub.

Focused surveys are required for species identified as not adequately conserved under the MSHCP if suitable habitat is present onsite. If focused surveys are determined necessary and

species identified as not adequately conserved under the MSHCP occur onsite, the proponent may be required to undergo a Habitat Acquisition and Negotiation Strategy (HANS) determination with the County of Riverside. If a single family home or mobile home is to be placed on an existing legal lot, permitting will be reviewed according to the procedures outlined in MSHCP Section 6.1.1, *Expedited Review Process for Single-Family Homes or Mobile Homes to Be Located on an Existing Lot within the Criteria Area*.

MSHCP Section 6.1.2 (Riparian/Riverine Habitat)

Section 6.1.2 of the MSHCP requires an assessment of the potentially significant effects of the proposed project on Riparian/Riverine areas, and vernal pools as currently required by CEQA using available information augmented by project-specific mapping. Riparian/Riverine areas and vernal pools are defined as follows:

- Riparian/Riverine Areas are lands that have flow for all or a portion of the year and which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.
- Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses, to which it has been subjected, and weather and hydrologic records.

With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

Burrowing Owl

Section B (Species Accounts) of Volume 2 of the MSHCP (Dudek 2003) lists the following objectives for burrowing owl conservation/protection:

Objective 1

Include within the MSHCP Conservation Area at least 27,470 acres of suitable primary habitat for the burrowing owl including grasslands.

Objective 2

Include within the MSHCP Conservation Area at least 5 Core Areas and interconnecting linkages. Core areas may include the following: (1) Lake Skinner/Diamond Valley Lake area (Existing Core C plus Proposed Extension of Existing Cores 5, 6, 7; 29,060 acres); (2) playa west of Hemet (Proposed Noncontiguous Habitat Block 7; 1,250 acres); (3) San Jacinto Wildlife Area/Mystic Lake area including Lake Perris area (Existing Core H; 17,470 acres); (4) Lake Mathews (Existing Core C plus Proposed Extension of Existing Cores 2; 23,710 acres); and (5) along the Santa Ana River (9,670 acres). The Core Areas should support a combined total breeding population of approximately 120 burrowing owls with no fewer than five pairs in any one Core area.

Objective 3

Include within the MSHCP Conservation Area at least 22,120 acres of suitable secondary habitat for the burrowing owl including playas and vernal pools, and agriculture outside of the Core Areas identified above. Areas where additional suitable habitat could be conserved include west of the Jurupa Mountains, near Temescal Wash (i.e., vicinity of Alberhill), near Temecula Creek, within the Lakeview Mountains, Banning, the Badlands, Gavilan Hills, and Quail Valley.

Objective 4

Include within the MSHCP Conservation Area the known nesting locations of the burrowing owl at Lake Perris, Mystic Lake/San Jacinto Wildlife area, Lake Skinner area, the area around Diamond Valley Lake, playa west of Hemet, Lakeview Mountains, Lake Mathews/Estelle Mountain Reserve and Sycamore Canyon Regional Park.

Objective 5

Surveys for burrowing owl will be conducted as part of the project review process for public and private projects within the burrowing owl survey area where suitable habitat is present (see Burrowing Owl Survey Area Map, Figure 6-4 of the MSHCP, Volume I). The locations of this species determined as a result of survey efforts shall be conserved in accordance with procedures described within Section 6.3.2, MSHCP, Volume I and the guidance provided below:

Burrowing owl surveys shall be conducted utilizing accepted protocols as follows. If burrowing owls are detected on the project site then the action(s) taken will be as follows:

If the site is within the Criteria Area, then at least 90 percent of the area with long-term conservation value will be included in the MSHCP Conservation Area. Otherwise:

1) If the site contains, or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than 3 pairs of burrowing owls,

then the on-site burrowing owls will be passively or actively relocated following accepted protocols.

2) If the site (including adjacent areas) supports three or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat and is non-contiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite.

The survey and conservation requirements stated in this objective will be eliminated when it is demonstrated that Objectives 1 – 4 have been met.

Objective 6

Pre-construction presence/absence surveys for burrowing owl within the survey area where suitable habitat is present will be conducted for all Covered Activities through the life of the permit. Surveys will be conducted within 30 days prior to disturbance. Take of active nests will be avoided. Passive relocation (use of one-way doors and collapse of burrows) will occur when owls are present outside the nesting season.

Objective 7

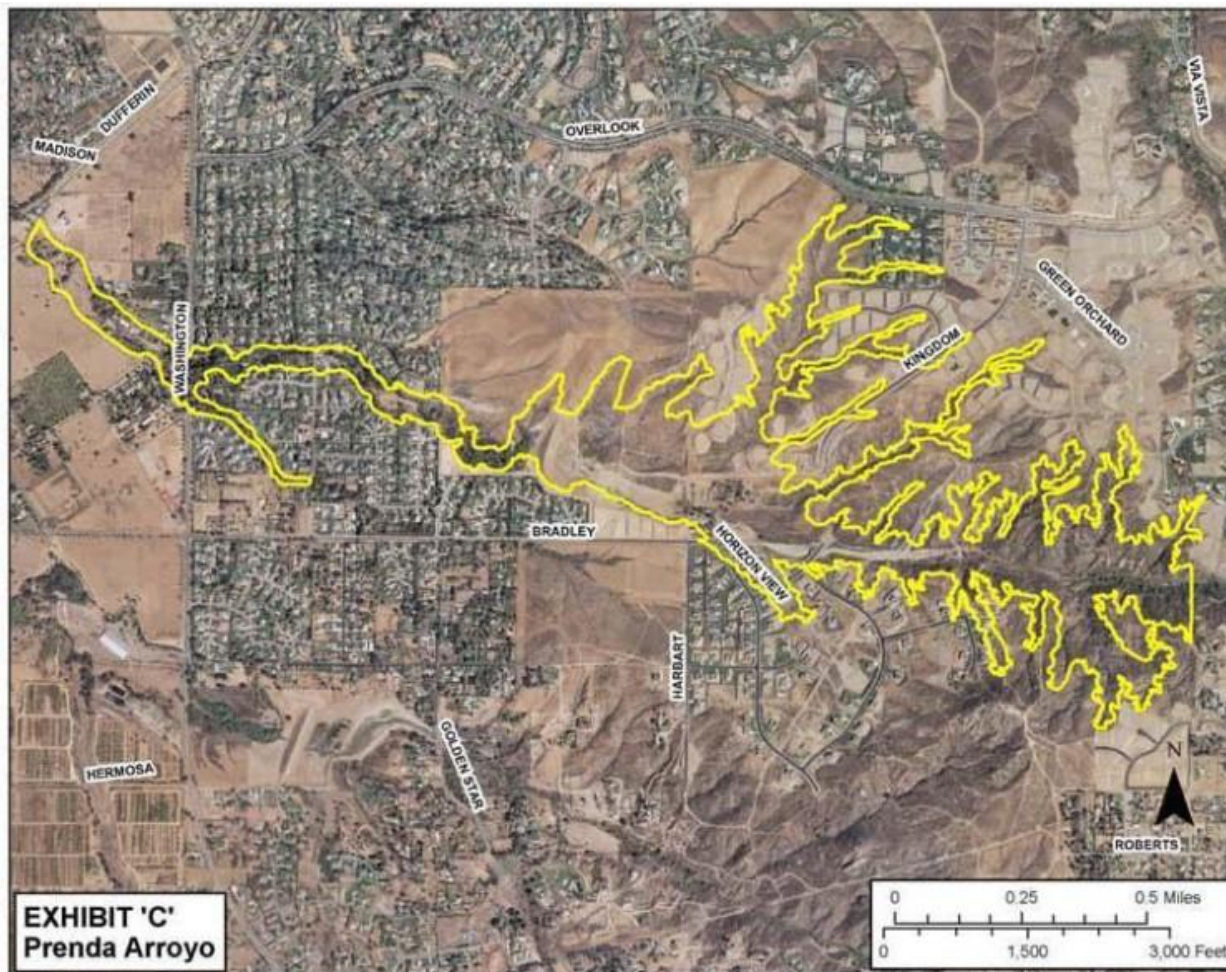
Translocation sites for the burrowing owl will be created in the MSHCP Conservation Area for the establishment of new colonies. Translocation sites will be identified, taking into consideration unoccupied habitat areas, presence of burrowing mammals to provide suitable burrow sites, existing colonies and effects to other Covered Species. Reserve Managers will consult with the Wildlife Agencies regarding site selection prior to translocation site development.

2.11) City of Riverside Hillside/Arroyo Grading

Title 17 (Grading) of the City of Riverside Municipal Code defines the actions that require a permit. One of the definitions (Section 17.08.011) identifies what areas are considered to be “arroyos” within the city limits. Section 17.12.020 specifies which areas are subject to hillside/arroyo grading provisions that are found in Section 17.28.020. (https://library.municode.com/ca/riverside/codes/code_of_ordinances?nodeId=PTIICOOR_TIT17GR).

17.08.011 - Arroyo.

"Arroyo" shall mean those areas shown within the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F of this title [Exhibit C: Prenda Arroyo included below]. The limits of these arroyos and arroyo tributaries shall include all the land within the water course area, the adjacent slopes having an average natural slope of 30 percent or greater, and all other areas within the boundaries shown on Exhibits A-F of this title.



17.12.020 - Applicability—Hillside/arroyo grading.

The provisions for hillside/arroyo grading as defined in Section 17.28.020 of this title shall apply to all excavation and grading of any land if any one of the following criteria apply to the property in question:

- A. The property is in the RC - Residential Conservation Zone.
- B. The property has an average natural slope ten percent or greater.
- C. The property is within or is adjacent to the boundaries of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, and Springbrook Arroyos. Blue line streams identified on the United States Geological Survey (USGS) Maps or other significant arroyos may also be included. (Ord. 6453 § 1, 1998)

17.28.020 - Hillside/arroyo grading.

The following supplementary regulations shall apply to the grading of hillsides and arroyos.

- A. Grading requirements. Where grading is proposed on any parcel having an average natural slope of ten percent or greater, or which is zoned Residential Conservation (RC), or which is located within or adjacent to the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos, or a blue line stream identified on USGS Maps, or other significant arroyo, the grading must be confined per this chapter and limited to the

minimum grading necessary to provide for a house, driveway, garage and limited level yard. The ungraded terrain must be left in its natural form for the remainder of the site. All hillside/arroyo grading shall conform to the following general requirements:

1. The overall shape, height or grade of any cut or fill slopes shall be developed utilizing contour grading in concert with existing natural contours and the scale of the natural terrain of the site.
2. Where two cut or fill slopes intersect, the intersection shall be horizontally rounded and blended.
3. The tops of cut and fill slopes shall be rounded vertically with a constant tangent (T) of ten feet (See Figure 2 of Title 17).
4. Where any cut or fill slopes intersect the natural grade, the intersection of each slope shall be vertically and/or horizontally rounded and blended with the natural contours so as to present a natural slope appearance.
5. Where any cut or fill slope exceeds 100 feet in horizontal length, the horizontal contours of the slope shall be developed in concert with existing natural contours.
6. The area of a site proposed to be graded shall be that which fits into the natural terrain and which allows for a minimal amount of grading. The ungraded area must be left in its natural form for the remainder of the site. No native vegetation shall be removed and no non-native vegetation shall be introduced or allowed within hillside areas not included as part of the graded pad area. The Community & Economic Development Director shall be responsible to determine the precise boundaries of the non-graded area to be retained as natural open space and an open space easement shall be recorded over this area. Portions of the non-graded area may be excluded from the natural open space easement by the Community & Economic Development Director based on factors specific to each lot, including whether the area is isolated from a meaningful area of contiguous open space and the absence of unique topographical or geological features. The intent of this provision is to create significant areas of contiguous open space and not to create small, isolated areas of open space. No change to the boundaries of the area determined to be placed in natural open space by Community & Economic Development Director shall be made unless the Planning Commission determines that exceptional or special circumstances addressed in Chapter 17.32 Conditional Exceptions apply.
7. Structures shall be designed to fit with the contours of the hillside and relate to the overall form of the terrain. Structures shall be designed to fit into the hillside rather than altering the hillside to fit the structure.
8. Streets shall be designed to generally follow the natural contours and land form in order to minimize cut and fill.
9. Pad sizes for single family residential development shall be limited as follows:
 - Under ten percent average natural slope within the area to be graded - No limit
 - Ten percent to 15 percent average natural slope within the area to be graded - 27,000 square feet
 - Fifteen percent to 30 percent average natural slope within the area to be graded - 21,000 square feet
 - Thirty percent to 40 percent average natural slope within the area to be graded - 18,000 square feet

Over 40 percent average natural slope - no grading per 17.28.020 A. 12.

The Community & Economic Development Director shall have the authority to increase or decrease the pad size category by up to 25 percent without a grading exception depending on the sensitivity of the site. Sensitivity shall be determined by such factors as the pad's visibility from the public right-of-way, its location on a ridgeline, the presence of habitat for sensitive species including rare, threatened, or endangered species, or the presence of unique topographic features such as knolls, valleys, rock outcroppings or other features or views. (Level padded area defined as area that is at a slope ratio of 5:1 or flatter.)

10. Slopes having a ratio of 3.9:1 or steeper shall not exceed 20 feet in vertical height. Slopes having a 4:1 or flatter ratio may be up to 25 feet in vertical height. The Community & Economic Development Director shall have the authority to increase vertical slope height by up to 25 percent without a grading exception depending on the sensitivity of the site. Sensitivity shall be determined by such factors as the slope's visibility from the public right-of-way, its location on a ridge line, the presence of habitat for sensitive species including rare, threatened, or endangered species, or the presence of unique topographic features such as knolls, valleys, rock outcroppings or other features or views. (Level padded area defined as area that is at a slope ratio of 5:1 or flatter.)
11. Slopes requiring benches shall not normally be permitted.
12. No grading shall be permitted on slopes exceeding 40 percent unless findings can be made by the Planning Commission that exceptional or special circumstances as set forth in Chapter 17.32 Conditional Exceptions apply.
13. Driveway grading:
 - a. Shall not exceed 15 feet in width.
 - b. Shall not exceed a 15 percent finished grade unless otherwise approved by the Fire Department and Community & Economic Development Director.
 - c. Driveway cut and fill slopes shall be subject to the same restrictions as identified in Chapter 17.28.
 - d. Driveway grading required to provide access to the level building pad area is not included as part of the total permitted level pad area.
14. Arroyo grading.
 - a. No development or grading of any kind shall be permitted within 50 feet of the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F. The Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area. Sensitivity shall be determined by such factors as the presence of riparian vegetation, habitat for rare or endangered species, significant rock outcroppings or other unique topographic features on the property proposed to be graded or in nearby segments of the same tributary.
 - b. The limits of these arroyos shall include all that land within the watercourse area, the adjacent slopes having an average natural slope of 30 percent or greater, and all other areas within the boundaries shown on Exhibits A-F.

- c. No grading for private crossings of these arroyos shall be permitted. Grading for public street crossings must be limited to the minimum necessary for access and emergency access.
- d. No native vegetation shall be removed and no non-native vegetation shall be introduced within the boundaries of these arroyos in areas that cannot be graded.
- e. All land within the boundaries of these arroyos shall be included as an open space easement on final tract and parcel maps.
- f. Where drainage structures enter these arroyos the structure must be blended into the natural terrain, and where necessary, lined with natural or quarried rock or other material as approved by the Community & Economic Development Director and Public Works Director.
- g. Where possible, other arroyos shall be preserved as natural drainage courses. Significant natural features within these arroyos shall be preserved including riparian vegetation, boulders, rock outcroppings, milling features and deeply incised channels. These features shall be shown on the grading plans submitted for review. To insure that these areas are adequately preserved, an appropriate setback for development and grading may be applied.
- h. Development or grading within blue line streams shall be limited to the minimum necessary for access or drainage structures. Any disturbance will require permits from the U.S. Corps of Engineers and the State Department of Fish and Wildlife. (Ord. 7459 § 36, 2019; Ord. 7362 §9, 2017; Ord. 6673 §§ 6, 7, 8, 9, 2003; Ord. 6453 § 1, 1998)

2.12) City of Riverside Tree-related Ordinances

Section 13.25.020 of the City of Riverside Code of Ordinances states that, “No trees or shrubs planted or growing along the public streets of the City shall be removed except pursuant to the policy established by the Park, Recreation and Community Services Commission and no trees along the streets shall be cut, pruned or trimmed except pursuant to the policy established by the Commission and approved by the City Council; nor shall anyone not authorized by said policy trench around or alongside of any tree, plant or shrub with a view to cutting the roots of same.”

The Parks, Recreation and Community Services Commission oversees the Urban and Community Forestry Program. The City’s Urban Forestry Policy Manual (pages 13 and 14) provides the following guidance regarding impacts to trees on City property:

“5. Construction Projects on City Property - The following guidelines have been developed to protect trees on City property during construction projects:

- a. A root protection zone shall be defined by a minimum 42" high barrier constructed around any potentially impacted tree. This barrier shall be at the drip

line or at a distance from the trunk equal to 6 inches for each inch of trunk diameter 4.5 feet above the ground if this method defines a larger area.

b. Should it be necessary to install irrigation lines within this area, the line shall be located by boring, or an alternate location for the trench is to be established. The minimum clearance between an open trench and a street tree shall be one (1) foot, or six (6) inches for each inch of trunk diameter measured at 4.5 feet above existing grade if this method defines a larger distance. The maximum clearance shall be ten (10) feet. The contractor shall conform to these provisions unless otherwise directed by the City.

c. At no time shall any equipment, materials, supplies or fill be allowed within the prescribed root protection zone unless otherwise directed by the City. The root protection zone is defined as the larger of the drip line of 1) the tree or 2) the distance from the trunk equal to six (6) inches for each inch of trunk diameter measured at 4.5 feet above existing grade.

d. It is recognized that failure to abide by these provisions will result in substantial root damage to trees that may not be immediately apparent. The City will therefore assess damages according to the International Society of Arboriculture standards and bill the responsible party.

6. Release Requirements

a. In order for construction work that will impact a tree to begin, a signed release form must be issued by the Public Works Department. This release shall be based on the condition of the tree and an assessment of the impact of the proposed construction. Mitigation measures necessary to protect the tree will also be stated.

b. In the event a tree must be removed, the Public Works Department will issue a Tree Removal Permit.”

Section 17.28.030 of the City of Riverside Code of Ordinances states in part that, “Existing trees which have a six inch or greater trunk size at a point three feet above grade shall be accurately shown on the grading plan and shall be preserved in place whenever possible as determined by the Community & Economic Development Director.”

3.0) METHODS AND PERSONNEL

3.1) Literature Review

Certain plants and animals have been listed as threatened or endangered under state or federal Endangered Species Acts. Other species have not been formally listed, but declining populations or habitat availability are reasons for concern regarding their long-term viability. These species are included in lists compiled by resource management agencies or conservation organizations. In this report, the term “listed” refers to all species that are listed, or candidates for listing, as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW). “Special status species” refers to all species included in one or more compendia of rare species, but not listed as threatened or endangered by USFWS or CDFW.

Pertinent literature was reviewed to identify local occurrences and habitat requirements of special status species and communities occurring in the region. Literature reviewed included compendia provided by resource agencies (CDFW 2021a, 2021b), a search of the California Natural Diversity Database (CNDDDB; CDFW 2021c) and California Native Plant Society Inventory of Rare and Endangered Plants (CNPS 2021) for the Project topographic quadrangle (Riverside East) and adjacent quadrangles (Fontana, San Bernardino South, Redlands, Riverside West, Sunnymead, Lake Mathews, Steele Peak, and Perris), and a search of USFWS Information for Planning and Consultation (IPAC; USFWS 2021a) for the Project site.

Potentials for occurrence of plant and wildlife species were evaluated and classified as either absent, not expected, low, moderate, high, or occurs. These classifications are based on the presence and quality of habitat, geographic and elevation range of species, proximity to a known occurrence of a species obtained from CNDDDB or other reliable data, and field observations. Classifications for individual species may be modified based on biologists’ experience and expert opinion.

Scientific names of plants follow Baldwin et al. (2012) with updates from the online Jepson eFlora (Jepson 2021). Scientific names of animals follow Stebbins (1985), Jameson and Peeters (1988), Cornell (2021), and Arnett (2000), with updates from academic sources. Current conservation status of plant and wildlife species determined from CDFW (2021a, 2021b). Vegetation community classifications follow Sawyer et al. (2009) with updates from CDFW (2020). State ranks (S ranks) for vegetation communities are from CDFW (2020).

In this report, the “site” or “property” refers to the entire ±5.74-acre parcel.

L&L also conducted a biological survey of the site in 2006 (L&L 2006a) and a summary of that information is included in this report as appropriate. The 2006 survey consisted of one site visit on August 17, 2006. In this report, the “survey” refers to the 2021 survey unless the 2006 survey is specifically stated.

3.2) Biological Surveys

L&L biologist Guy Bruyey visited the Project site during June and July of 2021 to conduct a protocol breeding season burrowing owl survey. A biological resources assessment was also conducted to describe vegetation and habitat and evaluate the site for presence of suitable habitat for special status plant and wildlife species (Table 1).

Table 1. Survey dates, times, and weather conditions.

Date	Time	Sunrise*	Weather	Wind Speed (mph)
06.22.2021	0625-0830	0542	Partly Cloudy, 64-69°F	0-1
07.07.2021	0645-0815	0548	Clear, 65-70°F	0-1
07.19.2021	0715-0845	0555	Partly Cloudy, 75-80°F	1-3
07.28.2021	0730-0900	0601	Clear, 74-81°F	0-1

*sunrise times from www.timeanddate.com

A total of about 6.5 person-hours were spent onsite. All habitat types onsite were visited on foot. The site was surveyed by conducting a series of meandering transects across the subject property where possible, stopping periodically for observations and notations. A general habitat map and field notes were completed during the survey. All field surveys were conducted during daylight hours. Digital photographs were taken to record site conditions during the survey.

Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Abrams (1923, 1944, and 1951), Abrams and Ferris (1960), Munz (1974), and Parker (1999).

3.3) Burrowing Owl Survey

Burrowing owl surveys were conducted concurrently with the biological resources assessment (Table 1). The site was examined for suitable burrow sites and for signs of occupation by burrowing owl, including pellets, feathers, whitewash, prey remains, and eggshell fragments, as well as individual owls. A search for potentially suitable burrows within dirt, wood, or rock debris piles, artificially created berms, and other locations was conducted during surveys.

Surveys were conducted in areas identified during the habitat assessment survey as potential burrowing owl habitat, including open areas onsite and areas where California ground squirrel (*Spermophilus beechyi*) activity was expected (i.e., potentially suitable burrows). An additional 150-meter (500-foot) buffer area surrounding the site was visually inspected, where possible, in areas identified as potential burrowing owl habitat (Figure 6). Any developed areas were visually surveyed with binoculars due to private property trespassing concerns.

Transects were walked throughout the property where suitable habitat is present. Coupled with binocular surveys of any restricted offsite areas, this allowed for complete visual ground coverage of the survey area. Distance between transects was approximately 15 to 20 meters.

Per MSHCP protocol for burrowing owl surveys (RCA 2006), surveys should be conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys will not be accepted if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90°F. Surveys should be conducted in the morning one hour before sunrise to two hours after sunrise or in the early evening two (2) hours before sunset to one (1) hour after sunset. Surveys were conducted during appropriate hours and weather conditions (Table 1).



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Figure 6

Burrowing Owl Survey Area

(Aerial obtained from Google Earth, August 2018)

*Alpine Meadows Lane, City of Riverside
Riverside County, California*

3.4) Desktop Analysis

Recent and historical aerial images (Google Earth 2021, NETRonline 2021) dated from 1948 to 2020 were examined to review the condition of the parcel and the extent of the drainages within Prenda Arroyo over time.

4.0) RESULTS

4.1) Literature Review Results

The site is located within the area covered by the MSHCP but is not within the Criteria Area (i.e., Criteria Cells). Public/Quasi-Public (PQP) Conserved Lands identified as Alessandro Arroyo Big Bend are one mile to the east of the site. There are no other PQP or MSHCP Conserved Lands within a mile of the site. The site is not within or near any MSHCP Core Areas or Linkages (Figure 7). Surveys required by the MSHCP are a habitat assessment to address riparian/riverine and vernal pool habitats and associated species and burrowing owl.

An MSHCP Consistency Analysis is typically required when a property falls within one or more MSHCP Criteria Cell(s). The Project site is not within a Criteria Cell; however, the Conceptual Development Review from the City of Riverside (dated May 26, 2021) lists a Consistency Analysis as a project requirement and it is included under separate cover.

The site is largely within the mapped extent of the Prenda Arroyo, although the Project disturbance area is not within the watercourse as it currently exists (see Section 4.6).

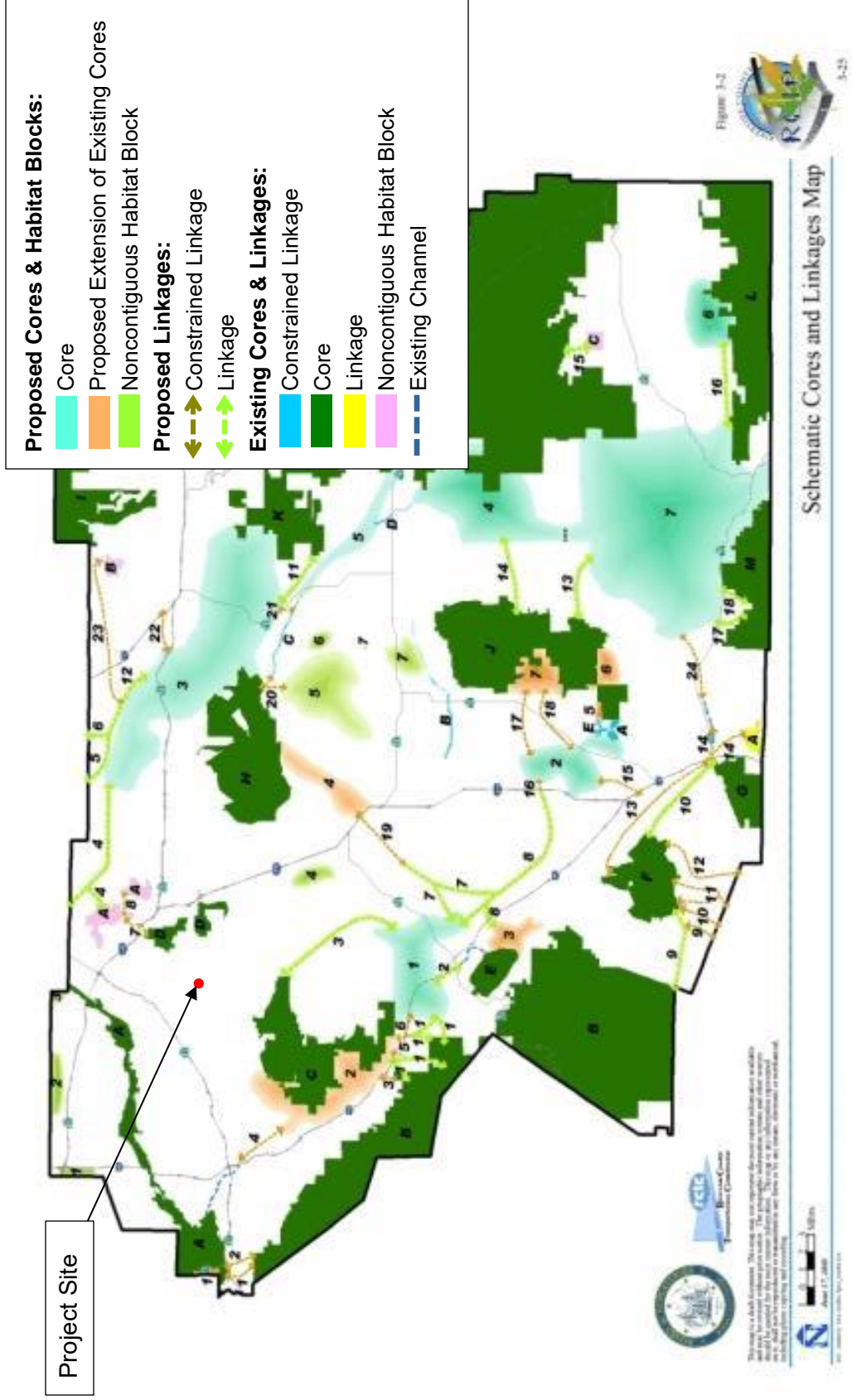


Figure 7. MSHCP Cores and Linkages

4.1.1) Precipitation

Precipitation data was obtained from the Clark and Lake Mathews Remote Automated Weather Stations (RAWS) (WRCC 2021). The Clark RAWS is located about 4.0 miles southeast of the Project site at an elevation of 1,720 feet and the Lake Mathews RAWS is about 8.6 miles southwest of the site at an elevation of 1,516 feet (WRCC 2021).

Tables 2a and 2b provide precipitation data from the Clark and Lake Mathews RAWS, respectively, from October 2018 through September 23, 2021 (WRCC 2021). Total precipitation recorded by the Clark RAWS for the 2019 water year (October 2018 through September 2019) was 12.92 inches and for the 2020 water year was 12.66 inches. Precipitation for the 2021 water year (as of September 23) recorded at Clark was 4.80 inches. The Lake Mathews RAWS recorded 13.82 inches total precipitation for the 2019 water year and 11.90 inches for the 2020 water year. Precipitation for the 2021 water year (as of September 23) recorded at Lake Mathews was 4.15 inches. Average annual precipitation for the Project area is 5 to 10 inches (WRCC 2018).

Table 2a. Precipitation data for Clark Weather Station.

Month	Precipitation (inches)		
	Water Year ¹ (October through September)		
	2019	2020	2021
October	1.02	0	0
November	1.08	2.19	0.14
December	1.33	2.69	1.18
January	2.27	0.04	2.00
February	4.37	0.32	0.01
March	1.96	3.65	1.30
April	0.02	3.73	0
May	0.87	0	0*
June	0	0.04	0.07*
July	0	0	0.1
August	0	0	0
September	0	0	0**
Total	12.92	12.66	4.80*

*missing data, **as of September 23, 2021.

¹ A water year is October to September. For example, the 2019 water year is October 2018 through September 2019.

Table 2b. Precipitation data for Lake Mathews Weather Station.

Month	Precipitation (inches)		
	Water Year (October through September)		
	2019	2020	2021
October	1.02	0	0
November	0.91	1.84	0.21
December	1.29	3.04	0.98
January	2.73	0.06	1.54
February	5.47	0.23	0.05
March	1.81	3.78	1.29
April	0.03	2.91	0
May	0.56	0	0
June	0	0.04	0.01
July	0	0	0.06
August	0	0	0
September	0	0	0.01**
Total	13.82	11.90	4.15*

*missing data. **as of September 23, 2021.

4.2) Vegetation Communities

The site, particularly the western portion, has been disturbed for residential use since 1947 (L&L 2006b). A review of historical aerial images (NETRonline 2021) finds that the entire parcel appears to have been completely cleared of vegetation in 1978. The site is currently occupied by developed areas and ornamental vegetation, disturbed/ruderal areas, and disturbed and relatively undisturbed brittlebush scrub (Tables 3a through 3c and Figures 8a and b).

An unnamed ephemeral streambed crosses through the southeastern portion of the site. A mature black willow (*Salix gooddingii*) is present within the streambed and its trunk is just offsite at the east-central fence line. This willow's canopy extends over the site boundary but no riparian or wetland vegetation is present on the site. There has been disturbance to the streambed, particularly on the west end. On the east end, vegetation in and along the streambed is brittlebush scrub. On the west end, it is either unvegetated or non-native and ruderal.

The MSHCP mapped vegetation layer (1994 baseline) depicts the parcel as largely coastal sage scrub with developed/disturbed land on the west end immediately surrounding the existing residence. No riparian or Riversidean alluvial fan sage scrub is mapped on the parcel in the 1994 baseline (RCA 2021).

Based on the grading limits as shown on the TPM (plus a ± 20 -foot buffer) and the fuel modification zone, the total impact area on Lots 2 through 4 plus the road dedication area would be 2.49 acres. The impact area consists of 1.95 acres of disturbed/developed/ornamental areas and 0.54 acre of brittlebush scrub. No temporary impact areas are proposed and all impacts would be permanent. The TPM does not show any impacts to Lot 1 other than the road dedication area. Areas outside the grading footprint, fuel modification zone, and road dedication area on Lots 2 through 4 will be an open space easement (Figure 8b).

Table 3a. Vegetation communities present by lot

Vegetation Community	Acres Present ¹				
	Lot 1	Lot 2	Lot 3	Lot 4	Total ²
Lot					
Disturbed/Developed/Ornamental	1.07	0.95	0.69	0.49	3.24
Brittlebush Scrub	0	0.12	0.38	1.65	2.15
Road Dedication Area					
Disturbed/Developed/Ornamental	0.07	0.07	0.07	0.14	0.35
Brittlebush Scrub	0	0	0	0	0
Total					
Disturbed/Developed/Ornamental	1.14	1.02	0.76	0.63	3.59
Brittlebush Scrub	0	0.12	0.38	1.65	2.15
TOTAL	1.14	1.14	1.14	2.28	5.74

1. Based on recorded acreage of parcel and acreages as shown on TPM. 2. Discrepancy in totals due to using recorded acreage rather than geographic acreage of parcel as required by City, as well as lot acreages as shown on the TPM.

Table 3b. Vegetation communities impacted by lot

Vegetation Community	Acres Impacted ¹				
	Lot 1	Lot 2	Lot 3	Lot 4	Total
Lot (grading area plus fuel modification zone)					
Disturbed/Developed/Ornamental	0	0.67	0.55	0.38	1.60
Brittlebush Scrub	0	0.10	0.11	0.33	0.54
Road Dedication Area					
Disturbed/Developed/Ornamental	0.07	0.07	0.07	0.14	0.35
Brittlebush Scrub	0	0	0	0	0
Total					
Disturbed/Developed/Ornamental	0.07	0.74	0.62	0.52	1.95
Brittlebush Scrub	0	0.10	0.11	0.33	0.54
TOTAL	0.07	0.84	0.73	0.85	2.49

1. Based on impact areas as shown on TPM plus a 20-foot buffer. Minor discrepancies in totals due to rounding error.

Table 3c. Open space easement by lot

Vegetation Community	Acres ¹				
	Lot 1	Lot 2	Lot 3	Lot 4	Total ²
Open space easement					
Disturbed/Developed/Ornamental	0	0.28	0.14	0.11	1.64
Brittlebush Scrub	0	0.02	0.27	1.32	1.61
TOTAL	0	0.30	0.41	1.43	3.25

1. Based on TPM and fuel mod plan. 2. Any discrepancy in totals due to using recorded acreage rather than geographic acreage of parcel as required by City, as well as lot acreages as shown on the TPM, and rounding error.

4.2.1) Brittlebush Scrub

Patches of coastal scrub vegetation are present in the eastern, southeastern, and south-central portions of the site (Figure 8). Brittlebush (*Encelia farinosa*) is the dominant shrub associated with this vegetation community on the site and it is best characterized as brittlebush scrub (*Encelia farinosa* Shrubland Alliance). The brittlebush scrub on the eastern and southeastern portions of the site is relatively undisturbed. The more centrally located patches of brittlebush scrub on the site have been disturbed by vehicle tracks and storage of materials, mainly around the periphery of the patches.

Additional perennials associated with this community include California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), and cudweed aster (*Corethrogyne filaginifolia* var. *filaginifolia*). Other native perennials present include blue elderberry (*Sambucus nigra* ssp. *cerulea*) and Anderson box-thorn (*Lycium andersonii*). Non-native plants commonly observed include shortpod mustard (*Hirschfeldia incana*), wild oat (*Avena* species), and red brome (*Bromus madritensis* ssp. *rubens*). Castor bean (*Ricinus communis*), a non-native large shrub or small tree, is conspicuous along the southwestern and south-central site edges in alluvial soils associated with a small onsite drainage.

Brittlebush scrub is ranked as S4 (apparently secure, uncommon but not rare) and is not considered sensitive (CDFW 2020).

4.2.2) Disturbed/Developed/Ornamental

The disturbed/developed/ornamental portion of the property is occupied by the residence and associated structures, driveway, trees, lawn, and garden; the two wells and the unimproved access road for the wells; trees and fencing along Alpine Meadows Lane; and the cleared area in the western and north-central areas of the site.

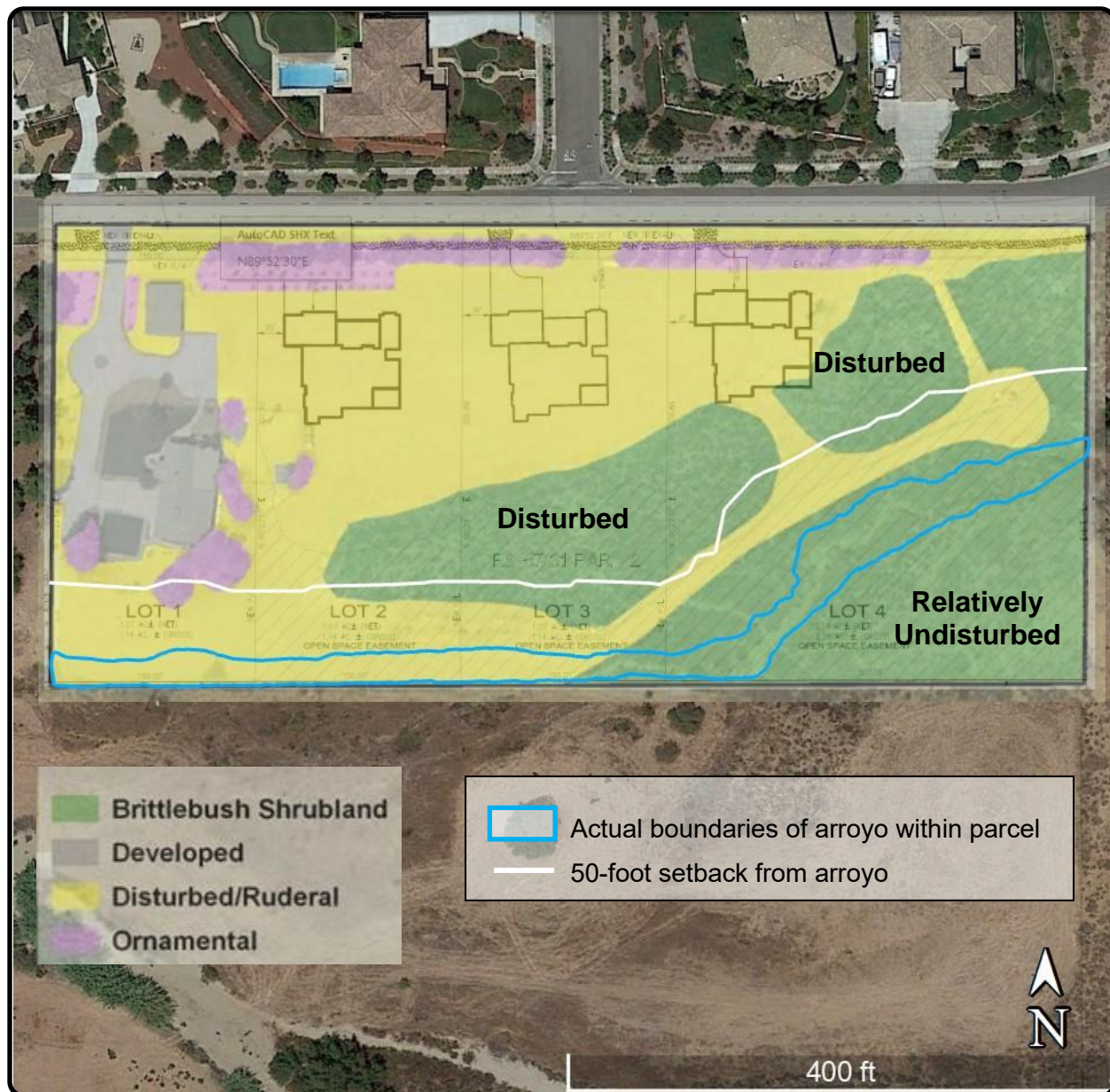
Disturbed areas that are not vegetated with ornamental plants are sparsely to densely inhabited by various non-native annual plants, including non-native grasses (*Bromus* species and *Schismus barbatus*), mustards (*Hirschfeldia incana* and *Sisymbrium irio*), Russian thistle (*Salsola tragus*), totalote (*Centaurea melitensis*), filaree (*Erodium* species), horehound (*Marrubium vulgare*), cheeseweed (*Malva parviflora*), and tree tobacco (*Nicotiana glauca*).

Some native annual plants that are tolerant of disturbed places are also present and include large flower rancher's fiddleneck (*Amsinckia intermedia*), western sunflower (*Helianthus annuus*), jimsonweed (*Datura wrightii*), and horseweed (*Erigeron canadensis*).

Non-native ornamental landscaping includes Peruvian pepper tree (*Schinus molle*), blue jacaranda (*Jacaranda mimosifolia*), eucalyptus (*Eucalyptus* species), pine (*Pinus* species), elm (*Ulmus* species), acacia (*Acacia longifolia*), crepe myrtle (*Lagerstroemia* species), and Mexican fan palm (*Washingtonia robusta*). Additional unidentified ornamental shrubs and smaller landscape annuals are present.

Non-native weedy plants are present in the landscaped areas and include (but are not limited to) common sow thistle (*Sonchus oleraceus*), prickly lettuce (*Lactuca serriola*), lamb's-quarters (*Chenopodium album*), pineapple weed (*Matricaria discoidea*), and tumbling pigweed (*Amaranthus albus*).

Sawyer et al. (2009) does not provide a classification for disturbed or ornamental areas. CDFW does not assign an S rank to non-native vegetation communities and they are not considered sensitive (CDFW 2020).



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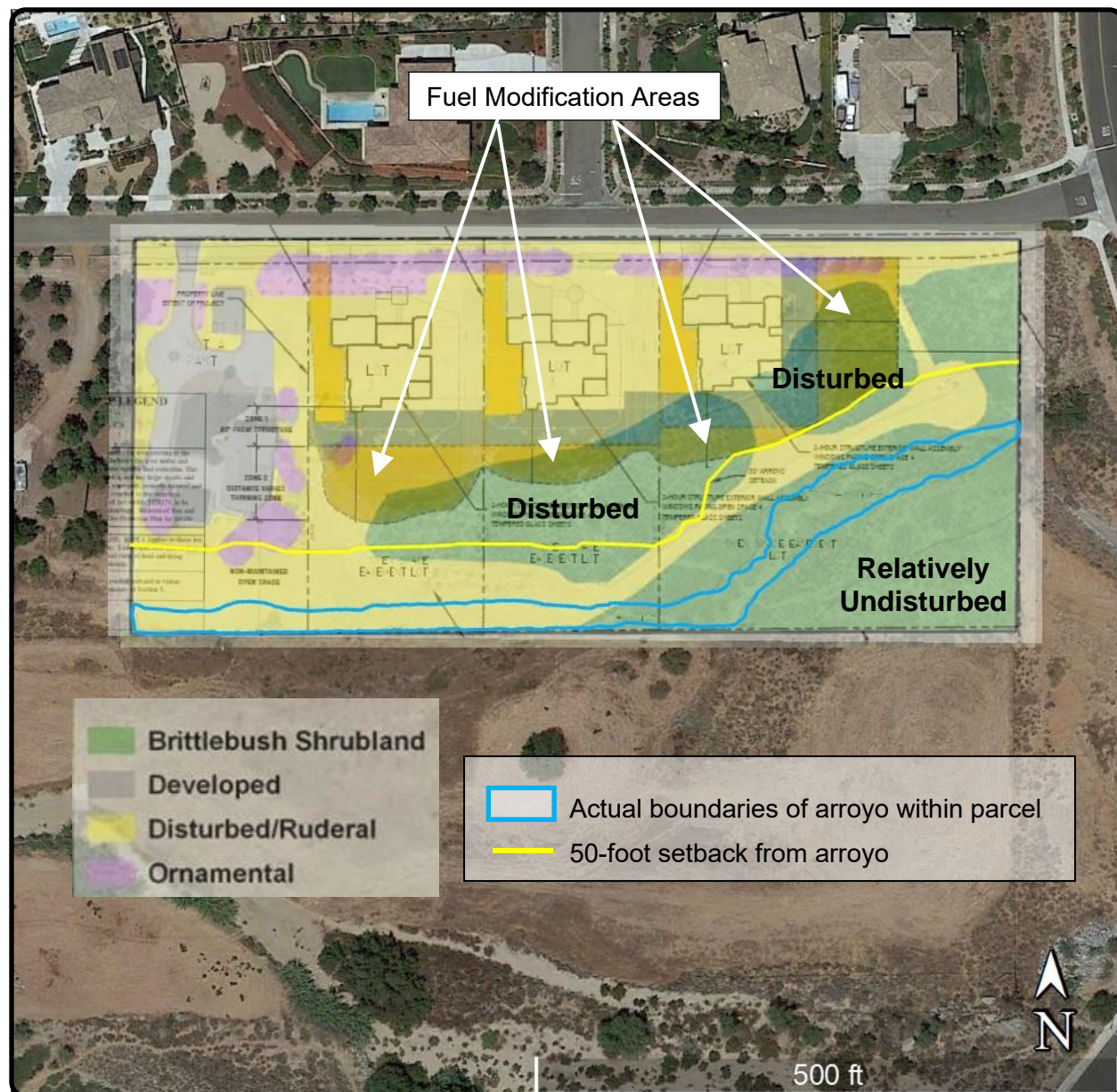
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Figure 8a

Habitat with Tract Map

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California



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Figure 8b

Habitat with Fuel Mod

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California

4.3) Plant Species

A total of 47 plant species were observed onsite during 2021 surveys². Other ornamental species may also be present adjacent to the existing residence. A list of observed plant species is included in Appendix A. Of the 47 species, 31 (66 percent) are non-native or ornamental.

Due to the timing of the survey (June-July) and below average precipitation, additional annual plant species may be present on the site and were not detected.

No federal or state-listed or special status plant species were observed on the site during surveys. The site is not within U.S. Fish and Wildlife Service (USFWS) designated critical habitat for any listed plant species (USFWS 2021b).

Based on the presence of mostly non-native vegetation throughout the site, disturbances associated with current and past land use, a lack of CNDDDB records in the site vicinity, and results of this habitat assessment, listed and special status plant species known from the region are either absent, not expected to occur, or have a low potential for occurrence on the site (see Appendix B), with the exception of Payson's jewelflower (*Caulanthus simulans*).

Payson's jewelflower has a low to moderate potential to occur on the site. The survey was conducted in June and July and did not adequately cover the blooming period of this annual plant. Additional botanical surveys during the blooming period in a year with adequate rainfall could result in a revision of this potential. This species has a California Rare Plant Rank (CRPR) of 4.2 (limited distribution, moderate degree of threat) and is covered under the MSHCP and considered adequately conserved.

4.3.1) Trees

There are a number of non-native and ornamental trees on the site, mostly in association with the existing residence or along Alpine Meadows Lane. The only native trees onsite are blue elderberry and one black willow with its trunk offsite but canopy extending over the site boundary. There are no oak species present.

Non-native trees present are ornamental pine (*Pinus* species), Peruvian pepper tree (*Schinus molle*), blue jacaranda (*Jacaranda mimosifolia*), avocado (*Persea americana*), crepe myrtle (*Lagerstroemia* species), eucalyptus (*Eucalyptus* species), pomegranate (*Punica granatum*), peach (*Prunus persica*), unidentified citrus (*Citrus* species), tree tobacco (*Nicotiana glauca*), elm

² The 2006 survey report (L&L 2006a) did not include a list of observed plant species.

(*Ulmus* species), and Mexican fan palm (*Washingtonia robusta*). There is a row of acacia trees (*Acacia* species) on the northern site boundary along Alpine Meadows Lane. Representative photos are included in Appendix C. A tree survey was not conducted.

4.4) Wildlife Species

A total of 32 vertebrate wildlife species (mostly birds) were detected during surveys in 2006 and 2021. No federal or state-listed endangered or threatened wildlife species were observed. A list of all observed species is included in Appendix A.

Three special status wildlife species were observed during the 2021 surveys, Cooper's hawk (*Accipiter cooperii*; CDFW Watch List species), Nuttall's woodpecker (*Picoides nuttallii*; USFWS Bird of Conservation Concern), and San Diego desert woodrat (*Neotoma lepida intermedia*; CDFW Species of Special Concern). Details of these observations are provided in Table 4 and observation locations are shown on Figure 9a. Representative photos are in Appendix C. No special status wildlife species were noted during the 2006 survey.

A Cooper's hawk was observed on two occasions (June 22 and July 7, 2021 surveys) perching in a tree adjacent to the existing residence near the southwest corner of the site. A Nuttall's woodpecker was heard vocalizing just offsite in Prenda Creek on June 22, 2021.

Four (4) middens (stick nests) of San Diego desert woodrat were observed in the northeast corner of the site in piles of rocks and concrete debris during the 2021 surveys (middens were not noted during the 2006 survey). The nest materials appeared weathered and there was no sign of recent activity at any of the middens. In coastal scrub habitat, the home range of this species is 0.1 to 0.5 acre (CDFW 2008). Based on the locations of the middens, the home ranges of the occupants (if present) would likely be confined to the open space easement and adjacent offsite areas to the east. Under the MSHCP, a survey is not required for San Diego desert woodrat.

Cooper's hawk and San Diego desert woodrat are covered under the MSHCP and considered adequately conserved. Nuttall's woodpecker is not covered under the MSHCP.

Table 4. Special status species observed during surveys.

Species	GPS Coordinates (Decimal Degrees)	Number Detected	Location on Site	Elevation (feet)
Cooper's hawk (perching) <i>Accipiter cooperii</i>	33.910084, -117.363975	1 individual (possibly 2)	Southwest	1,293
Nuttall's woodpecker (vocalization) <i>Dryobates nuttallii</i>	33.909378, -117.364299	1 individual	Offsite to southwest in Prenda Creek	1,274
San Diego desert woodrat (midden) <i>Neotoma lepida intermedia</i>	33.910660, -117.361915	1 midden	Northeast corner	1,325
	33.910693, -117.361827	1 midden	Northeast corner	1,329
	33.910649, -117.362019	1 midden	Northeast corner	1,321
	33.910569, -117.361887	1 midden	Northeast corner	1,316

The long-term anthropogenic disturbances on the site limit the potential for listed and special status wildlife species known from the region to occur on the site. Most are absent, not expected to occur, or have a low potential for occurrence (see Appendix B). Species that have a low to moderate, moderate, or high potential to occur are:

- Crotch bumble bee (*Bombus crotchii*; candidate for state listing as endangered³),
- Southern California legless lizard (*Anniella stebbinsi*; CDFW Species of Special Concern),
- Orange-throated whiptail (*Aspidoscelis hyperythra*; CDFW Watch List species),
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*; CDFW Species of Special Concern),
- Coast horned lizard (*Phrynosoma blainvillii*; CDFW Species of Special Concern),
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFW Watch List species),
- Bell's sage sparrow (*Artemisiospiza belli belli*; CDFW Watch List species),

³ Based on CDFW information, Crotch bumble bee was previously a candidate for state listing (CDFW 2021a, 2022), but the Sacramento Superior Court ruled that insects are not eligible for listing under the California Endangered Species Act: *Almond Alliance of California v. California Department of Fish and Wildlife*, Sacramento Superior Court No. 34-2019-80003216 (Nov. 13, 2020). The California Fish and Game Commission filed an intent to appeal this decision in February 2021. On May 31, 2022, California's Third District Court of Appeal ruled that the California Endangered Species Act can protect invertebrates, including Crotch bumble bee (CFS 2022). A State Supreme Court ruling reinstated its candidacy on September 30, 2022 (Supreme Court Case S275412).

- California horned lark (*Eremophila alpestris actia*; CDFW Watch List species),
- Loggerhead shrike (*Lanius ludovicianus*; CDFW Species of Special Concern),
- Coastal California gnatcatcher (*Polioptila californica californica*; federally listed threatened, CDFW Species of Special Concern),
- Allen's hummingbird (*Selasphorus sasin*; USFWS Bird of Conservation Concern),
- Pallid bat (*Antrozous pallidus*; CDFW Species of Special Concern),
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*; CDFW Species of Special Concern), and
- Western mastiff bat (*Eumops perotis californicus*; CDFW Species of Special Concern).

None of these species were observed during surveys in 2006 or 2021. These species are covered under the MSHCP and considered adequately conserved, with the exception of Crotch bumble bee, Southern California legless lizard, Allen's hummingbird, pallid bat, and western mastiff bat. These five species are not covered under the MSHCP.

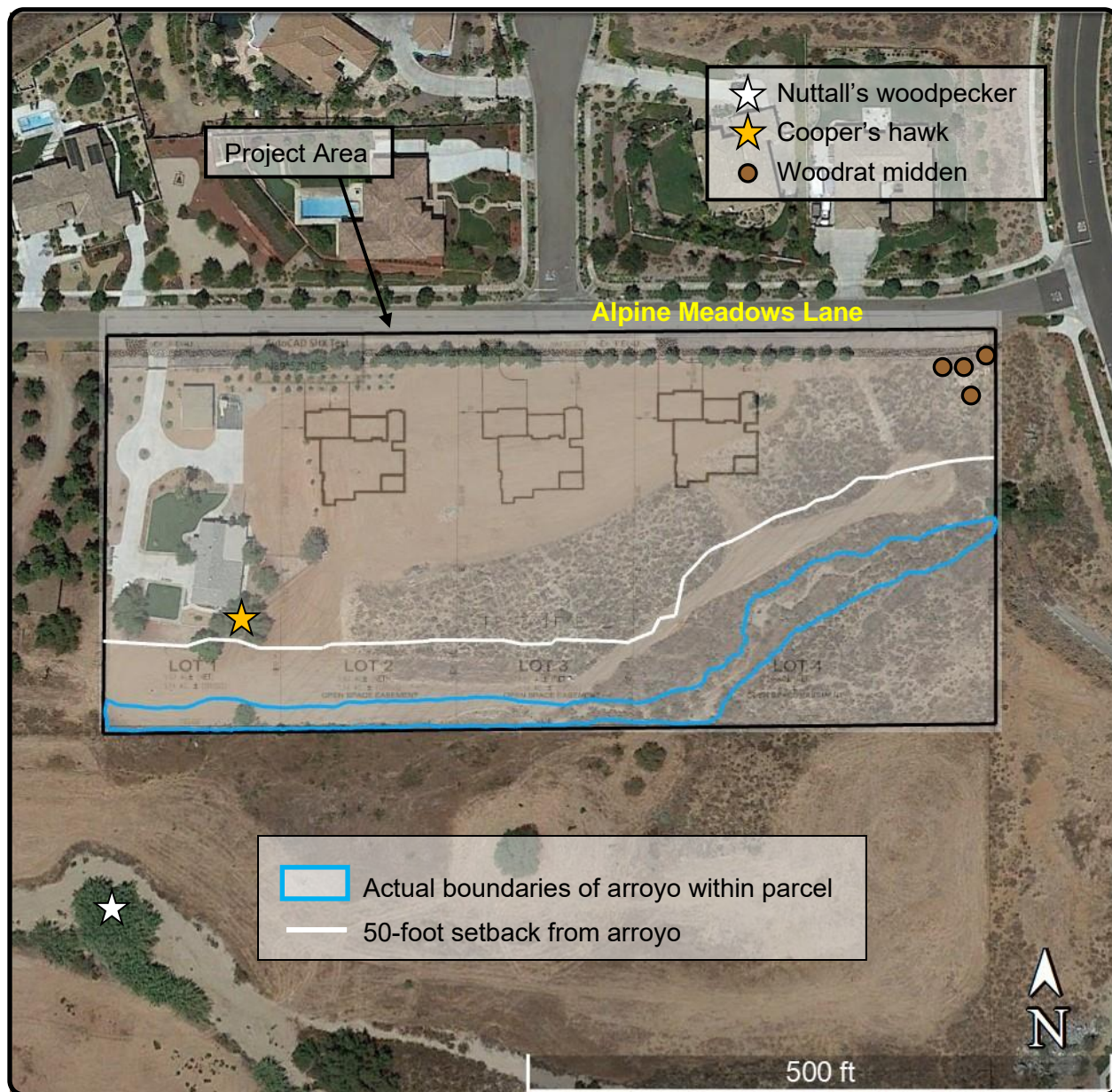
No evidence of bumble bee colonies was observed but a survey for invertebrate species was not conducted. Crotch bumble bee has a low to moderate potential for occurrence on the site, mainly in the avoided area.

Southern California legless lizard is a CDFW Species of Special Concern. It has a moderate potential for occurrence on the site, mainly within the avoided area and particularly along the streambed.

Allen's hummingbird is a USFWS Bird of Conservation Concern. It has a high potential to forage on the site, but the site is outside the species' breeding range.

No evidence of bat roosting was observed but the interior of onsite structures was not included in the survey. The buildings were well maintained and no obvious gaps or holes were noted where bats could access the structures. Both pallid bat and western mastiff bat have a moderate potential to forage on the site, but a low potential to roost there.

Fairy shrimp, riparian birds, burrowing owl, and nesting birds are discussed below.



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Figure 9a

Special Status Species

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California

4.4.1) Fairy Shrimp

Soil types mapped on the site are not consistent with an alkali playa or vernal pool complex (Bauder et al 2011). Pools or depressions characteristic of vernal habitat were not observed on the site and no wetland or vernal pool plant species were present. No evidence of ponding areas (i.e., cracked soils, tire ruts, etc.) were observed on the site during surveys.

No MSHCP species listed for protection associated with riparian/riverine areas and vernal pools were observed. No fairy shrimp or fairy shrimp habitat was observed during this study.

4.4.2) Riparian Birds

Least Bell's vireo (*Vireo bellii pusillus*) is state and federally listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species is migratory and breeds in California, arriving in March and departing by September or October. Males establish and defend territories in riparian woodlands and riparian scrub. Territory size ranges from 0.5 to 7.5 acres (USFWS 1998). Dense shrub cover is required for nesting.

There are 22 CNDDDB documented occurrences of nesting least Bell's vireo within five (5) miles of the site. The closest is within Prenda Arroyo, about 0.5 miles east of the site. There is no riparian habitat on the site and no suitable habitat for least Bell's vireo. Riparian vegetation near the site includes a few isolated willows adjacent to the site on the eastern boundary and riparian vegetation in Prenda Creek, to the south of the site. The isolated willows to the east do not provide the dense cover and/or the extent of habitat required by least Bell's vireo. The riparian vegetation in Prenda Creek south of the site includes mulefat (*Baccharis salicifolia*), willows (*Salix* species), cottonwood (*Populus fremontii*), tamarisk (*Tamarix* species), castor bean (*Ricinus communis*), arundo (*Arundo donax*), and other species. This area provides potentially suitable habitat for least Bell's vireo.

Southwestern willow flycatcher (*Empidonax traillii extimus*) is state and federally listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species inhabits dense riparian forests with ample numbers of willows and other associated trees and shrubs.

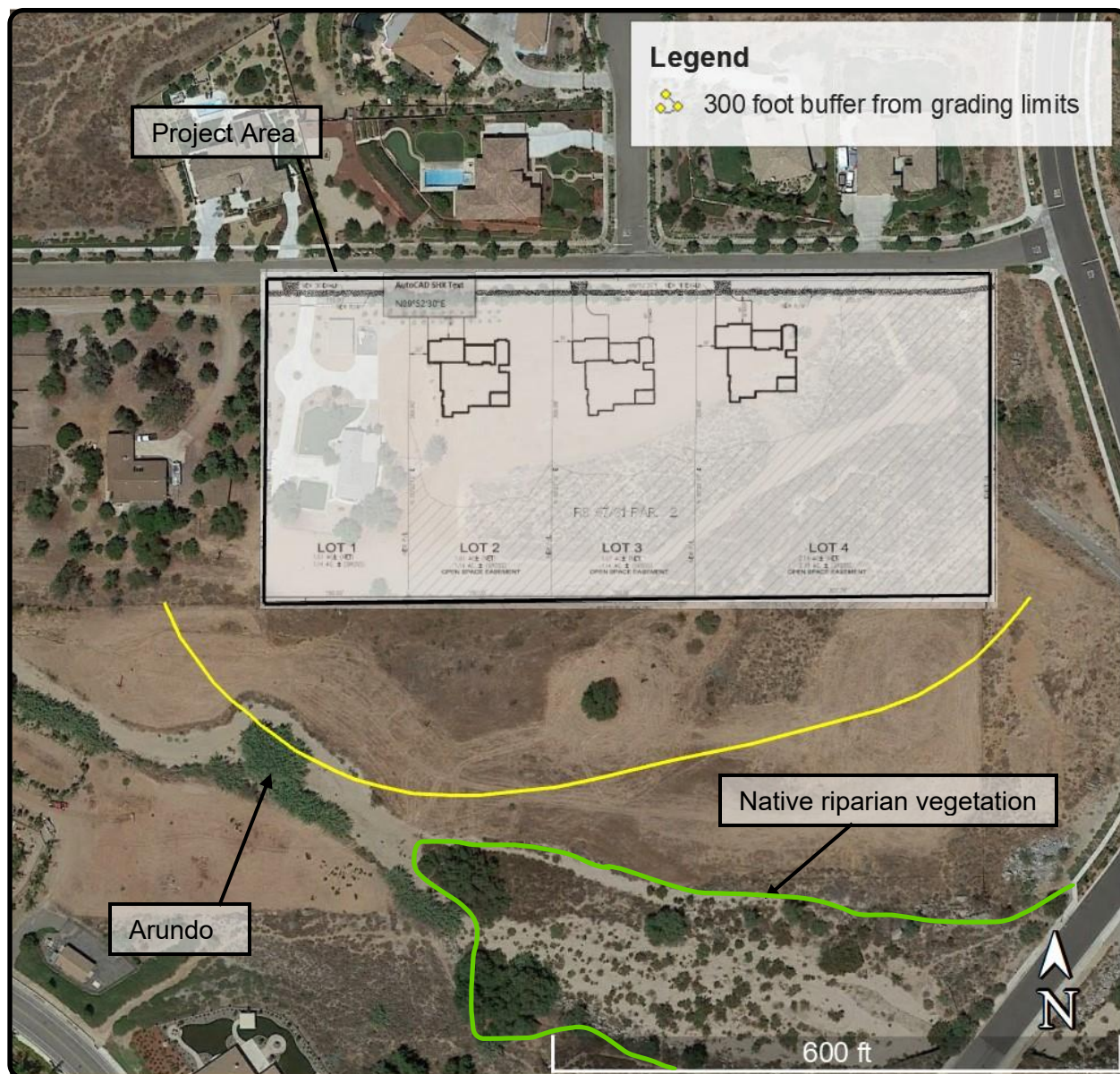
There are no CNDDDB documented occurrences of nesting southwestern willow flycatcher within five (5) miles of the site. There is no riparian habitat on the site and no habitat for southwestern willow flycatcher. However, there is riparian vegetation within Prenda Creek. This area consists mainly of mulefat and shrubby willows with some cottonwood trees. This offsite area provides potentially marginal habitat for southwestern willow flycatcher.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is federally listed as threatened and state listed as endangered. It is a covered species under the MSHCP and considered adequately conserved, but surveys are required in suitable habitat as described in MSHCP Section 6.1.2 and mitigation is required if the species is present. This species inhabits extensive riparian thickets or forests with dense, low-level or understory foliage and abutting on slow-moving watercourses, backwaters, or seeps.

There is one CNDDDB documented occurrences of nesting western yellow-billed cuckoo within five (5) miles of the site. This occurrence is from 1894 in the Riverside area, exact location unknown, and mapped 3.7 miles north of the site. The CNDDDB lists this occurrence as extirpated by development. There is no riparian habitat on the site and no habitat for western yellow-billed cuckoo. The riparian vegetation within Prenda Creek likely does not provide the dense cover and/or the extent of habitat required by the western yellow-billed cuckoo.

There is no suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo on or immediately adjacent to the site. Riparian vegetation is present in Prenda Creek to the south of the site. A protocol survey for riparian birds was not conducted, but Prenda Creek provides potentially suitable habitat for least Bell's vireo and potentially marginal habitat for southwestern willow flycatcher. This area likely does not provide suitable habitat for western yellow-billed cuckoo.

Based on TPM 38174 and review of aerial images (Google Earth 2021), the grading areas on the Project site appear to be at least 300 feet away from the suitable riparian habitat in Prenda Creek (Figure 9b). Native riparian habitat is not present within the 300-foot buffer. The buffer includes the edge of a large clump of non-native arundo, also called giant reed (*Arundo donax*). Arundo is an invasive exotic species that degrades riparian habitat. It is very rarely utilized as nesting habitat by least Bell's vireo. An extensive study in the Prado Basin found only 0.8 percent of vireo nests were located in arundo (Pike et al. 2006).



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Figure 9b

**300-Foot Buffer from
 Riparian**

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California

4.4.3) Burrowing Owl

Burrowing owl (*Athene cunicularia*) is protected under the federal Migratory Bird Treaty Act and California Fish and Game Code and is a CDFW Species of Special Concern. It is a small, ground-dwelling owl found in open dry grassland, desert, or shrubland areas and in uncultivated agricultural areas, rangelands, and other open areas with low-growing vegetation.

Burrows are an essential element of burrowing owl habitat. Although the burrowing owl is capable of excavating its own burrows in soft soils, it typically modifies and inhabits abandoned burrows of small burrowing mammals, such as ground squirrels and pocket gophers. The burrowing owl has also been known to use man-made structures such as cement culverts, debris piles, and other artificial burrows.

Occupancy of burrowing owl habitat can be verified at a site by observation of at least one (1) owl or sign of owl (molted feathers, cast pellets, prey remains, eggshell fragments, or excrement) at or near a burrow entrance. A site is considered occupied if at least one (1) owl has been identified onsite in the past three (3) years, because (if undisturbed) burrowing owls exhibit high site fidelity (CDFG 2012, CBOC 1993).

There are six (6) CNDDDB documented occurrences of burrowing owl within five (5) miles of the Project site (CDFW 2021c). The closest is Element Occurrence (EO) #1074, located about 0.5 mile west of the site and downstream of Prenda Dam. This occurrence is from 2004 and consisted of a breeding pair. The CNDDDB records it as extirpated.

EO #441 is from 1989 and consisted of one adult. It is about 2.3 miles southwest of the site. The CNDDDB records this occurrence as presumed extant but (based on Google Earth aerial images) the area is now developed.

EO #1283 and 1284 were both observed at the March Air Force Base Stephens' Kangaroo Rat Preserve in 2009. These records consist of a breeding pair with a chick and a breeding pair, respectively. These occurrences are 2.7 and 2.6 miles east of the site, respectively, and are assumed to be extant.

EO #929 is from 2006 and is about 2.9 miles southeast of the site. The record consists of one adult. Based on Google Earth aerial images, this location remains undeveloped agricultural fields and this occurrence is assumed to be extant.

EO #1771 was observed at the Riverside Municipal Airport in 2007 and is 4.8 miles northwest of the site. This occurrence consists of two adults assumed to be a breeding pair and is assumed to be extant.

There are four (4) eBird records of burrowing owl observations within five (5) miles of the Project site (eBird 2021). One record consists of multiple observations of one to five burrowing owls from January to November 2008. The July observation was of two juveniles and one adult. This record is from the Riverside Municipal Airport and appears to be the same location as EO #1771.

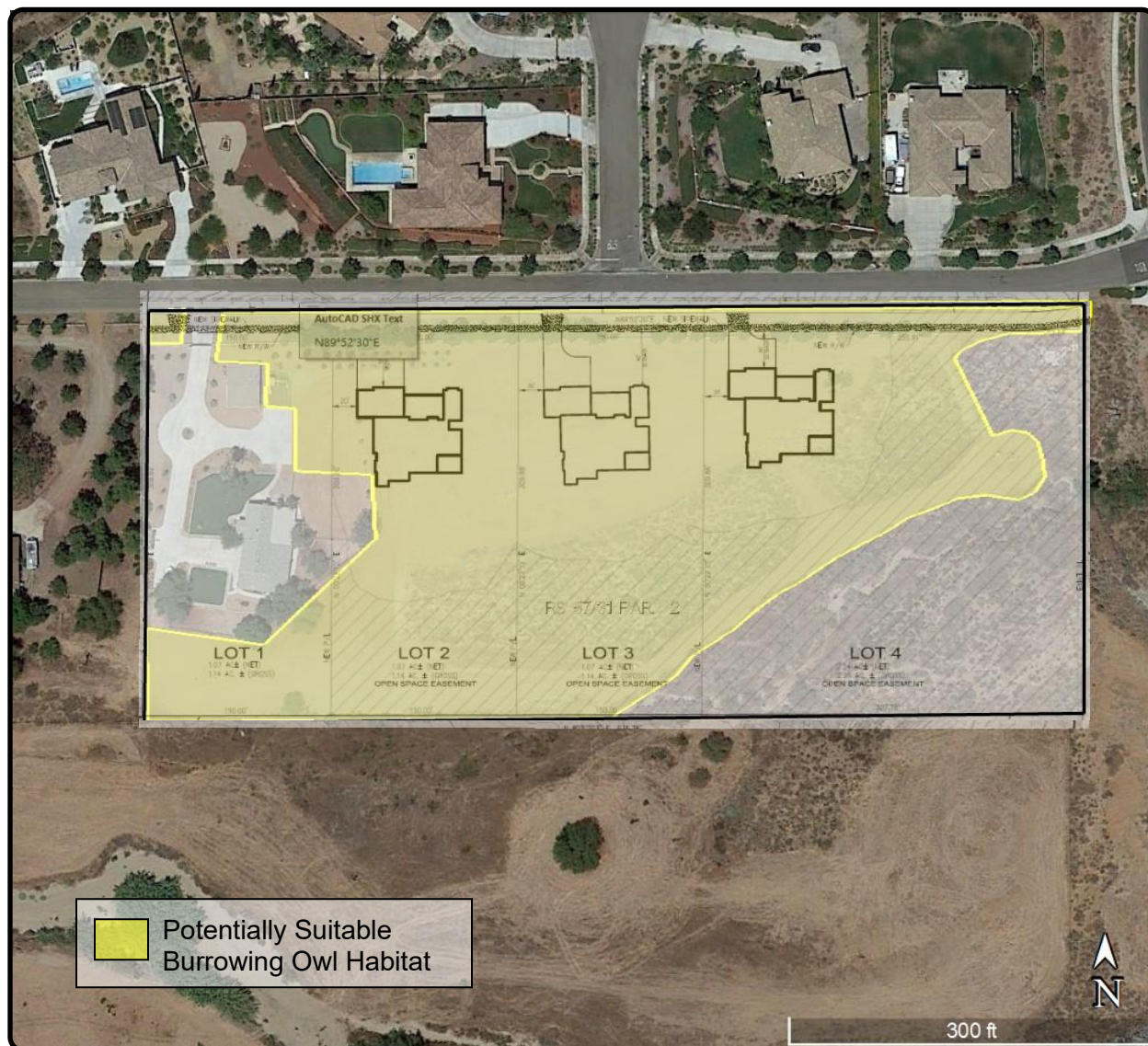
The second eBird record is from December 2016 at the Ben Clark Public Training Center, about 4.0 miles southeast of the site. This record consists of one burrowing owl. The third and fourth eBird records are in close proximity to each other at or near the Sycamore Canyon Wilderness Park, about 3.1 miles northeast of the site. These records are from May 2007 and September 2013 and consist of one and two burrowing owls, respectively.

No burrowing owls, owl sign (pellets, scat, feathers, tracks, etc.), or occupied burrows were observed onsite during the 2006 survey or 2021 protocol breeding season survey. Potentially suitable burrowing owl habitat is present on the site (Figure 10), including small mammal burrows. Potentially suitable habitat is also present within the 150-meter buffer area (Figure 6), but no owls, owl sign, or occupied burrows were observed in the buffer.

4.4.4) Nesting Birds

There is suitable habitat for nesting birds throughout the site. No active nests were observed during the 2021 survey but the survey was conducted after the peak of nesting season. Nesting birds may utilize trees, shrubs, and other vegetation, structures, stockpiled materials, and open ground on the site for nesting. This includes the native scrub habitat on the site as well as the disturbed/developed/ornamental areas. Nesting is likely to be limited to the more common species that are tolerant of human presence.

Most of the trees on the site are not of sufficient size to provide potential raptor nesting sites. Tall trees on the adjacent property to the west may provide raptor nesting sites. The 2006 survey found a potential raptor or raven (*Corvus corax*) nest on an old windmill on the site. The windmill was no longer present during the 2021 survey.



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Figure 10

Burrowing Owl Habitat

(Aerial obtained from Google Earth, August 2019)

*Alpine Meadows Lane, City of Riverside
Riverside County, California*

4.4.5) Wildlife Corridor

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated “islands” of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because movement barriers prohibit the infusion of new individuals and genetic information.

Wildlife movement activities usually fall into one of three movement categories: dispersal (e.g., juvenile animals dispersing from natal areas or individuals extending their range), seasonal migration, and movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover).

Prenda Creek is immediately south of the site and drainages often serve as wildlife corridors and travel routes. Prenda Creek is in a largely natural state in the Project vicinity and may function as a wildlife corridor for limited local travel between currently undeveloped (but not conserved) areas to the east and west. The drainage running through the site may contribute to this limited movement through the area. TPM 38174 indicates that the drainage on the site will be avoided by the Project.

4.5) Jurisdictional Waters and Wetlands

The property is largely within the mapped extent of the Prenda Arroyo, as identified by the City of Riverside, although the Project disturbance area is not within the watercourse as it currently exists (see Section 4.6). The Prenda Arroyo includes Prenda Creek, an ephemeral drainage that is a blue line stream on U.S. Geological Survey (USGS) maps. Prenda Creek is located about 150 feet south of the parcel (at its closest point). An ephemeral drainage that is tributary to Prenda Creek crosses the southeast portion of the parcel from east to west. This unnamed drainage is not a blue line stream. The Prenda Dam is located on Prenda Creek and is about 0.3 mile west (downstream) of the site.

A jurisdictional delineation was conducted in September 2021 and found that the streambed within the property measures 654 linear feet with an average width of 6.6 feet. The delineation found 0.46 acre of CDFW streambed and no CDFW wetlands on the parcel (Table 5a and Figure 11). Of this area, 0.088 acre is also federal Waters of the U.S. There are no federal wetlands (Table 5b and Figure 11).

There has been disturbance to the drainage, particularly on the west end. On the east end, vegetation in and along the drainage is brittlebush scrub. On the west end, it is either unvegetated or non-native and ruderal. Photos of the drainage are provided in Appendix C.

Impacts to jurisdictional waters require permits from the USACE, RWQCB, and CDFW. However, TPM 38174 indicates that the Project will avoid the jurisdictional area and permits would therefore not be required.

4.5.1) MSHCP Riparian/Riverine and Vernal Pool Habitat

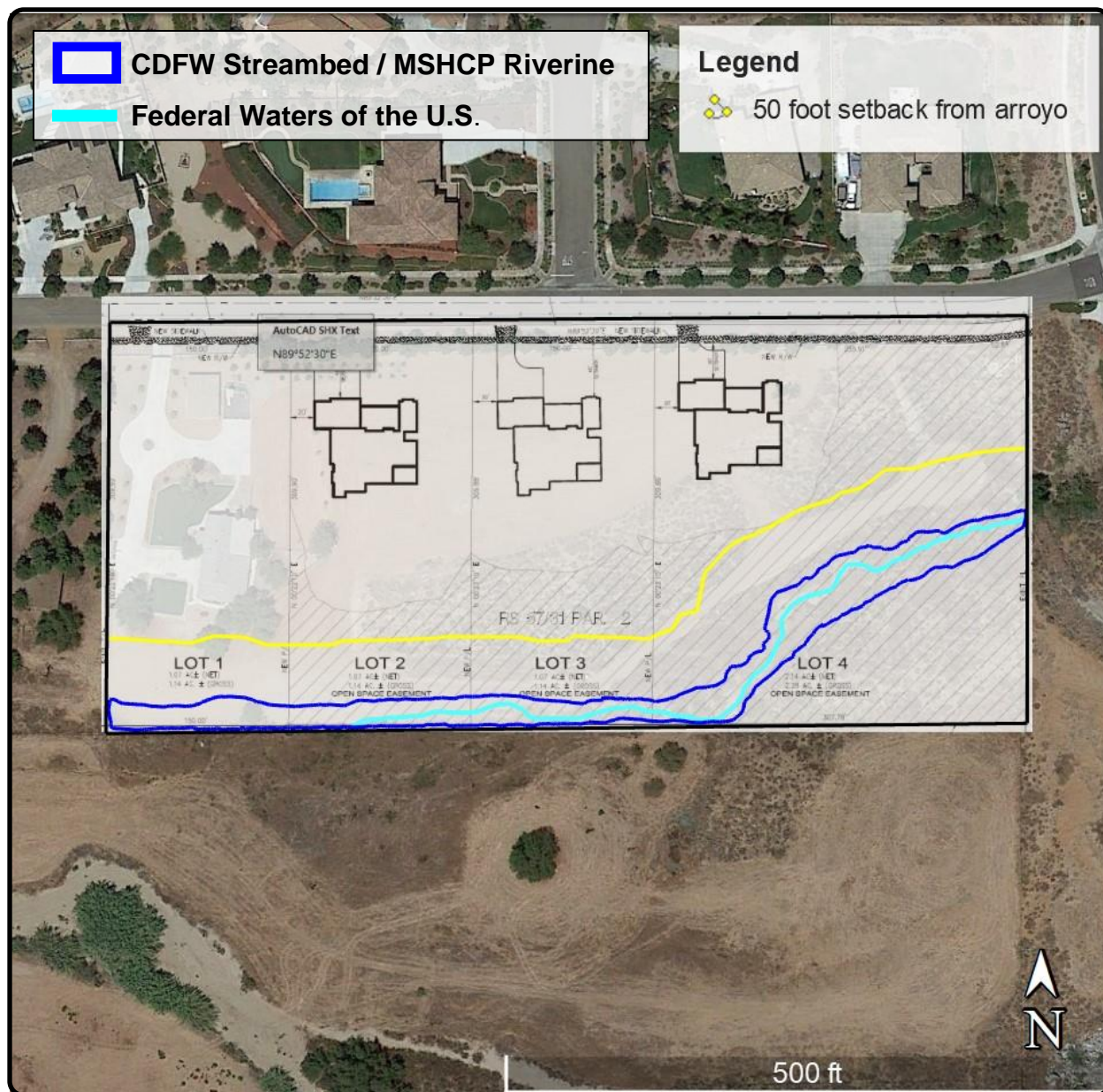
The jurisdictional delineation found 0.46 acre of MSHCP riverine habitat and no MSHCP riparian habitat on the site. Impacts to MSHCP riverine habitat requires preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP). TPM 38174 indicates that the Project will avoid the jurisdictional area. Therefore, the Project would not impact MSHCP riparian/riverine habitat and a DBESP is not required (Table 5a and Figure 11).

Table 5a. CDFW streambed/MSHCP riverine habitat

Point	Average Width (ft)	Square Feet (Acres)	Type of Waters	Latitude Longitude	HGM Code	Comment
State 1	6.625	20,222 (0.46)	Riverine Streambed Unveg/disturbed	33.963021° -117.033852°	Riverine	Flood Facility

Table 5b. USACE/RWQCB jurisdiction

Point	Average Width (ft)	Length (ft)	Square Feet (Acres)	Type of Waters	Latitude Longitude	HGM Code	Comment
R1	5.863	654	3,834.40 (0.088)	Riverine Unveg/disturbed	33.963021° -117.033852°	Riverine	Flood Facility



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Figure 11

Jurisdictional Delineation

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California

4.6) Prenda Arroyo

4.6.1) Background

The following section is summarized from the Open Space and Conservation Element of the City of Riverside General Plan (Riverside 2012).

The arroyos of the City of Riverside are naturally occurring ephemeral drainages created over thousands of years as seasonal rains eroded the hills. The arroyos support wildlife species and plant communities. The arroyos also provide corridors which wildlife use to migrate between habitat areas.

Urban expansion has infringed upon the arroyos and consequences include excessive grading, encroachment into the logical natural stream channel, increased urban runoff, and conflicts created by pets and invasive exotic plants. Proposition R and Measure C served to protect the arroyos within the City of Riverside from urban encroachment, pollutants, and erosion.

In 1979, Riverside voters approved Proposition R: "Taxpayer's Initiative to Reduce Costly Urban Sprawl by Preserving Riverside's Citrus and Agricultural lands, Its Unique Hills, Arroyos and Victoria Avenue." In 1987, Riverside voters passed Measure C, a bolstering amendment to Proposition R, entitled "Citizens' Rights Initiative to Reduce Costly Urban Sprawl, to Reduce Traffic Congestion, to Minimize Utility Rate Increases and to Facilitate Preservation of Riverside's Citrus and Agricultural Lands, its Scenic Hills, Ridgelines, Arroyos and Wildlife Areas".

Six arroyos, recognized by the City's Grading Code (Title 17), traverse the City, including Prenda Arroyo. The Prenda Arroyo originates in the southerly hills of Riverside and flows to the Santa Ana River. It is considered to be largely in a natural condition south of the 91 Freeway within the Arlington Heights Greenbelt and Alessandro Heights area⁴. The Arroyo is constrained by the Prenda Dam.

Past development practices have substantially reduced habitat for wildlife species and severed connections to larger habitat areas. Development has also deteriorated the quality of the water in the arroyos and caused erosion of the stream banks. As a result, valuable biological resources are mostly limited to major open spaces within and adjacent to the City limits, including Santa Ana River Regional Park, Box Springs Mountain Reserve, the Alessandro Hills, the Woodcrest and Prenda Arroyos, and Mockingbird Canyon.

⁴ The project site is within the Alessandro Heights area.

Under Objective OS-5 of the City of Riverside General Plan (Protect biotic communities and critical habitats for endangered species), Policy OS-5.1 is intended to preserve significant habitat and environmentally sensitive areas, including hillsides, rock outcroppings, creeks, streams, viewsheds and arroyos through application of the RC Zone standards and the Hillside/Arroyo standards of the City's Grading Code. Under Objective OS-6 of the General Plan (Preserve and maintain wildlife movement corridors), Policy OS-6.3 is intended to preserve the integrity of Riverside's arroyos and riparian habitat areas through the preservation of native plants.

As shown in Figure 4, most of the parcel is within the mapped extent of the Prenda Arroyo except for a portion of the northeast quadrant and a small area of the southeast corner. However, the Project disturbance area is not within the watercourse as it currently exists (Figures 12a and 12b).

4.6.2) Historical Conditions

Review of historic aerial images and other records (L&L 2006b) shows that the western portion of the parcel has been developed for residential use since 1947. The parcel appears to have been completely cleared of vegetation in 1978 but vegetation had reestablished by 1994 (NETRonline 2021). The cleared area currently present in the western and north-central areas of the site is first apparent in 2004 (Google Earth 2021) although it increases in size over time. The road between the wells is also first visible in 2004. The drainage through the site appears to be essentially in its current topography since at least 1967 (Figures 13a through 13f) (Google Earth 2021, NETRonline 2021).

The Prenda Dam (CA00799) is located about 0.3 mile west and downstream of the site on Prenda Creek, the blue line stream that flows to the south of the parcel. It is an earthen dam constructed in 1954 for flood control (US National Dams 2021). It is 1,313 feet long, 44 feet high, and has a storage capacity of 192 acre-feet. It is operated by the Riverside County Flood Control and Water Conservation District (RCFCD).

4.6.3) Current Conditions

Section 17.08.011 of the City of Riverside Municipal Code defines arroyos as:

"Arroyo" shall mean those areas shown within the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F of this title. The limits of these arroyos and arroyo tributaries shall include all the land within the water course area, the adjacent slopes

having an average natural slope of 30 percent or greater, and all other areas within the boundaries shown on Exhibits A-F of this title.

The Project disturbance area is not within the watercourse as it currently exists and where it has been since at least 1967. The criteria used by the City to map the arroyo are not known but assumed to rely on factors such as topography, hydrology, soils, vegetation, and the historical extent of the watercourse.

The provisions for hillside/arroyo grading as defined in Section 17.28.020 of the Municipal Code apply to all excavation and grading of any land within or adjacent to the boundaries of Prenda Arroyo. This Section states in part, "No development or grading of any kind shall be permitted within 50 feet of the limits of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos and associated tributaries as shown on Exhibits A-F. The Community & Economic Development Director shall have the authority to administratively allow grading within designated arroyo tributaries depending on the sensitivity of the area. Sensitivity shall be determined by such factors as the presence of riparian vegetation, habitat for rare or endangered species, significant rock outcroppings or other unique topographic features on the property proposed to be graded or in nearby segments of the same tributary."

Riparian Vegetation

There is no riparian vegetation on the site, with the exception of one willow tree. The trunk of this willow is offsite, but its canopy overhangs the eastern site boundary. Based on TPM 38174, this area is within the open space easement and this willow will not be impacted. The only native habitat on the site is brittlebush scrub, a type of coastal scrub, which is uncommon but not rare and is not considered a sensitive vegetation community (CDFW 2020). Project grading would impact 19 percent of the brittlebush scrub on the site and avoid 81 percent. All of the brittlebush scrub within the grading area is disturbed and all of the relatively undisturbed brittlebush scrub would be avoided.

Riparian vegetation is present within Prenda Creek to the south of the site. Based on TPM 38174 and review of aerial images (Google Earth 2021), the grading areas on the Project site (plus a 20-foot buffer) appear to be at least 300 feet away from the native riparian habitat in Prenda Creek.

Habitat for Rare or Endangered Species

Most listed and special status plant and wildlife species known from the region are either absent, not expected to occur, or have a low potential for occurrence on the site. There are a few

exceptions (see Sections 4.3 and 4.4), but most are covered under the MSHCP and considered adequately conserved. Recommended mitigation would avoid and minimize any potential impacts (Mitigation Measure BIO-1 [Burrowing Owl], Mitigation Measure BIO-2 [Nesting Birds], Mitigation Measure BIO-3 [Crotch Bumble Bee], and Mitigation Measure BIO-4 [Riparian Birds]; see Sections 5.0 and 6.0).

Rock Outcrops and Unique Topographic Features

Several rock piles are present on the northeastern corner of the site, including concrete debris. The rock piles are visible in aerial photographs going back to 1967 before the surrounding area was developed and appear to be naturally occurring outcrops. These rock piles are relatively small and would not appear to be unique or significant topographic features, and they are located on the open space easement.

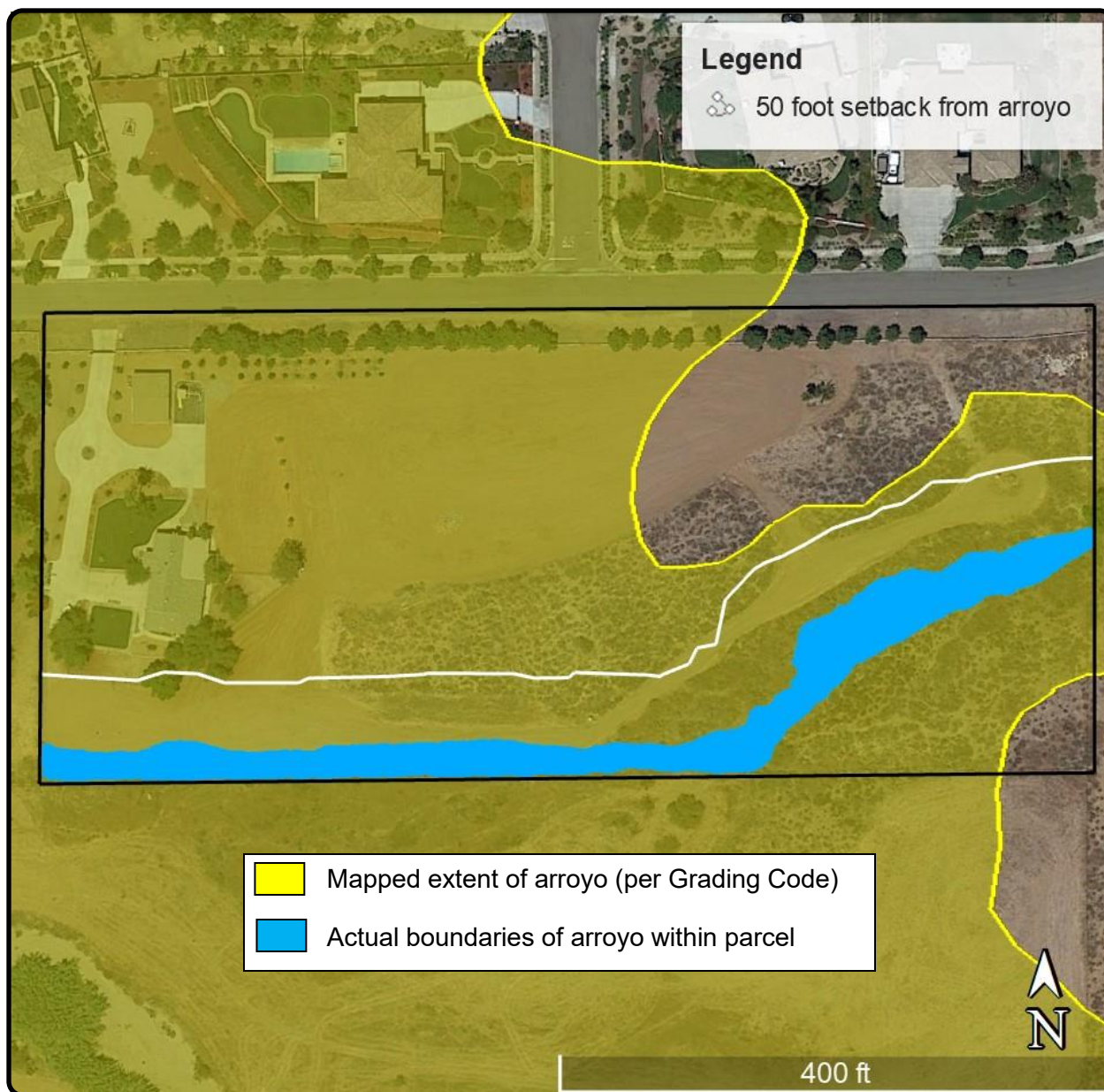
Figure 14a shows the topography of the parcel. Based on the topographic map, the slopes adjacent to the actual boundaries of the arroyo reach a maximum of approximately 24 percent at the eastern end of the parcel and decrease to about 10.5 percent at the western end of the parcel. There are no slopes outside of the actual boundaries of the arroyo within the parcel (as shown on Figures 12a, 12b, and 14) that have an average natural slope of 30 percent or greater. A slope analysis (Figure 14b) found that slopes adjacent to the actual boundaries of the arroyo are less than 30 percent with the exception of two small areas (about 760 square feet total) in the southeastern corner of the parcel, which is not proposed for development.

Summary

The site does not include riparian habitat or other sensitive vegetation communities and none would be impacted by Project grading. The rock piles on the site do not appear to be unique or significant topographic features and would not be impacted by the Project.

Most special status species with potential to occur on the site are covered under the MSHCP and considered adequately conserved. Recommended mitigations would avoid and minimize any potential impacts (Mitigation Measure BIO-1 [Burrowing Owl], Mitigation Measure BIO-2 [Nesting Birds], Mitigation Measure BIO-3 [Crotch Bumble Bee], and Mitigation Measure BIO-4 [Riparian Birds]; see Sections 5.0 and 6.0).

Based on the watercourse, topography, and vegetation, the actual boundaries of the arroyo are not consistent with the mapped extent of the arroyo in the Grading Code and do not include the Project disturbance area (Figures 12a and 12b).



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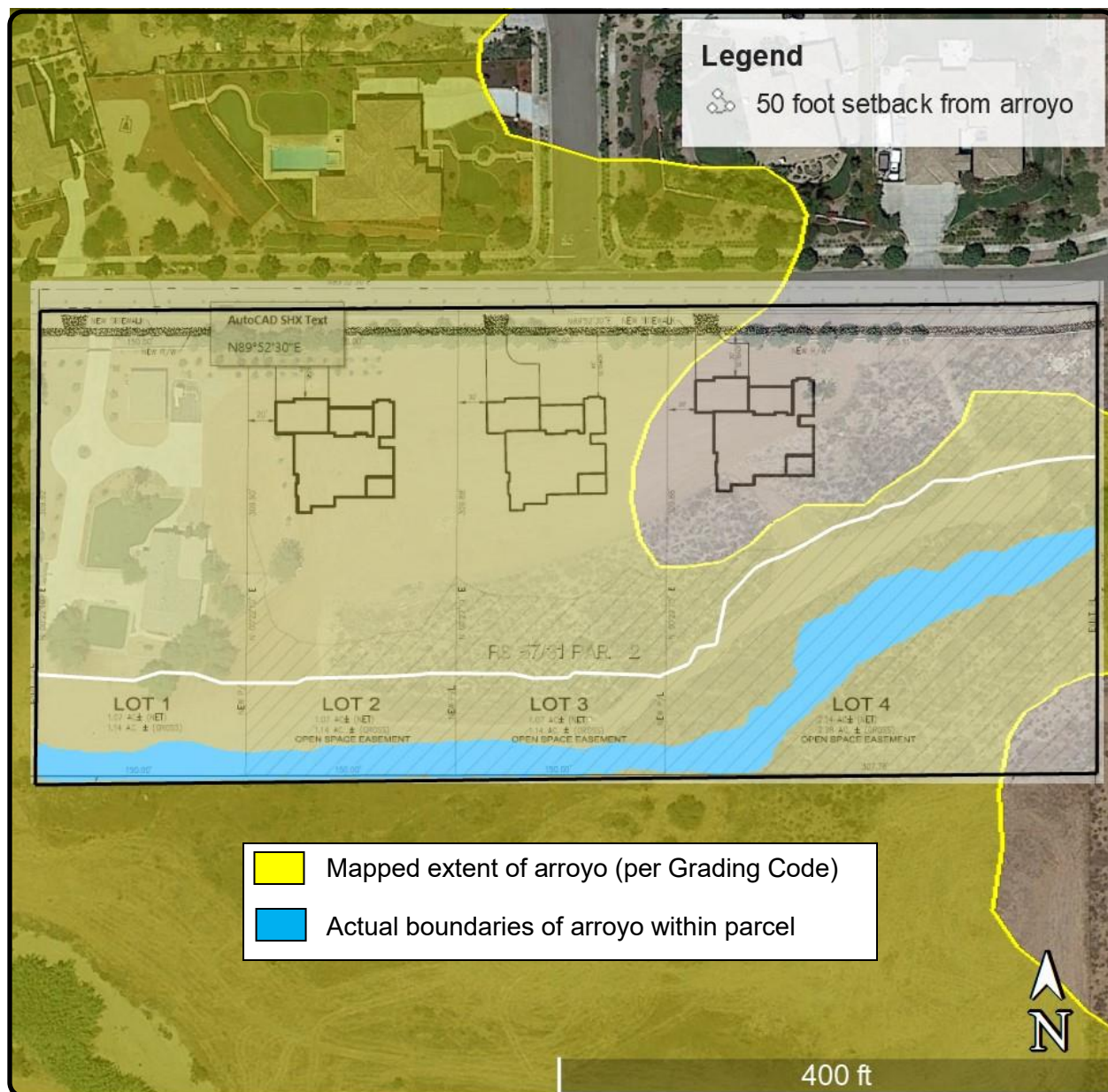
QUIN-05-752

Figure 12a

**Actual Boundaries of
 Arroyo within the Parcel**

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
 Riverside County, California



L&L Environmental, Inc.

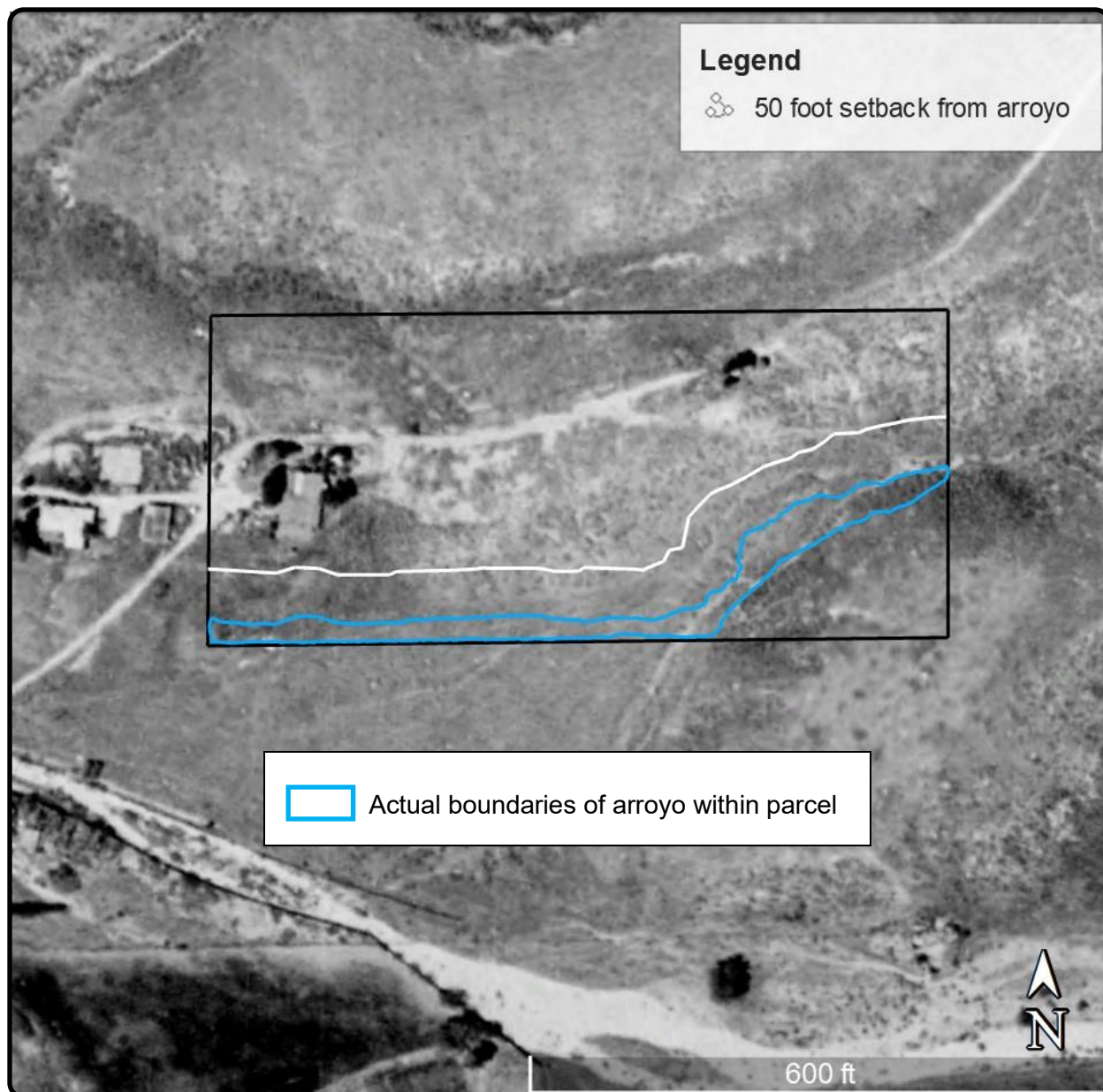
BIOLOGICAL AND CULTURAL
INVESTIGATIONS AND MONITORING

QUIN-05-752

Figure 12b
Actual Boundaries of
Arroyo and Project Impact
Area

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside



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Figure 13a

**Actual Boundaries of
Arroyo and 1967 Aerial
Photo**

(Aerial obtained from NETRonline, 1967)

Alpine Meadows Lane, City of Riverside



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Figure 13b

**Actual Boundaries of
Arroyo and 1978 Aerial
Photo**

(Aerial obtained from NETRonline, September 1978)

Alpine Meadows Lane, City of Riverside



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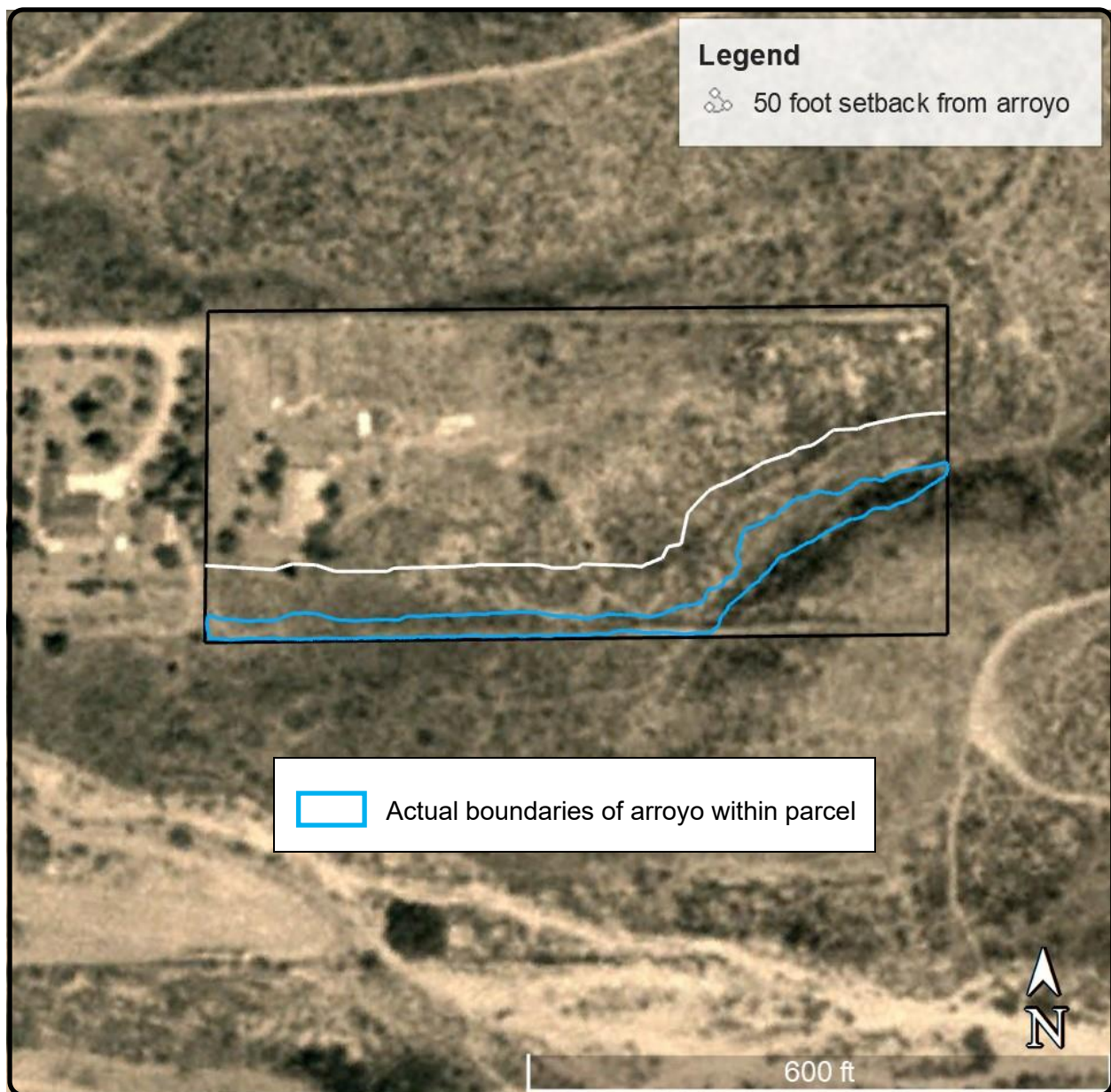
QUIN-05-752

Figure 13c

**Actual Boundaries of
Arroyo and 1994 Aerial
Photo**

(Aerial obtained from Google Earth, May 1994)

Alpine Meadows Lane, City of Riverside



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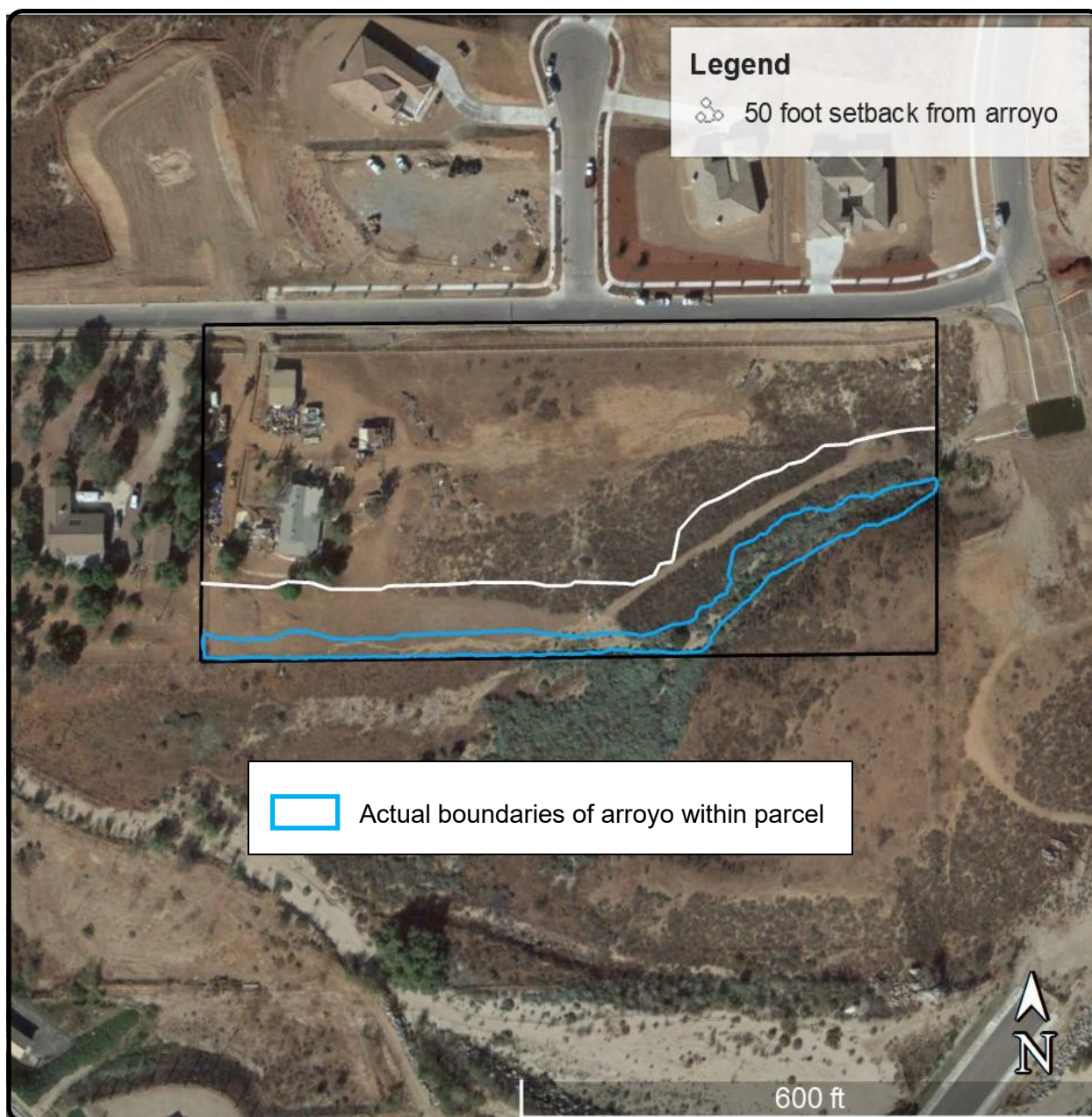
QUIN-05-752

Figure 13d

**Actual Boundaries of
Arroyo and 2002 Aerial
Photo**

(Aerial obtained from Google Earth, May 2002)

Alpine Meadows Lane, City of Riverside



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Figure 13e

**Actual Boundaries of
Arroyo and 2009 Aerial
Photo**

(Aerial obtained from Google Earth, November 2009)

Alpine Meadows Lane, City of Riverside



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Figure 13f

**Actual Boundaries of
Arroyo and 2016 Aerial
Photo**

(Aerial obtained from Google Earth, February 2016)

Alpine Meadows Lane, City of Riverside

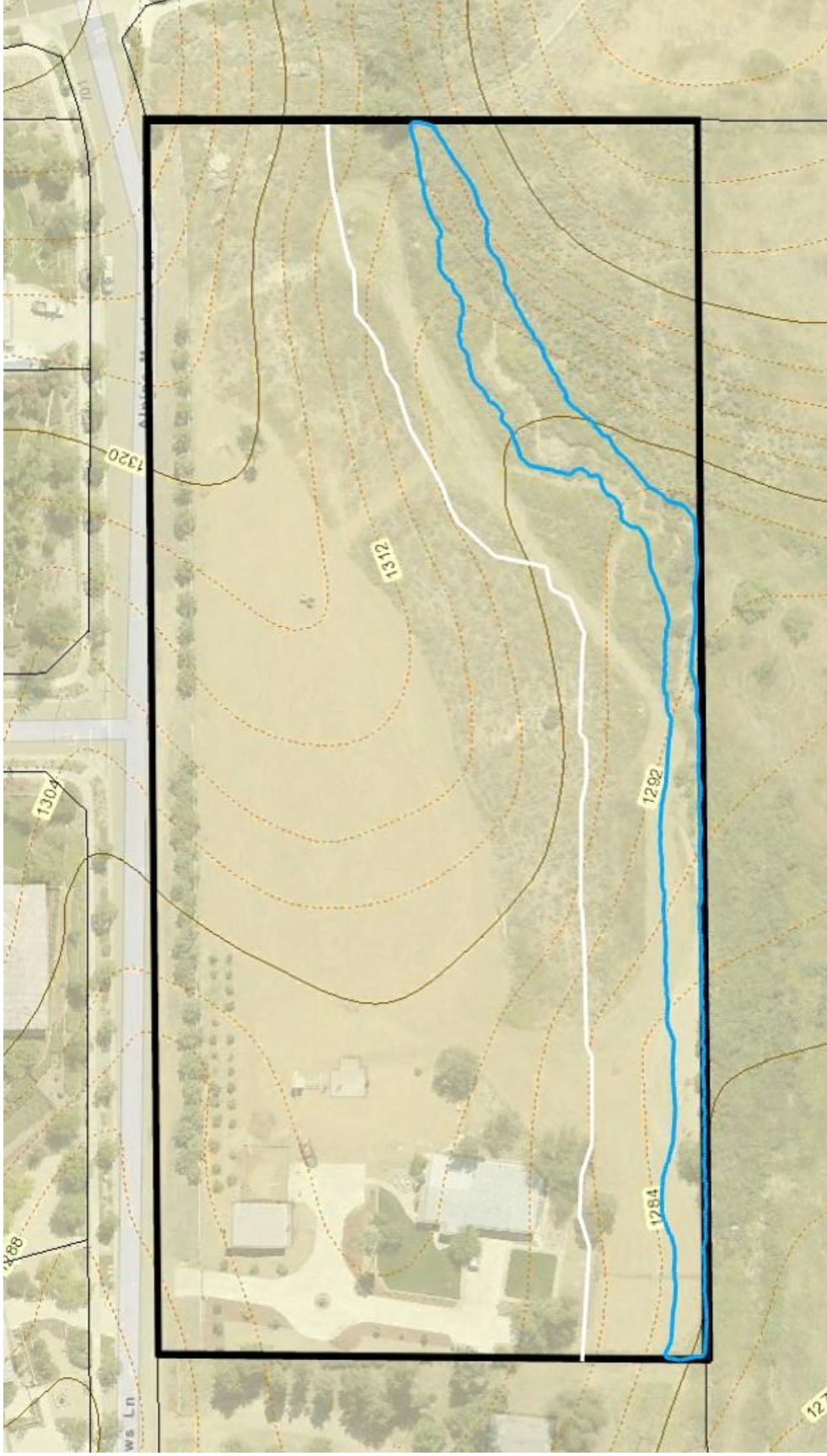


Figure 14a. Topography of the Parcel (source: Riverside County Information Technology, Map My County v10). Actual boundaries of the arroyo are shown in blue outline; the 50-foot setback from the arroyo is shown by the white line.

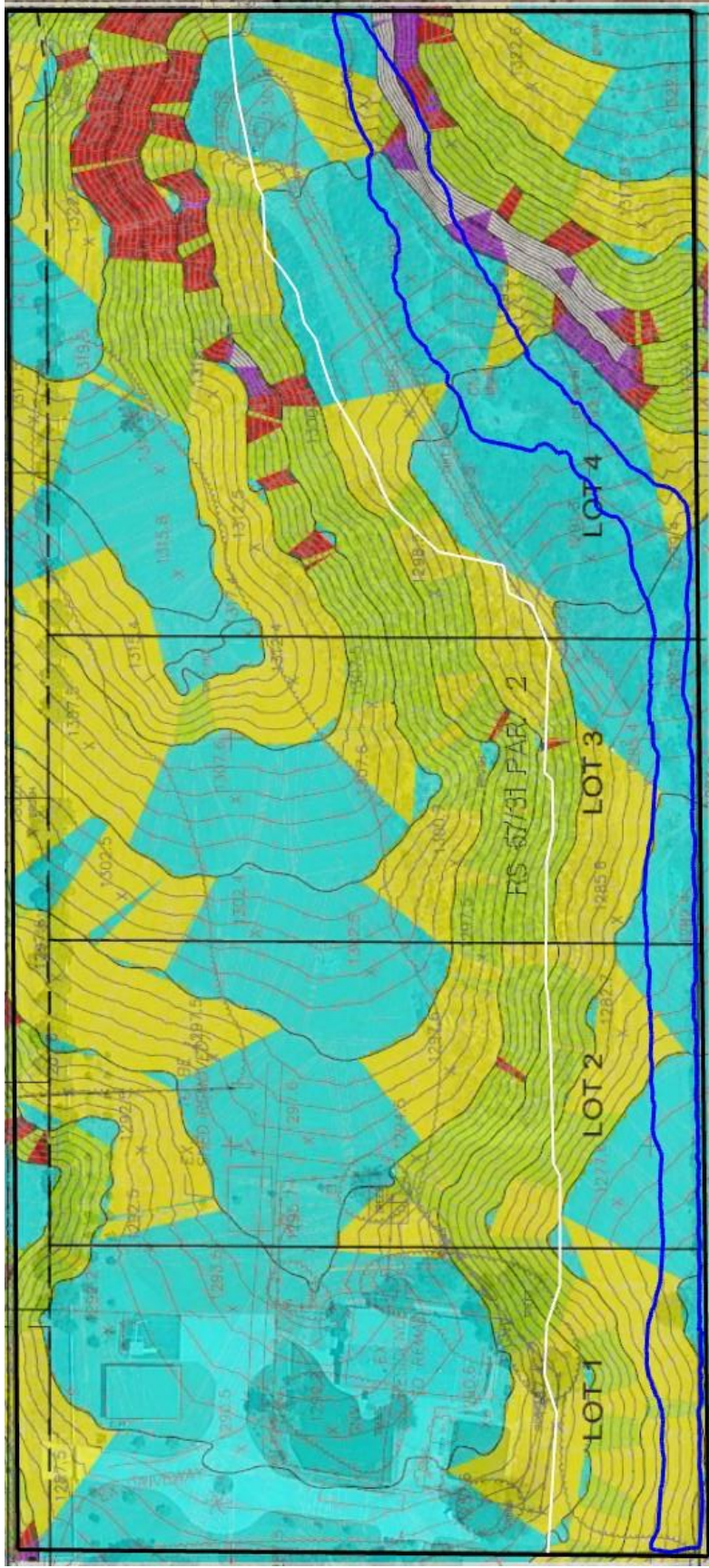


Figure 14b. Slope Analysis of the Parcel (source: Ackerman Associates 2000, Inc.). Actual boundaries of the arroyo are shown in blue outline; the 50-foot setback from the arroyo is shown by the white line. Legend is below.

Slopes Table				
Number	Minimum Slope	Maximum Slope	Area	Color
1	0.00%	10.00%	120748.65	
2	10.00%	20.00%	78614.71	
3	20.00%	30.00%	44841.74	
4	30.00%	40.00%	8635.46	
5	40.00%	50.00%	2151.06	

5.0) ANALYSIS OF POTENTIAL EFFECTS

The following discussion examines potential impacts to biological resources that may occur as a result of implementation of the proposed Project. Impacts can be direct, indirect, or cumulative. Direct impacts are those that are caused by a project and occur at the same time and place. Indirect effects are reasonably foreseeable and caused by a project but occur at a different time or place. Cumulative impacts are two or more individual effects which, when considered together, compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects taking place over a period of time.

Direct impacts include the loss, modification, or disturbance of vegetation communities, which in turn, directly affect plant and wildlife species dependent on those habitats, as well as the destruction of individual plants or wildlife. Direct impacts also include any effects that result from vegetation or ground disturbing activities during construction, including associated dust, noise and vibration, etc.

Indirect impacts are the result of such things as introduction of invasive plants and animals; predator subsidies (i.e., food, water, perch sites, etc.) that lead to increased predation on wildlife; and harassment or predation by domestic animals. These impacts may change the behavioral patterns of wildlife and reduce native plant and wildlife diversity and abundance in habitats adjacent to project sites.

Under the CEQA Guidelines (2018 revision), project impacts on biological resources are potentially significant if one or more of the following conditions would result from implementation of the proposed Project:

- a) 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 CDFW or USFWS.
- b) A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.
- c) A substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) 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 wildlife 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.

This section describes the Project's expected impacts to biological resources. Proposed mitigation measures to avoid, minimize, and compensate for those impacts are listed in Section 6.0.

5.1) Listed and Special Status Species

5.1.1) Listed and Special Status Plants

No federal or state-listed plant species were observed on the site during surveys. The site is not within USFWS designated critical habitat for any federally listed plant species. Based on the presence of mostly non-native vegetation throughout the site, disturbances associated with current and past land use, a lack of CNDDDB records in the site vicinity, and results of the habitat assessment, federal or state-listed plant species known from the region are either absent, not expected to occur, or have a low potential for occurrence on the site. Impacts to federal or state-listed plants would be less than significant and no mitigation is proposed.

No special status plant species were observed on the site during surveys. Special status plant species known from the region are either absent, not expected to occur, or have a low potential for occurrence on the site, with the exception of Payson's jewelflower. Impacts to special status plants other than Payson's jewelflower would be less than significant and no mitigation is proposed.

Payson's jewelflower was not observed on the site but has a low to moderate potential to occur. This species has a California Rare Plant Rank of 4.2 (limited distribution, moderate degree of threat) and is covered under the MSHCP and considered adequately conserved. The MSHCP does not require focused surveys or mitigation for this species.

If Payson's jewelflower is present, implementation of the Project could impact these plants through loss of habitat and loss of individuals within the disturbance area. Since Payson's jewelflower is a covered species under the MSHCP and considered adequately conserved,

Project-related impacts to Payson's jewelflower, if any, would be a covered impact under the MSHCP and no mitigation is proposed.

5.1.2) Listed and Special Status Wildlife

Burrowing Owl

Burrowing owl has not been detected on the site during surveys, although potentially suitable habitat is present. Because burrowing owls will tend to shelter in their burrows rather than flee from disturbance, adults as well as juveniles or eggs could be harmed by Project activities.

Mitigation Measure BIO-1 (Burrowing Owl) requires a preconstruction survey for burrowing owl, avoidance buffers if any owls are present during nesting season, and other mitigation as required by the MSHCP. With implementation of this mitigation measure, Project-related impacts to burrowing owl would be less than significant.

Nesting Birds

There is potential habitat for nesting birds, including raptors, on and adjacent to the site. Adult birds will typically avoid or flee from construction activities and other disturbance and the potential for physical harm would be limited to nests, eggs, and dependent juveniles.

Mitigation Measure BIO-2 (Nesting Birds) requires site disturbance to occur outside of the nesting season. If this work cannot be scheduled outside of the nesting season, a preconstruction nesting bird survey is required and avoidance buffers will be established for any active nests. With implementation of this mitigation measure, Project-related impacts to nesting birds would be less than significant.

Crotch Bumble Bee

Crotch bumble bee was originally advanced to candidacy for state listing in June 2019. This status was challenged in court and a trial court decision temporarily removed its candidacy in February 2021. A State Supreme Court ruling reversed this judgement and reinstated its candidacy on September 30, 2022 (Supreme Court Case S275412). The latest information from CDFW indicates that Crotch bumble bee is a candidate for state listing as endangered. This species was not observed on the site but surveys for invertebrates were not conducted. Crotch bumble bee has a low to moderate potential for occurrence on the site, mainly in the avoided area.

Mitigation Measure BIO-3 (Crotch Bumble Bee) requires a qualified biologist to conduct a focused survey for Crotch bumble bee on the site. If the survey finds that the species is present on the site, consultation with CDFW is required. If Crotch bumble bee will be impacted by the Project, an incidental take permit will be obtained prior to Project impacts as required by CDFW. With implementation of this mitigation measure, Project-related impacts to Crotch bumble bee would be less than significant.

Riparian Birds

There is no suitable habitat for riparian birds (least Bell's vireo, southwestern willow flycatcher, and western yellow billed cuckoo) within or immediately adjacent to the Project site, and the grading limits are over 300 feet away from potentially suitable habitat in Prenda Creek to the south of the site. Project-related impacts to these species, if any, would be less than significant.

However, impacts to these species are possible (i.e., noise and disturbance) if the Project grading plans are revised and will encroach within a 300-foot buffer of the riparian habitat in Prenda Creek to the south of the Project site. If this occurs, Mitigation Measure BIO-4 (Riparian Birds) requires either avoidance of the nesting season or a habitat assessment and a protocol survey if suitable habitat is present. If a protocol survey finds any of these species present within 300 feet of the Project disturbance area, additional avoidance and minimization measures are required.

With implementation of Mitigation Measure BIO-4 (Riparian Birds), Project-related impacts to least Bell's vireo, southwestern willow flycatcher, and western yellow billed cuckoo would be less than significant.

Other Listed and Special Status Wildlife Species

No state or federally listed wildlife species were observed during surveys. Three special status wildlife species were detected on the site during surveys (Cooper's hawk, Nuttall's woodpecker, and San Diego desert woodrat) and several others were not detected but have a low to moderate, moderate, or high potential to occur (see Section 4.4). Most of these species are covered under the MSHCP and considered adequately conserved, with the exception of Crotch bumble bee (discussed above), Southern California legless lizard, Allen's hummingbird, Nuttall's woodpecker, pallid bat, and western mastiff bat.

Impacts to nesting birds are addressed by Mitigation Measure BIO-2 (Nesting Birds) as described above. Other Project-related impacts to the MSHCP covered species, if any, would be a covered

impact under the MSHCP. The MSHCP does not require surveys or mitigation for any of these species and no mitigation is proposed.

Southern California legless lizard is a CDFW Species of Special Concern. It has a moderate potential for occurrence on the site, mainly within the avoided area and particularly along the streambed. Impacts to this species, if present in the Project's disturbance area, would not be expected to substantially affect regional populations. Project-related impacts to southern California legless lizard would be less than significant and no mitigation is proposed.

Allen's hummingbird is a USFWS Bird of Conservation Concern. It has a high potential to forage on the site, but the site is outside the species' breeding range. Adult birds will typically flee from disturbance and injury/mortality would be limited to nests, eggs, and chicks. Since this species does not nest in the area, there would be no potential for injury/mortality. Potential foraging habitat for this species is common throughout the region and loss of the habitat on the site would be a less-than-significant impact. Project-related impacts to Allen's hummingbird would be less than significant and no mitigation is proposed.

Nuttall's woodpecker is a USFWS Bird of Conservation Concern. It was observed offsite in Prenda Creek. Adult birds will typically flee from disturbance and injury/mortality would be limited to nests, eggs, and chicks. Impacts to nesting birds are addressed by Mitigation Measure BIO-2 (Nesting Birds), described above.

Both pallid bat and western mastiff bat have a moderate potential to forage on the site, but a low potential to roost there. Potential foraging habitat for these species is common throughout the region and loss of the habitat on the site would be a less-than-significant impact. Project-related impacts to special status bats would be less than significant and no mitigation is proposed.

5.2) Vegetation Communities

Implementation of the Project will result in the permanent loss of ±2.49 acres of vegetation communities on the Project consisting of 1.95 acres of disturbed/developed/ornamental vegetation and 0.54 acre of brittlebush scrub (Table 6). No sensitive vegetation communities are present.

Table 6. Vegetation Communities Impacted

Vegetation Community	Acres Impacted ¹				
	Lot 1	Lot 2	Lot 3	Lot 4	Total
Lot (grading area plus fuel modification zone)					
Disturbed/Developed/Ornamental	0	0.67	0.55	0.38	1.60
Brittlebush Scrub	0	0.10	0.11	0.33	0.54
Road Dedication Area					
Disturbed/Developed/Ornamental	0.07	0.07	0.07	0.14	0.35
Brittlebush Scrub	0	0	0	0	0
Total					
Disturbed/Developed/Ornamental	0.07	0.74	0.62	0.52	1.95
Brittlebush Scrub	0	0.10	0.11	0.33	0.54
TOTAL	0.07	0.84	0.73	0.85	2.49

1. Based on grading limits as shown on TPM (plus a ±20-foot buffer) and the fuel modification zone. Minor discrepancies in totals due to rounding error.

Disturbed/ruderal/ornamental areas are not native vegetation communities and the loss of 1.95 acres of these areas would have no impact on the extent of native vegetation communities in the region. No mitigation is proposed.

Brittlebush scrub is not a sensitive vegetation community and is ranked by CDFW as S4 (apparently secure, uncommon but not rare). This vegetation community is found throughout most of Riverside County as well as other southern California counties (Sawyer et al. 2009). There would be no impacts to sensitive vegetation communities and no mitigation is proposed.

5.3) Waters and Wetlands

A jurisdictional delineation found that the streambed within the parcel includes 0.46 acre of CDFW streambed and no CDFW wetlands. Of this area, 0.088 acre is also federal Waters of the U.S. There are no federal wetlands. TPM 38174 indicates that the Project will avoid the jurisdictional area. Therefore, the Project will not impact state or federal jurisdictional waters or wetlands on the site, permits from USACE, RWQCB, and CDFW are not required, and no mitigation is proposed.

5.4) Wildlife Corridors

Prenda Creek is in a largely natural state in the Project vicinity and may function as a wildlife corridor for limited local travel between currently undeveloped (but not conserved) areas to the east and west. An ephemeral drainage that is tributary to Prenda Creek and crosses the

southeast portion of the project site from east to west may contribute to this limited movement through the area. The proposed Project will avoid this drainage. Project-related impacts to wildlife corridors would therefore be less than significant and no mitigation is proposed.

5.5) Local Ordinances

Prenda Arroyo

Section 17.28.020 of the City of Riverside Municipal Code prohibits development or grading within 50 feet of the limits of the Prenda Arroyo. The limits of the arroyo are defined and mapped in Section 17.08.011 of the Municipal Code (see Section 2.11).

Most of the Project parcel is within the mapped extent of the Prenda Arroyo except for a portion of the northeast quadrant and a small area of the southeast corner. However, based on the watercourse, topography, and vegetation, the actual boundaries of the Prenda Arroyo are not consistent with the mapped extent of the arroyo in Section 17.08.011 and do not include the Project disturbance area.

The Project will avoid the actual boundaries of the Prenda Arroyo within the parcel and no mitigation is proposed.

Trees

Based on TPM 38174, no trees within the site would be impacted by the Project. However, the row of acacia trees along Alpine Meadows Lane could be impacted. A tree survey has not been conducted but a desktop review indicates 39 acacia trees are present.

In accordance with Section 13.25.020 of the City of Riverside Code of Ordinances, any project within the City of Riverside that will impact trees on City property must follow the Urban Forestry Policy Manual (see Section 2.12).

If tree trimming, encroachment, or removal will occur during the nesting season (February 1 to August 31), preconstruction nesting bird surveys will be required as detailed in Mitigation BIO-2 (Nesting Birds).

5.6) Habitat Conservation Plan

The Project is within the covered area for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The site is located within the area covered by the MSHCP but is

not within the Criteria Area (i.e., Criteria Cells). Surveys required by the MSHCP are a habitat assessment to address riparian/riverine and vernal pool habitats and associated species and burrowing owl.

MSHCP Riparian/Riverine

A jurisdictional delineation was conducted in 2021 to assess MSHCP riparian/riverine habitat on the site (see Section 4.5.1). The jurisdictional delineation found 0.46 acre of MSHCP riverine habitat and no MSHCP riparian habitat on the site. Impacts to MSHCP riverine habitat requires preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP). However, the Project will avoid the MSHCP riverine habitat and a DBESP is therefore not required. There would be no conflict with the MSHCP and no mitigation is proposed.

Vernal Pools

An assessment for vernal pool habitat was conducted in 2021 (see Section 4.4.1). Pools or depressions characteristic of vernal habitat were not observed and there was no evidence of ponding areas (i.e., cracked soils, tire ruts, etc.) on the site during surveys. No MSHCP species listed for protection associated with vernal pools were observed. No fairy shrimp or fairy shrimp habitat was observed. There would therefore be no impacts to vernal pool habitat or associated species, no conflict with the MSHCP, and no mitigation is proposed.

Riparian Birds

See Section 5.1.2 for a discussion of riparian birds. With implementation of Mitigation Measure BIO-4 (Riparian Birds), Project-related impacts to least Bell's vireo, southwestern willow flycatcher, and western yellow billed cuckoo would be less than significant and there would be no conflict with the MSHCP.

Burrowing Owl

A habitat assessment and protocol breeding season survey for burrowing owl was conducted in 2021 (see Section 4.4.3). The survey found that potentially suitable habitat for burrowing owl is present but no owls or owl sign were observed. Under the MSHCP, a preconstruction survey is required within 30 days prior to the start of Project activities and additional mitigation is required if burrowing owl is present as described in Mitigation Measure BIO-1 (Burrowing Owl). With implementation of this mitigation measure, there would be no conflict with the MSHCP.

6.0) SUMMARY AND RECOMMENDATIONS

The purpose of this study was to identify biological resources present or potentially present onsite, determine the current condition and extent of the jurisdictional drainage within the parcel, and analyze the impact area with respect to the Prenda Arroyo. Measures are proposed to avoid, minimize, and compensate for Project-related impacts on biological resources.

The MSHCP requires a habitat assessment to address riparian/riverine and vernal pool habitats and associated species and burrowing owl, and focused surveys if suitable habitat is present. L&L also analyzed the potential for impacts to state and federal jurisdictional waters, special status species, and sensitive vegetation communities. The recommendations are based on the literature review, L&L's knowledge of species and habitats in the region, the biological field survey, and analysis of aerial images.

The site is within the area covered by the MSHCP but is not located within the MSHCP Criteria Area (i.e., Criteria Cells). PQP Conserved Lands identified as Alessandro Arroyo Big Bend are one mile to the east of the site. There are no other PQP or MSHCP Conserved Lands within a mile of the site. The site is not within or near any MSHCP Core Areas or Linkages.

Listed and Special Status Plants

No federal or state-listed or special status plant species were observed. The site is not within USFWS designated critical habitat for any federally listed plant species. Listed and special status plants known from the region are either absent, not expected to occur, or have a low potential for occurrence onsite, with the exception of Payson's jewelflower. Impacts to listed and special status plants (other than Payson's jewelflower) would be less than significant and no mitigation is proposed. Payson's jewelflower is covered under the MSHCP and considered adequately conserved. Project-related impacts to Payson's jewelflower, if any, would be a covered impact under the MSHCP and no mitigation is proposed.

Burrowing Owl

There is potentially suitable habitat for burrowing owl onsite, but no burrowing owls, occupied burrows, or owl sign were observed during a protocol breeding season survey. With implementation of Mitigation Measure BIO-1 (Burrowing Owl), Project-related impacts to burrowing owl would be less than significant.

MM BIO-1. Burrowing Owl

A preconstruction survey for burrowing owl shall be conducted by a qualified biologist and the results submitted to the City of Riverside within no more than 30 calendar days prior to any site disturbance, including vegetation removal or mowing, ground disturbance, fence installation, demolition, etc. The survey will be conducted as close to the actual initiation of site disturbance as possible. The survey is valid for 30 calendar days. If work does not commence within the 30 days, the survey shall be repeated. If work starts and is suspended for 30 or more calendar days, the survey shall be repeated.

If burrowing owls are found on the site during the preconstruction survey, the Project biologist shall consult with the City of Riverside, the Western Riverside County Regional Conservation Authority (RCA), and the California Department of Fish and Wildlife as needed to develop and implement a mitigation plan. The mitigation plan shall be based on the following goals and requirements in the MSHCP:

1. If the site contains or is part of an area supporting less than 35 acres of suitable habitat or the survey reveals that the site and the surrounding area supports fewer than three (3) pairs of burrowing owls, the onsite burrowing owls will be passively or actively relocated following accepted protocols.

a. Occupied nests shall be avoided during the nesting season (February 1 to August 31) and a buffer of 300 to 500 feet shall be employed, depending on the level of disturbance surrounding the burrow.

b. Burrow exclusion shall be utilized outside of the nesting season by installing a one-way door in burrow openings. The burrow shall be closed following verification that burrows are empty (through site monitoring and scoping).

c. Prior to implementation of exclusion and/or relocation, a relocation plan shall be prepared for review and approval by the California Department of Fish and Wildlife. This plan shall include, but not be limited to, the following:

- Project Overview
- Species Biology
- Summary of Burrowing Owl Surveys and Results

- Impact Avoidance and Minimization including buffers, monitoring during construction, worker environmental awareness program, and other measures
- Relocation Methods including location of adjacent suitable habitat and replacement burrows, conservation and management of relocation area, enhancement of replacement burrows and/or construction of artificial burrows, ratio of replacement burrows to removed burrows, timing of relocation, burrow exclusion, and burrow inspection and excavation of removed burrows
- Monitoring and Reporting including monitoring during and after construction, surveys, cleaning and maintenance and/or replacement of artificial burrows, duration of monitoring, and reporting requirements

2. If the site (including adjacent areas) supports three (3) or more pairs of burrowing owls, supports greater than 35 acres of suitable habitat, and is noncontiguous with MSHCP Conservation Area lands, at least 90 percent of the area with long-term conservation value and burrowing owl pairs shall be conserved onsite.

Nesting Birds

There is suitable habitat for nesting birds, including raptors, on and adjacent to the site. Nesting birds are protected under state and federal laws (see Sections 2.8 and 2.9). With implementation of Mitigation Measure BIO-2 (Nesting Birds), Project-related impacts to nesting birds would be less than significant.

MM BIO-2. Nesting Birds

Site disturbance (vegetation and/or ground disturbance, tree trimming/encroachment/removal, fence installation, demolition, etc.) shall be scheduled outside of the nesting season (February 1 to August 31). If site disturbance cannot be scheduled outside the nesting season, a preconstruction survey for nesting birds shall be conducted by a qualified biologist within three (3) days prior to any site disturbance during the nesting season.

If active nest(s) are present, an avoidance buffer of 500 feet for raptors and special status birds and 300 feet for all other birds (or as recommended by the biologist) shall be established and maintained until a qualified biologist has determined that the juvenile birds have fledged and are no longer dependent on the nest or the nest has otherwise become inactive. An active nest is defined as a nest with eggs, chicks, or dependent juveniles, or a nest actively being constructed or utilized for reproduction.

The size of the avoidance buffer shall be determined by the biologist based on the nature of Project activities, the birds' tolerance to disturbance (if known), conservation status of the affected species, and any applicable agency recommendations or requirements. The boundary of the buffer shall be clearly flagged or marked, and construction crews informed of the restrictions.

Crotch Bumble Bee

Crotch bumble bee is a candidate for state listing as endangered. Under the California Endangered Species Act, candidate species receive the same protections as a listed species. This species was not observed on the site but surveys for invertebrates were not conducted. Crotch bumble bee has a low to moderate potential for occurrence on the site, mainly in the avoided area. With implementation of Mitigation Measure BIO-3 (Crotch Bumble Bee), Project-related impacts to this species would be less than significant.

MM BIO-3. Crotch Bumble Bee

Prior to the start of Project activities on the site (i.e., ground or vegetation disturbing activities), a qualified biologist shall conduct a focused survey for Crotch bumble bee using the CDFW survey protocol for this species. If CDFW has not established a survey protocol for Crotch bumble bee, a focused survey shall be conducted during the appropriate season and utilizing an appropriate survey method based on the species' biology. Survey results shall be provided to the City of Riverside and CDFW.

If the survey finds that Crotch bumble bee is present on the site, the biologist shall consult with CDFW. If the Project will impact Crotch bumble bee, an incidental take permit from the CDFW shall be obtained and/or other measures shall be implemented as required by CDFW.

Riparian Birds

There is no suitable habitat for riparian birds (least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo) on or immediately adjacent to the site. Project site, and the grading limits are over 300 feet away from potentially suitable habitat in Prenda Creek to the south of the site. Project-related impacts to these species, if any, would be less than significant.

However, impacts to these species are possible (i.e., noise) if the Project grading plans are revised and will encroach within a 300-foot buffer of the riparian habitat in Prenda Creek to the south of the Project site. If this occurs, with implementation of Mitigation Measure BIO-4 (Riparian Birds), Project-related impacts to least Bell's vireo, southwestern willow flycatcher, and western yellow billed cuckoo would be less than significant.

MM BIO-4. Riparian Birds

If Project grading plans are revised such that grading is extended to the south and within a 300-foot buffer from riparian habitat in Prenda Creek to the south, then either construction shall avoid the nesting season (February 1 to August 31), or a habitat assessment for riparian birds (least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo) in that area shall be completed by a qualified biologist. If suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo is present, then a protocol survey shall be conducted by a qualified and permitted biologist to determine presence or absence of any of these species within 300 feet of Project disturbance areas.

If any of these species are present within 300 feet of the Project disturbance area, additional avoidance and minimization measures shall be implemented as identified by the qualified biologist in consultation with the Western Riverside County Regional Conservation Authority, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service.

Other Listed and Special Status Wildlife

No state or federally listed wildlife species were observed during surveys and none have a moderate or high potential to occur (with the exception of Crotch bumble bee as discussed above). Impacts to state or federal wildlife species (other than Crotch bumble bee) would be less than significant and no mitigation is proposed.

Three special status wildlife species were detected on or near the site during surveys (Cooper's hawk, Nuttall's woodpecker, and San Diego desert woodrat) and several others were not detected but have a low to moderate, moderate, or high potential to occur. Most of these species are covered under the MSHCP and considered adequately conserved, with the exception of Crotch bumble bee (discussed above), Southern California legless lizard, Allen's hummingbird, Nuttall's woodpecker, pallid bat, and western mastiff bat.

Impacts to nesting birds are addressed by Mitigation Measure BIO-2 (Nesting Birds), discussed above. Other Project-related impacts to the MSHCP covered species, if any, would be a covered impact under the MSHCP and no mitigation is proposed.

Project-related impacts to southern California legless lizard, Allen's hummingbird, pallid bat, and western mastiff bat would be less than significant and no mitigation is proposed.

Sensitive Vegetation Communities

The site is composed of disturbed/developed/ornamental areas and brittlebush scrub. There are no riparian, Riversidean alluvial fan sage scrub, or other sensitive vegetation communities present. There would be no impacts to sensitive vegetation communities and no mitigation is proposed.

Waters and Wetlands

A jurisdictional delineation found that the streambed within the property includes 0.46 acre of CDFW streambed and no CDFW wetlands. Of this area, 0.088 acre is also federal Waters of the U.S. There are no federal wetlands. TPM 38174 indicates that the Project will avoid the jurisdictional area. Therefore, the Project will not impact state or federal jurisdictional waters or wetlands on the site, permits from USACE, RWQCB, and CDFW are not required, and no mitigation is proposed.

Wildlife Corridors

The Project site is largely surrounded by roads and existing development but the drainage running through the site may contribute to limited local wildlife movement through the area. The proposed Project will avoid the drainage. Project-related impacts to wildlife corridors would therefore be less than significant and no mitigation is proposed.

Local Ordinances: Prenda Arroyo

The site is within the mapped extent of the Prenda Arroyo in the City of Riverside Grading Code. However, the Project disturbance area is not within the watercourse as it currently exists. The City can allow a grading exception within the mapped extent of the arroyo depending on the sensitivity of the area. Sensitivity is determined by such factors as the presence of riparian vegetation, habitat for rare or endangered species, and significant rock outcroppings or other unique topographic features

The site does not include riparian habitat or other sensitive vegetation communities and none would be impacted by Project grading. The rock piles on the site do not appear to be unique or significant topographic features and would not be impacted by the Project. Based on the watercourse, topography, and vegetation, the actual boundaries of the arroyo are not consistent with the mapped extent of the arroyo in the Grading Code and do not include the Project disturbance area. The Project will not impact the actual boundaries of the Prenda Arroyo and no mitigation is proposed.

Local Ordinances: Trees

There are several trees on the site, some moderately large. Most of the trees are non-native and no oak species are present. Based on TPM 38174, no trees within the site would be impacted by the Project. However, the row of acacia trees along Alpine Meadows Lane could be impacted.

In accordance with Section 13.25.020 of the City of Riverside Code of Ordinances, any project within the City of Riverside that will impact trees on City property must follow the Urban Forestry Policy Manual.

If tree trimming, encroachment, or removal will occur during the nesting season (February 1 to August 31), preconstruction nesting bird surveys will be required as detailed in Mitigation BIO-2 (Nesting Birds).

Habitat Conservation Plan: Riparian/Riverine, Vernal Pools, and Associated Species

A jurisdictional delineation found 0.46 acre of MSHCP riverine habitat and no MSHCP riparian habitat on the site. Impacts to MSHCP riverine habitat requires preparation of a DBESP. However, the Project will avoid the MSHCP riverine habitat and a DBESP is therefore not required. There would be no conflict with the MSHCP and no mitigation is proposed.

Pools or depressions characteristic of vernal habitat were not observed and there was no evidence of ponding areas (i.e., cracked soils, tire ruts, etc.) on the site during surveys. No MSHCP species listed for protection associated with vernal pools were observed. No fairy shrimp or fairy shrimp habitat was observed. There would therefore be no impacts to vernal pool habitat or associated species, no conflict with the MSHCP, and no mitigation is proposed.

Riparian birds (least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo) are discussed above. With implementation of Mitigation Measure BIO-4 (Riparian Birds), Project-related impacts to least Bell's vireo, southwestern willow flycatcher, and western yellow billed cuckoo would be less than significant and there would be no conflict with the MSHCP.

Habitat Conservation Plan: Burrowing Owl

Burrowing owl is discussed above. With implementation of Mitigation Measure BIO-1 (Burrowing Owl), Project-related impacts to burrowing owl would be less than significant and there would be no conflict with the MSHCP.

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APPENDIX A: PLANT AND WILDLIFE SPECIES

Plant species identified on the site during the 2021 surveys and vertebrate wildlife species identified on the site during the 2006 and 2021 surveys. One asterisk (*) indicates a non-native species; two asterisks (**) indicates a special status species.

Scientific Name

Common Name

VASCULAR PLANTS DICOTYLEDONS

Gymnosperms

PINACEAE

PINE FAMILY

* *Pinus species*

Unid. ornamental pine

Angiosperms

ADOXACEAE

MUSKROOT FAMILY

Sambucus nigra ssp. cerulea
(*S. mexicana*)

Mexican elderberry, blue elderberry

AMARANTHACEAE

AMARANTH FAMILY

* *Amaranthus albus*

Tumbleweed, tumbling pigweed

ANACARDIACEAE

SUMAC or CASHEW FAMILY

* *Schinus molle*

Peruvian pepper tree

APOCYNACEAE

DOGBANE FAMILY

Asclepias fascicularis

Narrow-leaf milkweed

ASTERACEAE

ASTER FAMILY

Artemisia californica

California sagebrush

* *Centaurea melitensis*

Tocalote

Corethrogyne filaginifolia var. *filaginifolia*
(*Lessingia filaginifolia*)

California-aster, sand-aster

Encelia farinosa

Brittlebush

Erigeron canadensis

Horseweed, mare's tail

(*Conyza canadensis*)

Helianthus annuus

Western sunflower

* *Lactuca serriola*

Prickly lettuce

Matricaria discoidea

(*Chamomilla suaveolens*,

* *M. matricarioides*)

Pineapple weed

* *Sonchus asper*

Prickly sow thistle

* *Sonchus oleraceus*

Common sow thistle

BIGNONIACEAE

TRUMPET-CREEPER or JACARANDA FAMILY

* *Jacaranda mimosifolia*

Blue jacaranda

Scientific Name	Common Name
BORAGINACEAE	BORAGE OR WATERLEAF FAMILY
<i>Amsinckia intermedia</i> (<i>A. menziesii</i> var. <i>intermedia</i>)	Large flower rancher's fiddleneck
<i>Phacelia ramosissima</i>	Branching phacelia
BRASSICACEAE	MUSTARD FAMILY
* <i>Hirschfeldia incana</i> (<i>Brassica geniculata</i>)	Shortpod mustard
* <i>Sisymbrium irio</i>	London rocket
CHENOPODIACEAE	GOOSEFOOT FAMILY
* <i>Chenopodium album</i>	Lamb's quarters, common goosefoot
* <i>Salsola tragus</i>	Russian thistle
EUPHORBIACEAE	SPURGE FAMILY
<i>Croton setiger</i> (<i>C. setigerus</i> , <i>Eremocarpus setiger</i> , <i>E.</i> <i>setigerus</i>)	Turkey-mullein, doveweed
<i>Euphorbia albomarginata</i> (<i>Chamaesyce albomarginata</i>)	Rattlesnake sandmat, rattlesnake weed
* <i>Ricinus communis</i>	Castor bean
FABACEAE	LEGUME FAMILY, PEA FAMILY
* <i>Acacia species</i>	Unid. ornamental
GERANIACEAE	GERANIUM FAMILY
* <i>Erodium species</i>	Unid. filaree
LAMIACEAE	MINT FAMILY
* <i>Marrubium vulgare</i>	Horehound
<i>Salvia apiana</i>	White sage
LAURACEAE	LAUREL FAMILY
* <i>Persea americana</i>	Avocado
LYTHRACEAE	LOOSESTRIFE FAMILY
* <i>Lagerstroemia species</i>	Crepe myrtle
* <i>Punica granatum</i>	Pomegranate
MALVACEAE	MALLOW FAMILY
* <i>Malva parviflora</i>	Cheeseweed
MYRTACEAE	MYRTLE FAMILY, EUCALYPTUS FAMILY
* <i>Eucalyptus species</i>	Ornamental eucalyptus, gumtree
POLYGONACEAE	BUCKWHEAT FAMILY
<i>Eriogonum fasciculatum</i>	California buckwheat

Scientific Name	Common Name
ROSACEAE	ROSE FAMILY
* <i>Prunus persica</i>	Peach
RUTACEAE	RUE FAMILY, CITRUS FAMILY
* <i>Citrus species</i>	Unid. cultivated citrus
SALICACEAE	WILLOW FAMILY
<i>Salix gooddingii</i>	Goodding's black willow
SOLANACEAE	NIGHTSHADE FAMILY
<i>Datura wrightii</i> (<i>D. meteloides</i>)	Jimsonweed, tolguacha
<i>Lycium andersonii</i>	Anderson box-thorn
* <i>Nicotiana glauca</i>	Tree tobacco
ULMACEAE	ELM FAMILY
* <i>Ulmus species</i>	Ornamental elm
MONOCOTYLEDONS	
ARECACEAE	PALM FAMILY
* <i>Washingtonia robusta</i>	Mexican fan palm, ornamental fan palm
POACEAE	GRASS FAMILY
* <i>Avena species</i>	Unid. wild oat
* <i>Bromus diandrus</i> (<i>B. rigidus</i>)	Ripgut brome
* <i>Bromus madritensis</i> ssp. <i>rubens</i> (<i>B. rubens</i>)	Red brome
* <i>Schismus barbatus</i>	Mediterranean grass

Scientific Name	Common Name	Year Observed
VERTEBRATES		
Reptiles		
Phrynosomatidae	Spiny Lizards	
<i>Sceloporus occidentalis</i>	Western fence lizard	2021
<i>Sceloporus orcutti</i>	Granite spiny lizard	2006, 2021
<i>Uta stansburiana</i>	Side-blotched lizard	2006, 2021
Birds		
Accipitridae	Hawks, Eagles, and Harriers	
** <i>Accipiter cooperii</i>	Cooper's hawk	2021
<i>Buteo jamaicensis</i>	Red-tailed hawk	2006, 2021
Aegithalidae	Long-tailed Tits	
<i>Psaltirparus minimus</i>	Bushtit	2021
Columbidae	Pigeons and Doves	
<i>Zenaida macroura</i>	Mourning dove	2006, 2021
Corvidae	Crows and Jays	
<i>Aphelocoma californica</i>	California scrub jay	2021
<i>Corvus brachyrhynchos</i>	American crow	2006, 2021
<i>Corvus corax</i>	Common raven	2021
Falconidae	Falcons	
<i>Falco sparverius</i>	American kestrel	2006, 2021
Fringillidae	Finches	
<i>Spinus (Carduelis) psaltria</i>	Lesser goldfinch	2021
<i>Haemorhous (Carpodacus) mexicanus</i>	House finch	2006, 2021
Hirundinidae	Swallows	
<i>Petrochelidon pyrrhonota tachina</i>	Cliff swallow	2006
Icteridae	Blackbirds	
<i>Icterus cucullatus</i>	Hooded oriole	2021
Mimidae	Mockingbirds	
<i>Mimus polyglottos polyglottos</i>	Northern mockingbird	2021
Odontophoridae	Quail	
<i>Callipepla californica californica</i>	California quail	2006, 2021
Passerellidae	New World Sparrows	
<i>Chondestes grammacus</i>	Lark sparrow	2021
<i>Melospiza crissalis</i>	California towhee	2021
<i>Pipilo maculatus</i>	Spotted towhee	2021

Scientific Name	Common Name	Year Observed
Picidae ** <i>Dryobates (Picoides) nuttallii</i>	Woodpeckers Nuttall's woodpecker	2021
Ptiliognatidae <i>Phainopepla nitens</i>	Silky-flycatchers Phainopepla	2021
Sturnidae * <i>Sturnus vulgaris</i>	Starlings European starling	2021
Trochilidae <i>Calypte anna</i>	Hummingbirds Anna's hummingbird	2006, 2021
Troglodytidae <i>Thryomanes bewickii</i>	Wrens Bewick's wren	2021
Tyrannidae <i>Sayornis nigricans</i> <i>Tyrannus vociferans</i>	Tyrant Flycatchers Black phoebe Cassin's kingbird	2021 2021
Mammals		
Canidae <i>Canis latrans</i>	Dogs, Foxes, and Coyotes Coyote (sign)	2021
Geomyidae <i>Thomomys bottae</i>	Pocket Gophers Botta's pocket gopher (sign)	2021
Leporidae <i>Sylvilagus audubonii</i>	Rabbits Audubon's cottontail	2006, 2021
Muridae ** <i>Neotoma lepida intermedia</i>	Mice, Rats, and Voles San Diego desert woodrat (middens)	2021
Sciuridae <i>Spermophilus beecheyi</i>	Squirrels California ground squirrel	2006, 2021

APPENDIX B: SPECIAL STATUS SPECIES POTENTIALS FOR OCCURRENCE

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
Plants				
<i>Abronia villosa</i> var. <i>aurita</i> Chaparral sand-verbena	Annual herb. Sandy soils in chaparral, coastal scrub, desert dunes at 75-1600m elevation. Riverside, San Bernardino, Imperial, San Diego, Orange Cos. (presumed extirpated in Orange Co.), Arizona, Baja.	(Jan)Mar-Sep	Fed: None Calif: S2 CRPR: 1B.1	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Allium marvinii</i> Yucaipa onion	Perennial bulbiferous herb. Clay soils in openings in chaparral at 760-1065m. Riverside, San Bernardino, Orange, San Diego Cos.	Apr-May	Fed: None Calif: S1 CRPR: 1B.2 MSHCP: AC b USFS: S	Not expected; no suitable habitat, below elevation range, no documented occurrences within 5 mi.
<i>Allium munzii</i> Munz's onion	Perennial bulbiferous herb. Mesic, clay soils in chaparral, cismontane woodland, coastal scrub, pinyon juniper woodland, valley and foothill grassland at 297-1070m elevation. Western Riverside Co.	Mar-May	Fed: END Calif: THR, S1 CRPR: 1B.1 MSHCP: AC b	Not expected; no suitable habitat, no documented occurrences within 5 mi.
<i>Ambrosia pumila</i> San Diego ambrosia	Perennial rhizomatous herb. Sandy or clay soils, often in disturbed areas, sometimes alkaline. Chaparral, coastal scrub, valley and foothill grassland, and vernal pools at 20-415m elevation. Riverside, San Diego Co., Baja.	Apr-Oct	Fed: END Calif: S1 CRPR: 1B.1 MSHCP: AC b	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Arenaria paludicola</i> Marsh sandwort	Perennial stoloniferous herb. Sandy soils and openings in freshwater or brackish marshes and swamps at 3-170m elevation. LA, San Bernardino, Riverside, Santa Cruz, Marin, San Francisco, San Luis Obispo, and Santa Cruz Cos. and Sonora Mexico, Washington state. Presumed extirpated in San Bernardino, San Francisco, and Santa Cruz Cos.	May-Aug	Fed: END Calif: END, S1 CRPR: 1B.1	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Artemisia palmeri</i> San Diego sagewort	Perennial deciduous shrub. Sandy, mesic areas in chaparral, coastal scrub, riparian scrub/woodland/forest at 15-915m elevation. San Diego, Riverside, San Bernardino Cos., Baja.	(Feb)May-Sep	Fed: None Calif: S3? CRPR: 4.2	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Asplenium vesperinum</i> Western spleenwort	Perennial rhizomatous fern. Rocky soils and moist, shady areas in chaparral, cismontane woodland, coastal scrub at 180-1000m elevation. LA, Orange, Riverside, San Bernardino, San Diego, and Ventura Cos. and Baja. Not tracked in CNDDB.	Feb-Jun	Fed: None Calif: S4 CRPR: 4.2	Not expected; no suitable habitat, one mapped CCH record within 5 mi. (from 1892 – east Riverside, exact location unknown), not observed during surveys (June-July).
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	Annual herb. Alkaline soils and along lake margins, meadows and seeps and playas at 60-850m elevation. San Bernardino, Riverside, Inyo, Kern, LA, Orange, and Kings Cos. and Nevada. San Joaquin Valley, South Coast, Western Transverse Ranges, W edge of the Mojave Desert. Presumed extirpated in San Bernardino Co.	May-Oct	Fed: None Calif: S1 CRPR: 1B.1	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Atriplex coronata</i> var. <i>notalior</i> San Jacinto Valley crownscale	Annual herb. Alkaline soils in playas, mesic areas of valley and foothill grassland, vernal pools at 139-500m elevation. Western Riverside Co.	Apr-Aug	Fed: END Calif: S1 CRPR: 1B.1 MSHCP: AC d	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Atriplex parishii</i> Parish's brittle-scale	Annual herb. Alkaline soils in chenopod scrub, playas, vernal pools at 25-1900m elevation; Riverside, San Bernardino, LA, Orange, and San Diego Cos. and Baja. Presumed extirpated in LA, Orange, and San Bernardino Cos.	Jun - Oct	Fed: None Calif: S1 CRPR: 1B.1 MSHCP: AC d USFS: S	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	Annual herb. Alkaline soils in coastal bluff scrub, coastal scrub at 10-200m elevation; Channel Islands, LA, Orange, Riverside, San Luis Obispo, Santa Barbara, and Ventura Cos. Presumed extirpated in Santa Barbara Co., possibly extirpated in LA Co.	Apr - Oct	Fed: None Calif: S1 CRPR: 1B.2 MSHCP: AC d	Not expected; potentially suitable habitat but above elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Berberis nevadensis</i> Nevin's barberry	Perennial evergreen shrub. Sandy or gravelly soils in chaparral, coastal scrub, cismontane woodland, riparian scrub at 70-825m elevation. Scattered localities in LA, San Bernardino, Riverside, & San Diego Cos.	(Feb)Mar-Jun can ID all year	Fed: END Calif: END, S1 CRPR: 1B.1 MSHCP: AC d	Absent; potentially suitable habitat, one documented occurrence within 5 mi. (from 1999, 3.1 mi. N of site, a transplant outside of natural range), conspicuous plant not observed during surveys.

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Bouteloua trifida</i> Three-awned grama	Perennial herb. Carbonate, rocky soils in Mojavean desert scrub at 700-2000m elevation. Riverside, San Bernardino, Inyo Cos. SW US and Sonora, Mexico.	(Apr)May-Sep	Fed: None Calif: S3 CRPR: 2B.3	Absent; no suitable habitat, below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	Perennial bulbiferous herb. Often on clay soils in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools at 25-1120m elevation. LA, Orange, Riverside, San Bernardino, and San Diego Co; scattered in Southern CA foothills & valleys.	Mar-Jun	Fed: THR Calif: END, S2 CRPR: 1B.1 MSHCP: AC d	Not expected; no or marginal habitat/soils, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Calochortus plummerae</i> Plummer's mariposa lily	Perennial bulbiferous herb. Granitic rocky soils in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland at 100-1700m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos.	May-Jul	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Carex comosa</i> Bristly sedge	Perennial rhizomatous herb. Coastal prairie, marshes and swamps (lake margins), valley and foothill grassland at 0-625m elevation; Central and Northern CA and San Bernardino Co. Presumed extirpated in San Bernardino Co.	May-Sep	Fed: None Calif: S2 CRPR: 2B.1	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Caulanthus simulans</i> Payson's jewelflower	Annual herb. Chaparral, coastal scrub at 90-2200m elevation. North-facing slopes and ridgelines on sandy-granitic soils, frequently on steep rocky slopes, in burned areas, or disturbed sites such as streambeds. Orange, western Riverside, San Diego Cos.	(Feb)Mar-May(Jun)	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Low to moderate; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Annual herb. Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland at 0-640m elevation. Also fallow fields, drainage ditches; mainly in SW Riverside Co., a few sites in interior valleys of LA, San Bernardino, San Diego Cos.	Apr-Sep	Fed: None Calif: S2 CRPR: 1B.1 MSHCP: AC d	Low; potentially suitable habitat, two documented occurrences within 5 mi. (from 2013, Sycamore Cyn, 3.3 mi. ENE of site; from 1995, March Air Reserve Base, 3.5 mi. E of site), not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Chloropyron maritimum</i> ssp. Salt marsh bird's-beak	Hemiparasitic annual herb. Coastal salt marsh and swamp and coastal dunes. Limited to the higher zones of the salt marsh habitat. 0-30m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos. and Central CA, Baja.	May-Oct(Nov)	Fed: END Calif: END, S1 CRPR: 1B.2	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Chorizanthe leptotheca</i> Peninsular spineflower	Annual herb. Granitic soils and alluvial fans in chaparral, coastal scrub, lower montane coniferous forest at 300-1900m elevation. Riverside, San Bernardino, LA, San Diego, Kern, San Luis Obispo Cos., Baja. Not tracked in the CNDDDB.	May-Aug	Fed: None Calif: S3 CRPR: 4.2 MSHCP: AC	Not expected; no or marginal habitat, no CCH records in vicinity, not observed during surveys (June-July).
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	Annual herb. Sandy or rocky soils and openings in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 275-1220m elev. LA, Riverside, San Bernardino Cos.	Apr-Jun	Fed: None Calif: S2 CRPR: 1B.1 USFS: S BLM: S MSHCP: AC	Low; potentially suitable habitat, two documented occurrences within 5 mi. (from 1917, exact location unknown, mapped 3.2 mi. NNE of site; from 1936, exact location unknown, mapped 2.5 mi. NE of site), not observed during surveys (June-July).
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long-spined spineflower	Annual herb. Often on clay soils in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools at 30-1530m elevation. Orange, Riverside, San Diego Cos., Baja.	Apr-Jul	Fed: None Calif: S3 CRPR: 1B.2 MSHCP: AC	Low; no or marginal habitat, one documented occurrence within 5 mi. (from 1992, 5.0 mi. SSW of site), not observed during surveys (June-July).
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Annual herb. Sandy or gravelly soil in coastal scrub (alluvial fans), Mojavean desert scrub, pinyon and juniper woodlands at 300-1200m elevation. Riverside, San Bernardino, San Diego Cos.	Apr-Jun	Fed: None Calif: S3 CRPR: 1B.2	Low; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Convolvulus simulans</i> Small-flowered morning-glory	Annual herb. Clay soils, serpentine seeps, chaparral openings, coastal scrub, valley and foothill grassland at 30-740m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos. and Central CA, Baja. Not tracked in CNDDDB.	Mar-Jul	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Low; no or marginal habitat, no mapped CCH records within 5 mi., not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Annual parasitic vine. Freshwater marshes & swamps at 15-280m elevation. Scattered locations in LA, San Bernardino Cos., Northern and Central CA, various US states and Baja. Presumed extirpated from San Bernardino Co.	Jul-Oct	Fed: None Calif: SH CRPR: 2B.2	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Deinandra (Hemizonia) paniculata</i> Panicleate tarplant	Annual herb. Usually vernal mesic areas, sometimes sandy. Coastal scrub, valley and foothill grassland, vernal pools at 25-940m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura, Kern, Santa Barbara, San Luis Obispo Cos., Baja. Not tracked in the CNDDB.	(Mar) Apr-Nov	Fed: None Calif: S4 CRPR: 4.2	Not expected; no or marginal habitat, several CCH records in vicinity (closest is 2.8 mi. E of site), not observed during surveys (June-July).
<i>Dodecahema leptoceras</i> Slender-horned spineflower	Annual herb. Open, sandy alluvial benches in valleys & canyons. Chaparral, coastal scrub (alluvial fans), cismontane woodland at 200-760m elevation. LA, Riverside, San Bernardino Cos.	Apr-Jun	Fed: END Calif: END, S1 CRPR: 1B.1 MSHCP: AC b	Low; limited potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Dudleya multicaulis</i> Many-stemmed dudleya	Perennial herb. Often on clay soils in chaparral, coastal scrub, valley and foothill grassland at 15-790m elevation. LA, Orange, Riverside, San Bernardino, San Diego Cos.	Apr-Jul	Fed: None Calif: S2 CRPR: 1B.2 USFS: S BLM: S MSHCP: AC b	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	Perennial herb. Sandy or gravelly soils in chaparral, coastal scrub (alluvial fans) at 91-610m elevation. Orange, Riverside, San Bernardino Co., endemic to Santa Ana River watershed. Presumed extirpated in Orange Co.	Apr-Sep	Fed: END Calif: END, S1 CRPR: 1B.1 MSHCP: AC	Absent; no or marginal habitat, outside known geographic range, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Galium californicum</i> ssp. <i>primum</i> Alvin meadow bedstraw	Perennial herb. Granitic, sandy soils in chaparral, lower montane coniferous forest at 1350-1700m elevation. Riverside, San Bernardino Cos.	May-Jul	Fed: None Calif: S2 CRPR: 1B.2 MSHCP: NAC f	Absent; no suitable habitat, well below elevation range, not observed during surveys (June-July).
<i>Harpagonella palmeri</i> Palmer's grapplinghook	Annual herb. Clay soils and open grassy areas within shrubland in chaparral, coastal scrub, valley and foothill grassland at 20-955m elevation. LA, Orange, Riverside, San Diego Co., Catalina Island, AZ, Baja and Sonora, Mexico.	Mar-May	Fed: None Calif: S3 CRPR: 4.2 MSHCP: AC	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	Perennial rhizomatous herb. Coastal salt and freshwater marshes and swamps at 10-1525m elevation. LA, Orange, San Bernardino Cos. Last seen in 1937, presumed extinct.	Aug-Oct	Fed: None Calif: SX CRPR: 1A	Absent; no suitable habitat, no documented occurrences within 5 mi., presumed extinct.
<i>Hordeum intercedens</i> Vernal barley	Annual grass. Saline flats and depressions in valley and foothill grassland, vernal pools, coastal dunes, coastal scrub at 5-1000m elevation. LA, Orange, Riverside, San Diego Cos., Central CA, Channel Islands. Not tracked in the CNDDB.	Mar-Jun	Fed: None Calif: S3S4 CRPR: 3.2 MSHCP: AC	Absent; no suitable habitat, no mapped CCH records within 5 mi., not observed during surveys (June-July).
<i>Horkelia cuneata</i> var. <i>puberula</i> Mesa horkelia	Perennial herb. Sandy or gravelly soils in maritime chaparral, cismontane woodland, coastal scrub at 70-810m elevation. LA, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Ventura Cos. Presumed extirpated in Riverside and San Diego Cos.	Feb-Jul(Sep)	Fed: None Calif: S1 CRPR: 1B.1 USFS: S	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., presumed extirpated in Riverside County, not observed during surveys (June-July).
<i>Imperata brevifolia</i> California satintail	Perennial rhizomatous herb. Mesic areas in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub at 0-1215m elevation. Riverside, San Bernardino, LA, Orange, San Diego, Ventura, Imperial Cos., Central and Northern CA, SW US, Baja.	Sep-May	Fed: None Calif: S3 CRPR: 2B.1 USFS: S	Not expected; no or marginal habitat, no documented occurrences within 5 mi.
<i>Juglans californica</i> Southern California black walnut	Perennial deciduous tree. Alluvial soils in chaparral, cismontane woodland, coastal scrub, riparian woodland at 50-900m elevation. LA, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, Ventura Cos., Central and Northern CA.	Mar-Aug	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Absent; no or marginal habitat, conspicuous plant not observed during surveys.
<i>Lasthenia glabrata</i> spp. <i>coulteri</i> Coulter's goldfields	Annual herb. Coastal salt marshes and swamps, playas, vernal pools at 1-1220m elevation. Riverside, San Bernardino, LA, Orange, Ventura Cos., Central and Northern CA, Baja. Presumed extirpated in LA, San Bernardino Cos.	Feb-Jun	Fed: None Calif: S2 CRPR: 1B.1 BLM: S MSHCP: AC d	Absent; no suitable habitat, one documented occurrence within 5 mi. (from 1989, 2.5 mi. SW of site), not observed during surveys (June-July).
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Annual herb. Chaparral, coastal scrub at 1-885m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara, Mono Cos., Channel Islands, Baja.	Jan-Jul	Fed: None Calif: S3 CRPR: 4.3	Low; potentially suitable habitat, two documented occurrences within 5 mi. (from 1962, Sycamore Cyn, 2.6 mi. NE of site; from 2004, 4.5 mi. NNE of site), not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Lycium parishii</i> Parish's desert-thorn	Perennial shrub. Arid slopes & sand flats in coastal scrub and Sonoran desert scrub at 135-1000m elevation. Imperial, San Bernardino, San Diego Co., AZ, Sonora, Mexico. Presumed extirpated in San Bernardino Co.	Mar-Apr	Fed: None Calif: S1 CRPR: 2B.3	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., no records from Riverside County, not observed during surveys (June-July).
<i>Malacothamnus parishii</i> Parish's bush-mallow	Perennial deciduous shrub. Chaparral, coastal scrub at 305-455m elevation. San Bernardino Co. Presumed extirpated.	Jun-Jul	Fed: None Calif: SX CRPR: 1A	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., no records from Riverside County, presumed extirpated, not observed during surveys (June-July).
<i>Microseris douglasii</i> ssp. <i>platycarpa</i> Small-flowered microseris	Annual herb. Clay soils in cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools at 15-1070m elevation. LA, Orange, Riverside, San Diego Cos., Channel Islands, Baja. Not tracked in CNDDB.	Mar-May	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Not expected; no or marginal habitat, no mapped CCH records within 5 mi., not observed during surveys (June-July).
<i>Monardella pringlei</i> Pringle's monardella	Annual herb. Sandy soil in coastal scrub at 300-400m elevation. Riverside, San Bernardino Co. Presumed extirpated.	May-Jun	Fed: None Calif: SX CRPR: 1A	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., presumed extirpated, not observed during surveys (June-July).
<i>Myosurus minimus</i> ssp. <i>apus</i> Little mouse-tail	Annual herb. Valley and foothill grasslands, alkaline vernal pools at 20-640m elevation. Riverside, San Bernardino, San Diego Cos., Central and Northern CA, Oregon, Baja.	Mar-Jun	Fed: None Calif: S2 CRPR: 3.1 MSHCP: AC d	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Nasturtium (Rorippa) gambelii</i> Gambel's water cress	Perennial rhizomatous herb. Freshwater or brackish marshes and swamps at 5-330m elevation. LA, Orange, San Bernardino, Santa Barbara, San Luis Obispo Cos. Presumed extirpated in San Bernardino Co.	Apr-Oct	Fed: END Calif: THR, S1 CRPR: 1B.1	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Navarretia fossalis</i> Spreading navarretia	Annual herb. Chenopod scrub, shallow freshwater marshes and swamps, playas, vernal pools at 30-655m elevation. LA, Riverside, San Diego, San Luis Obispo Cos., Baja.	Apr-Jun	Fed: THR Calif: S2 CRPR: 1B.1 MSHCP: AC b	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Navarretia prostrata</i> Prostrate vernal pool navarretia	Annual herb. Mesic areas in coastal scrub, valley and foothill grassland (alkaline), meadows and seeps, vernal pools at 3-1210m elevation. Locations in northern, central, and southern CA.	Apr-Jun	Fed: None Calif: S2 CRPR: 1B.2 MSHCP: AC d	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Phacelia stellaris</i> Brand's star phacelia	Annual herb. Coastal dunes, coastal scrub at 1-400m elevation. Sandy openings, sandy benches, dunes, sandy washes, or floodplains. LA, Orange, Riverside, San Bernardino, San Diego Cos. Possibly extirpated in LA Co.	Mar-Jun	Fed: None Calif: S1 CRPR: 1B.1 MSHCP: AC b	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Pseudognaphalium leucocephalum</i> White rabbit-tobacco	Perennial herb. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, riparian woodland at 0-2100m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., AZ, NM, TX, Baja and Sonora Mex.	(Jul)Aug- Nov(Dec)	Fed: None Calif: S2 CRPR: 2B.2	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Pseudorontium cyathiferum</i> Deep Canyon snapdragon	Annual herb. Rocky soils in Sonoran desert scrub at 0-800m elevation. Riverside, Imperial, San Diego Cos., AZ, Baja and Sonora, Mexico.	Feb-Apr	Fed: None Calif: S1 CRPR: 2B.3	Absent; no suitable habitat, no documented occurrences within 5 mi/
<i>Quercus engelmannii</i> Engelmann oak	Perennial deciduous tree. Chaparral, cismontane woodland, riparian woodland, valley and foothill grassland at 50-1300m elevation. Mostly in foothills of Orange, west Riverside, San Bernardino, and San Diego Counties, also southeast San Gabriel Mountain foothills (LA County). Not tracked in the CNDDB.	Mar-Jun	Fed: None Calif: S3 CRPR: 4.2	Absent; no or marginal habitat, conspicuous plant not observed during surveys
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	Perennial deciduous shrub. Riparian woodland at 65-300m elevation. LA, San Bernardino Co. Presumed extirpated.	Feb-Apr	Fed: None Calif: SX CRPR: 1A	Absent; no suitable habitat, no documented occurrences within 5 mi., presumed extirpated, not observed during surveys (June-July).
<i>Romneya coulteri</i> Coulter's matilija poppy	Large perennial rhizomatous herb. Often in burn areas in chaparral, coastal scrub at 20-1200m elevation. LA, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo Cos. Not tracked in CNDDB.	Mar- Jul(Aug)	Fed: None Calif: S4 CRPR: 4.2 MSHCP: AC	Absent; potentially suitable habitat, conspicuous plant not observed during surveys.
<i>Senecio aphanactis</i> Chaparral ragwort	Annual herb. Alkaline soils (sometimes) in chaparral, cismontane woodland, coastal scrub at 15-800m elevation; LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., Central and Northern CA, Baja.	Jan- Apr(May)	Fed: None Calif: S2 CRPR: 2B.2	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Growth Form, Habitat and Distribution	Flowering Season	Conservation Status	Potential for Occurrence
<i>Sidalcea neomexicana</i> Salt spring checkerbloom	Perennial herb. Alkaline, mesic soils in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas at 15-1530m elevation. Kern, LA, Orange, Riverside, San Bernardino, San Diego, Ventura Cos., western US, Sonora Mex. Presumed extirpated in LA Co.	Mar-Jun	Fed: None Calif: S2 CRPR: 2B.2 USFS: S	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Sphenopholis obtusata</i> Prairie wedge grass	Perennial herb. Mesic areas in dismontane woodland, meadows and seeps at 300-2000m elevation. Riverside, San Bernardino, San Diego Cos., Central and Northern CA, throughout US (except Alaska), Baja and Sonora Mex.	Apr-Jul	Fed: None Calif: S2 CRPR: 2B.2	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Symphotrichum defoliatum</i> San Bernardino aster	Perennial rhizomatous herb. Near ditches, streams, springs in dismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grasslands (vernally mesic) at 2-2040m elevation. LA, Orange, Riverside, San Bernardino, San Diego, Imperial, Kern, Santa Barbara, San Luis Obispo Cos.	Jul-Nov	Fed: None Calif: S2 CRPR: 1B.2 USFS: S BLM: S	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
<i>Texosporium sancti-jacobi</i> Woven-spored lichen	Crustose lichen. Grows on soil, small mammal pellets, dead twigs, and <i>Selaginella</i> species, in chaparral openings at 60-660m elevation. LA, Riverside, San Diego, Ventura, Santa Barbara, San Benito Cos., San Clemente Island, ID, OR, WA.	Not applicable	Fed: None Calif: S2 CRPR: 3	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Tortula californica</i> California screw-moss	Moss. Sandy soil in chenopod scrub, valley and foothill grassland at 10-1460m elevation. LA, Riverside, San Diego, Ventura Cos., Central and Northern CA, Channel Islands.	Not applicable	Fed: None Calif: S2? CRPR: 1B.2 BLM: S	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Trichocoronis wrightii</i> var <i>wrightii</i> Wright's trichocoronis	Annual herb. Alkaline soils in meadows and seeps, marshes and swamps, riparian forest, vernal pools at 5-435m elevation. Riverside Co., Central Valley, TX, Baja.	May-Sep	Fed: None Calif: S1 CRPR: 2B.1 MSHCP: AC b	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
References: CDFW (2021a, 2021c), USFWS (2021a), CNPS (2021), Dudek (2003), RCA (2020)				

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
Invertebrates			
<i>Bombus cratchii</i> Crotch bumble bee	Coastal CA E to Sierra-Cascade crest & S into Mexico. Open grassland and scrub habitats. Food plant genera include <i>Antirrhinum</i> , <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Salvia</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> . Lives in colonies that may be underground in rodent holes or above ground in rock piles, tree cavities, etc.	Fed: None Calif: CanE, S1S2	Low to moderate; potentially suitable habitat and food plant species present, two documented occurrences within 5 mi. (from 1976, Riverside area – exact location unknown, mapped 3.7 mi. N of site; from 2020, on black sage in an urban garden, 4.0 mi. NNW of site), no colonies noted during surveys.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	Vernal pools or similar vernal habitats, requires cool water pools (≤50°F to hatch, ≤75°F to survive); disjunct locations in Riverside Co. and the Coast Ranges thru Central Valley to Tehama Co., southern Oregon, up to elevation of 1159m.	Fed: THR Calif: SA, S3 MSHCP: AC a	Absent; no suitable habitat, no documented occurrences within 5 mi.
<i>Ceratochrysis longimale</i> Desert cuckoo wasp	Chaparral, scrub habitats, juniper. LA, Riv, Ventura cos. Possibly extirpated.	Fed: None Calif: SA, S1	Low; potentially suitable habitat, one documented occurrence within 5 mi. (from 1915, Riverside area – exact location unknown, mapped 3.7 mi. N of site), possibly extirpated.
<i>Cicindela tranquebarica viridissima</i> Greenest tiger beetle	Riparian woodland adjacent to Santa Ana River basin, usually found in open spots between trees.	Fed: None Calif: SA, S1	Absent; no suitable habitat, outside known geographic range, no documented occurrences within 5 mi.
<i>Eugnosta (Carolella) busckana</i> Busck's gallmoth	Coastal dunes, coastal scrub. Larval host is <i>Encelia californica</i> . All CNDDDB records are historical, from 1906 to 1939 and extirpated/possibly extirpated.	Fed: None Calif: SA, SH	Not expected; potentially suitable habitat, one documented occurrence within 5 mi. (from 1906, west Riverside area – exact location unknown, mapped 3.0 mi. NW of site, extirpated).
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	Coastal scrub, open chaparral, juniper woodland, native grassland. Western Riverside Co., southern San Diego Co., Baja. Flight season from mid-Jan to late May. Host plants are dwarf plantain (<i>Plantago erecta</i>), purple owl's clover (<i>Casilleja exserta</i>), white snapdragon (<i>Antirrhinum coulterianum</i>), wooly plantain (<i>Plantago patagonica</i>), thread-leaved bird's beak (<i>Cordylanthus rigidus</i>). USFWS considers species extirpated in San Bernardino Co.	Fed: END Calif: SA, S1S2 MSHCP: AC	Low; potentially suitable habitat but no host plants observed (during June-July survey), one documented occurrence within 5 mi. (from 1945, Mockingbird Cyn area – exact location unknown, mapped 2.0 mi. SW of site).
<i>Neolarra alba</i> White cuckoo bee	Cleptoparasitic in the nests of perdita bees. Known only from localities in Southern California. All occurrences are historical.	Fed: None Calif: SA, SH	Not expected; one documented occurrence within 5 mi. (from 1928, Riverside area – exact location unknown, mapped 3.0 mi. SE of site, possibly extirpated).

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Rhaphiomidas terminatus abdominalis</i> Delhi sands flower-loving fly	Delhi fine sands, often with unconsolidated dunes present. SW San Bernardino Co. & NW Riverside Co.	Fed: END Calif: SA, S1 MSHCP: AC	Absent; no suitable habitat, no Delhi soils present on the site.
<i>Streptocephalus wooltoni</i> Riverside fairy shrimp	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Coastal scrub, valley & foothill grassland, vernal pool, wetland. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. Generally restricted to pools greater than 12 inches deep. All known populations lie between 30 and 415 meters elevation.	Fed: END Calif: SA, S1S2 MSHCP: AC a	Absent; no suitable habitat, no documented occurrences within 5 mi.
Fish			
<i>Catostomus santaanae</i> Santa Ana sucker	Small to medium permanent streams. LA & San Gabriel drainage, lower Santa Ana River.	Fed: THR Calif: SA, S1 MSHCP: AC	Absent; no perennial aquatic habitat.
<i>Gila orcuttii</i> Arroyo chub	Slow-moving or backwater sections of warm/cool streams with mud or sand substrates. LA, San Gabriel, San Luis Rey, Santa Ana & Santa Margarita Riv & Malibu & San Juan creeks.	Fed: None Calif: SSC, S2 MSHCP: AC USFS: S	Absent; no perennial aquatic habitat.
<i>Oncorhynchus mykiss irideus</i> pop. 10 Steelhead – southern California DPS	South coast flowing waters. Fed listing refers to pops from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego Co.)	Fed: END Calif: SA, S1	Absent; no perennial aquatic habitat.
<i>Rhinichthys osculus</i> "subspecies 8" Santa Ana speckled dace	Headwaters of the Santa Ana & San Gabriel Rivers, May be extirpated from the Los Angeles River system. Santa Ana River populations in lower San Bernardino Mtn. foothills & washes. Requires permanent flowering streams with summer water temps of 17-20C. usually inhabits shallow cobble and gravel riffles.	Fed: None Calif: SSC, S1 USFS: S	Absent; no perennial aquatic habitat.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
Amphibians			
<i>Coleonyx variegatus abbotti</i> San Diego banded gecko	Coastal and cismontane southern California. Found in granite or rocky outcrops in coastal scrub and chaparral.	Fed: None Calif: SSC, S1S2	Low; potentially suitable habitat and rock outcrops, no documented occurrences within 5 mi., not observed during surveys but is secretive.
<i>Rana muscosa</i> Southern mountain yellow-legged frog	Always encountered within a few feet of water. Tadpoles may require up to 2 years to complete development.	Fed: END Calif: END, WL, S1 MSHCP: AC c USFS: S	Absent; no perennial aquatic habitat.
<i>Spea hammondi</i> Western spadefoot toad	Cismontane woodland, coastal scrub, valley & foothill grassland, vernal pool. Breeds in quiet streams & vernal pools, burrows beneath sand during dry season. W CA, Central Valley to Baja California. From near sea level up to 4,500 ft elev.	Fed: None Calif: SSC, S3 BLM: S MSHCP: AC	Low; no or marginal habitat, six documented occurrences within 5 mi. (1978 to 2017, 3.8 to 4.3 mi. E of site and 4.1 to 4.8 mi. NE of site), not observed during surveys but surveys done during dry season.
Reptiles			
<i>Anniella stebbinsi (Anniella pulchra)</i> Southern California legless lizard	Various habitats, mainly shrublands, <6500 ft. elev. Coast Ranges from Bay area to N Baja CA, SW Sierra Nevada, parts of the Central Valley, Transverse & Peninsular Ranges.	Fed: None Calif: SSC, S3 USFS: S	Moderate; potentially suitable habitat, four documented occurrences within 5 mi. (from 2017, 4.6 mi. S of site; two from 2016, along Santa Ana River, 4.7 mi. NW of site; from 1897, Riverside area – exact location unknown, mapped 3.7 mi. N of site), not observed during surveys but is secretive.
<i>Arizona elegans occidentalis</i> California glossy snake	Arid scrub, rocky washes, grasslands, chaparral, often with loose or sandy soils. Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular Ranges, south to Baja California. Sea level to 7200' elev. Nocturnal.	Fed: None Calif: SSC, S2	Low; potentially suitable habitat, one documented occurrence within 5 mi. (from 1946, Riverside area – exact location unknown, mapped 3.7 mi. N of site), not observed during surveys but is nocturnal.
<i>Aspidoscelis hyperythra</i> Orange-throated whiptail	Low-elevation coastal scrub, chaparral, valley-foothill hardwood, sea level to 1040m. Sandy areas, patches of rock. S CA, west of desert to tip of Baja CA.	Fed: None Calif: WL, S2S3 USFS: S MSHCP: AC	Moderate; potentially suitable habitat, 13 documented occurrences within 5 mi. (from 1957 to 2010, closest is 2.0 mi. from site), not observed during surveys.
<i>Aspidoscelis tigris stejnegeri</i> Coastal whiptail	Primarily hot, dry open areas with sparse foliage, chaparral, woodland, riparian; coastal So CA, mostly west of Peninsular Ranges and south of Transverse Ranges, north into Ventura County, below ±7000' elev. and into Baja.	Fed: None Calif: SSC, S3 MSHCP: AC	Low to moderate; potentially suitable habitat, two documented occurrences within 5 mi. (from 1993, 4.2 mi. SE of site; from 2001, 3.8 mi. SW of site), not observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Crotalus ruber</i> Red-diamond rattlesnake	Desert scrub, thorn scrub, chaparral below 4,000ft. San Bernardino County S through most of Baja California, Mexico.	Fed: None Calif: SSC, S3 USFS: S MSHCP: AC	Not expected; no or marginal habitat, six documented occurrences within 5 mi. (1931 to 2015, closest is 2.8 mi. from site), not observed during surveys.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Open relatively rocky areas within valley-foothill locales, mixed chaparral/annual grasslands. Prefers moist habitats. W San Diego & Riv. Cos., SW San Bern., Vent. & LA Cos., NW Baja CA.	Fed: None Calif: SA, S2? USFS: S	Low; no or marginal habitat, one documented occurrence within 5 mi. (from 2000, 4.9 mi. SSE of site), not observed during surveys but is secretive.
<i>Emys marmorata</i> Western pond turtle	Perennial ponds, streams, marshes, irrigation ditches. Coastal S & cent. CA, NW Baja CA, below about 4800 ft. elev. (few higher elev. pops.)	Fed: None Calif: SSC, S3 BLM: S USFS: S MSHCP: AC	Absent; no perennial aquatic habitat.
<i>Phrynosoma blainvillii</i> Coast horned lizard	Coastal sage scrub, low elevation chaparral, annual grassland, riparian scrub and woodlands, desert wash, pinyon and juniper woodland, valley and foothill grassland, 0-2438m elevation. SW California to NW Baja California, Mexico.	Fed: None Calif: SSC, S3S4 BLM: S MSHCP: AC	Moderate; potentially suitable habitat, four documented occurrences within 5 mi. (from 1989, 4.4 mi. NE of site, from 1989, 2.2 mi. SW of site; from 1957, 2.0 mi. S of site; from 1936, March AFB – exact location unknown, 4.0 mi. ESE of site), not observed during surveys.
<i>Salvadora hexalepis virgulifera</i> Coast patch-nosed snake	Shrublands, washes, sandy flats, rocky areas; Santa Barbara county through southwest Calif., to northwest Baja Calif.	Fed: None Calif: SSC, S2S3	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
<i>Thamnophis hammondi</i> Two-striped gartersnake	Usually in or near perennial fresh water & adjacent riparian habitat, pools in streams. SW CA & NW Baja California.	Fed: None Calif: SSC, S3S4 BLM: S USFS: S	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
Birds			
<i>Accipiter cooperii</i> Cooper's hawk	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest. Forages in open areas over scrublands; California, Mexico, Central America. Nests in trees, often in dense woods. Year-round resident in most of southern California range. CNDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	Occurs (foraging), low (nesting); observed on the site during surveys, no or marginal nesting habitat, no documented occurrences (nesting) within 5 mi.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Agelaius tricolor</i> Tricolored blackbird	Breeds colonially in freshwater marshes, nomadic among marshes and fields in winter; almost completely endemic to Calif. Year-round resident in southern California range. CNDDB only tracks nesting.	Fed: BCC Calif: THR, SSC, S1S2 BLM: S MSHCP: AC	Absent (foraging and nesting); no suitable habitat, one documented occurrence (nesting) within 5 mi. (from 1992, Sycamore Cyn, 3.0 mi. NE of site), few eBird records in vicinity (Sycamore Cyn and Riverside Nat'l Cemetery), not observed during surveys.
<i>Aimophila ruficeps canescens</i> Southern California rufous-crowned sparrow	Sparse, mixed chaparral, scrub, rocky, brushy slopes. Central California to Baja California. Year-round resident in southern California range.	Fed: None Calif: WL, S3 MSHCP: AC	Low to moderate (foraging and nesting); potentially suitable habitat, two documented occurrences within 5 mi. (from 1997, 3.0 mi. SW of site; from 2001, 3.8 mi. SW of site), several eBird records in vicinity, not observed during surveys.
<i>Aquila chrysaetos</i> Golden eagle	Found in a variety of habitats from sea level to 11,500 feet, rugged open habitats preferred. Large platform nests constructed on secluded cliffs, large trees, and occasionally structures (i.e., electrical transmission towers). CNDDB tracks nesting and wintering.	Fed: BGEPA, BCC Calif: FP, WL, S3 BLM: S MSHCP: AC	Absent (foraging and nesting); no suitable habitat, no documented occurrences (nesting or wintering) within 5 mi., several eBird records in vicinity (may be seen soaring overhead), not observed during surveys.
<i>Artemisiospiza belli belli</i> Bell's sage sparrow	Sage scrub and chaparral communities. Nests mainly in shrubs, also in grass, and occasionally on ground under shrub. Found in coastal sage scrub in south of range. Central Washington southward to Baja California, Mexico. Year-round resident in southern CA.	Fed: BCC Calif: WL, S3 MSHCP: AC	Low to moderate (foraging and nesting), potentially suitable habitat, one documented occurrence within 5 mi. (from 2001, 3.8 mi. SW of site), several eBird records in vicinity, not observed during surveys.
<i>Asio otus</i> Long-eared owl	Conifer, oak, riparian, pinyon-juniper, and desert woodlands that are open or adjacent to grasslands, meadows, or shrublands. Most of CA except Central Valley, coastal LA and Orange Co., western Imperial Co., and central Riverside Co. Very limited breeding range in southern CA. CNDDB only tracks nesting.	Fed: None Calif: SSC, S3?	Low (foraging), not expected (nesting); potentially suitable foraging habitat, no suitable nesting habitat, no documented occurrences (nesting) within 5 mi., one eBird record in vicinity (2013, Sycamore Cyn), not observed during surveys but is nocturnal.
<i>Athene cunicularia</i> Burrowing owl	Nests in rodent burrows, usually in grasslands. Forages in open habitat; increasingly uncommon in S CA. Occurs through W US/Mex. Sparse in desert scrub but common around irrigated lands. CNDDB tracks burrow sites and some wintering sites.	Fed: BCC Calif: SSC, S3 BLM: S MSHCP: AC c	Absent; potentially suitable habitat, six documented occurrences within 5 mi., a few eBird records in vicinity, not observed during protocol breeding season surveys.
<i>Baeolophus inornatus</i> Oak titmouse	Open pine or mixed oak-pine forest, juniper woodland, pinyon or juniper mixed with Joshua trees. Not migratory. CNDDB only tracks nesting.	Fed: BCC Calif: none	Not expected (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., few eBird records in vicinity, not observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Buteo regalis</i> Ferruginous hawk	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Great Basin grassland and scrub, pinyon and juniper woodlands, valley and foothill grassland. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles. Does not breed in southern CA.	Fed: BCC Calif: WL, S3S4 MSHCP: AC	Not expected (foraging), absent (nesting); no suitable habitat, no documented occurrences within 5 mi., few eBird records in vicinity, not observed during surveys.
<i>Buteo swainsoni</i> Swainson's hawk	Grassland/agricultural, large trees for nesting, desert scrub with Joshua tree & Fremont cottonwood overstory, near streams & open fields. Breeds overwhelmingly in Great Basin & Central Valley of California. Seen in migration in southern California. CNDDDB only tracks nesting.	Fed: BCC Calif: THR, S3 BLM: S MSHCP: AC	Absent (foraging and nesting); no suitable habitat, outside of known geographic nesting range, one documented occurrence within 5 mi. (from 1889, Riverside area – exact location unknown, mapped 3.0 mi. NW of site, possibly extirpated), several eBird records in vicinity (may be seen overhead during migration), not observed during surveys.
<i>Chamaea fasciata</i> Wrentit	Chaparral, oak woodland, shrublands, western CA, northwestern Baja, western Oregon. Year-round resident in southern CA range. CNDDDB does not track this species.	Fed: BCC Calif: None	Low (foraging and nesting); no or marginal habitat, several eBird records in vicinity, not observed during surveys.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	Valley foothill and desert riparian. Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage along slow-moving watercourses, backwaters, or seeps. Willow almost always a dominant component of the vegetation. Most of the United States (excluding the NW states) & into Baja California & northern Mexico. CNDDDB only tracks nesting.	Fed: THR, BCC Calif: END, S1 BLM: S USFS: S MSHCP: AC a	Absent (foraging and nesting); no suitable habitat, one documented occurrence (nesting) within 5 mi. (from 1894, Riverside area – exact location unknown, mapped 3.7 mi. N of site), no eBird records in vicinity, not observed during surveys.
<i>Contopus cooperi</i> Olive-sided flycatcher	Uncommon to common summer breeding resident throughout CA (except deserts, Central Valley, other lowland valleys), variety of forest/woodland habitats below 2800 m (9000 ft). Preferred nesting habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine. Requires large trees (usually conifers) for nesting and lofty perches for singing posts and hunting perches. CNDDDB only tracks nesting	Fed: BCC Calif: SSC, S3	Not expected (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., not observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Coturnicops noveboracensis</i> Yellow rail	Summer resident in eastern Sierra Nevada. Freshwater marshlands. Occurs year round in California, very local breeder in NE interior and winter visitor on the coast and Suisun Marsh region, central and southern coastal US, parts of Canada, south central Oregon.	Fed: BCC Calif: SSC, S1S2 USFS: S (Lassen and Shasta-Trinity National Forests)	Absent (foraging and nesting); no suitable habitat, no documented occurrences within 5 mi., no eBird records in vicinity, not observed during surveys.
<i>Dryobates (Picoides) nuttallii</i> Nuttall's woodpecker	Found in low elevation riparian and oak woodlands; rarely in conifers. Central Valley, Transverse and Peninsular Ranges, Coast Ranges north to Sonoma Co., lower portions of the Cascade Range and Sierra Nevada. Year-round resident throughout coastal mountains of CA. Not tracked in CNDDB.	Fed: BCC Calif: None	Occurs (foraging), low (nesting); detected by vocalization just south of the site, marginal nesting habitat.
<i>Elanus leucurus</i> White-tailed kite	Breeds in woodlands and riparian forests, forages over open terrain; Pacific Coast (Calif, northern Baja, Oregon), other scattered localities. Year-round resident in southern CA range. CNDDB only tracks nesting.	Fed: None Calif: FP, S3S4 BLM: S MSHCP: AC	Low (foraging), not expected (nesting); marginal foraging habitat, a few eBird records in vicinity, no suitable nesting habitat, no documented occurrences (nesting) within 5 mi., not observed during surveys.
<i>Empidonax traillii eximius</i> Southwestern willow flycatcher	Dense riparian forests, wet mountain meadow systems with standing water for at least part of the breeding season (May to July) & with ample numbers of willow & other associated trees & shrubs. Rare & local in S CA. SW US & N Baja California. CNDDB only tracks nesting.	Fed: END Calif: END, S1 MSHCP: AC a	Absent (foraging and nesting), no suitable habitat, no documented occurrences (nesting) within 5 mi., not incidentally observed during surveys.
<i>Eremophila alpestris actia</i> California horned lark	Variety of open habitats with low growing vegetation or bare ground, grasslands, rangelands, "bald" hills, mtn. meadows, open coastal plains, fallow fields, alkali flats. Within coastal Sonoma Co. to San Diego Co., San Joaquin Valley & E to foothills.	Fed: None Calif: WL, S4 MSHCP: AC	Moderate (foraging), low (nesting); potentially suitable habitat, two documented occurrences within 5 mi. (both from 1992, March Air Reserve Base, 4.2 mi. ESE and 4.0 mi. SE of the site), many eBird records in vicinity, not observed during surveys.
<i>Falco columbarius</i> Merlin	Woodlands, grasslands, agricultural fields, and areas around livestock feed lots. Dense tree stands close to bodies of water are needed for cover. Uses a wide variety of habitats. Winter migratory bird to southern California.	Fed: None Calif: WL, S3S4 MSHCP: AC	Low (foraging), absent (nesting); no suitable habitat, outside of nesting range, no documented occurrences within 5 mi., several eBird records in vicinity, not observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Haliaeetus leucocephalus</i> Bald eagle	Breed in large trees, usually near major rivers or lakes. Winters more widely. Wide but scattered distribution in N America, esp. coastal regions. CNDDDB tracks nesting and wintering.	Fed: Delisted, BGEPA, BCC Calif: END, FP, S3 MSHCP: AC BLM: S USFS: S	Absent (foraging and nesting); no suitable habitat, three documented occurrences (nesting and wintering) within 5 mi. (two from 1975 and one from 1981, all at Lake Mathews, about 5 mi. SW of site), a few eBird records in vicinity (may be seen flying overhead), not observed during surveys.
<i>Icteria virens</i> Yellow-breasted chat	Summer resident, inhabits riparian thickets of willow near watercourses, low dense riparian willow. Migrant and summer resident in CA, northern CA, central coast, eastern Central Valley, coastal southern CA, Colorado River, western US, Canada, Mexico, Central America. CNDDDB only tracks nesting.	Fed: None Calif: SSC, S3 MSHCP: AC	Absent (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., not observed during surveys.
<i>Lanius ludovicianus</i> Loggerhead shrike	Open areas where small trees, shrubs, and fences can provide suitable perches. Nests in small trees and large shrubs. Throughout much of North America. CNDDDB only tracks nesting.	Fed: BCC Calif: SSC, S4 MSHCP: AC	Moderate (foraging and nesting); potentially suitable habitat, one documented occurrence (nesting) within 5 mi. (from 1994, March Air Reserve Base, 2.5 mi. E of site), several eBird records in vicinity, not observed during surveys.
<i>Laterallus jamaicensis coturniculus</i> California black rail	Saline, brackish, and freshwater emergent wetlands. San Francisco Bay area, Sacramento-San Joaquin Delta, scattered locations on coastal southern CA, Salton Sea, lower Colorado River, scattered locations in US, Mex, Central America.	Fed: BCC Calif: THR, FP, S1 BLM: S	Absent (foraging and nesting); no suitable habitat, one documented occurrence within 5 mi. (from 1892, Riverside area – exact location unknown, mapped 3.7 mi. N of site), no eBird records in vicinity, not observed during surveys.
<i>Pandion haliaetus</i> Osprey	Nests on snags, treetops or between large branches, cliffs, or human built platforms with open surroundings. Needs open water with shallow fishing grounds. Throughout the US, with most nesting in the northwestern states and east coast, and Canada. Rare but possible in Southern CA. CNDDDB only tracks nesting.	Fed: None Calif: WL, S4 MSHCP: AC	Absent (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., several eBird records in vicinity (may be seen in migration), not observed during surveys.
<i>Polioptila californica californica</i> Coastal California gnatcatcher	Sage scrub, also chaparral, grasslands, riparian adjacent to or mixed with sage scrub below 2,500 ft elevation. S Ventura Co. to LA, Orange, Riv., San Bern., San D. Cos into Baja CA, Mexico.	Fed: THR Calif: SSC, S2 MSHCP: AC	Moderate (foraging and nesting); potentially suitable habitat, nine documented occurrences within 5 mi. (from 1992 to 2006, closest is 0.6 mi. SSE of site), several eBird records in vicinity, not incidentally observed during surveys (by a biologist permitted for this species).

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Selasphorus sasin</i> Allen's hummingbird	Breeds in moist coastal areas, scrub, chaparral, and forests. Winters in forest edge and scrub clearings with flowers. Breeds in and migrates through CA. Not tracked in CNDDB.	Fed: BCC Calif: None	High (foraging), absent (nesting); potentially suitable foraging habitat, outside of the coastal breeding range, many eBird records in vicinity, not observed during surveys.
<i>Setophaga petechia</i> Yellow warbler	Migrant and summer resident in southern CA. Riparian, including willow, cottonwood, sycamore, alder, aspen for nesting & foraging, also conifer forest. CNDDB only tracks nesting.	Fed: BCC Calif: SSC, S3S4	Absent (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., several eBird records in vicinity (in/near riparian areas), not observed during surveys.
<i>Spinus lawrencei</i> Lawrence's goldfinch	Summer breeder, may overwinter. Coastal side of southern and central CA, western edge of southern deserts, east side of Central Valley into northern CA, Colorado River, SW US and northern Mex. Valley foothill hardwood and hardwood-conifer, desert riparian, pinyon juniper, palm oasis, lower montane. Nests in oaks, conifers. CNDDB only tracks nesting.	Fed: BCC Calif: SA, S4	Low (foraging), not expected (nesting); marginal habitat; no documented occurrences (nesting) within 5 mi., many eBird records in vicinity, not observed during surveys.
<i>Toxostoma lecontei</i> Le Conte's thrasher	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Fed: BCC Calif: SSC*, S3 BLM: S* *San Joaquin population only	Absent (foraging and nesting); no suitable habitat, no documented occurrences within 5 mi., no eBird records in vicinity, not observed during surveys.
<i>Vireo bellii pusillus</i> Least Bell's vireo	Riparian woodlands, bottomlands. N Mex. & Baja CA into S CA & the S mid-western US. CNDDB only tracks nesting.	Fed: END Calif: END, S2 MSHCP: AC a	Absent (foraging and nesting); no suitable habitat, 22 documented occurrences within 5 mi. (from 2007 to 2015, closest is in Prenda Arroyo, 0.5 mi. E of site), not incidentally observed during surveys.
Mammals			
<i>Antrozous pallidus</i> Pallid bat	Rock outcrops of shrublands, ≤ 6000' elevation; southwest North America to interior Oregon and Washington; hibernates in winter. Locally common at low elevations in grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Forages over open ground. Roosts in caves, crevices, mines, hollow trees, buildings. Very sensitive to disturbance of roosting sites.	Fed: None Calif: SSC, S3 BLM: S USFS: S	Moderate (foraging), low (roosting); potentially suitable habitat, ongoing disturbance reduces potential for roosting, no documented occurrences within 5 mi., no evidence of bat roosting observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Chaetodipus (Perognathus) fallax</i> Northwestern San Diego pocket mouse	Sandy herbaceous areas, usually in association with rocks or coarse gravel, chaparral, coastal scrub, grasslands. SW CA & NW Baja California (inland to San Bernardino Valley).	Fed: None Calif: SSC, S3S4 MSHCP: AC	Moderate; potentially suitable habitat, six documented occurrences within 5 mi. (from 1992 to 1999, closest is 1.9 mi. NE of site).
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Alluvial floodplains and adjacent upland habitats within the San Bernardino, Menifee, and San Jacinto valleys, Riversidean alluvial fan sage scrub.	Fed: END Calif: CanE, SSC, S1 MSHCP: AC c	Low; potentially marginal upland habitat adjacent to offsite alluvial area (Prenda Creek), outside of current known geographic range, two documented occurrences within 5 mi. (from 1908, exact location unknown, mapped 2.6 mi. SE of site; from 1952, exact location unknown, mapped 1.6 mi. NW of site).
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	Sparse, gently sloping grassland, sometimes at margins of cultivated or disturbed lands; prefers grassland dominated by forbs rather than annual grasses, prefers sparse perennial vegetation; firm soil for burrowing (not too hard or too sandy); may use abandoned gopher burrows; W Riverside Co. and adjacent San Diego Co. San Bernardino County occurrences extirpated. No critical habitat has been designated.	Fed: END Calif: THR, S2 MSHCP: AC	Low; no or marginal habitat, 30 documented occurrences within 5 mi. including a large (over 2,000 acres) mapped occurrence from 1999 (EO #69) that includes the eastern portion of the site as well as large areas to the north and south, it is likely that portions of this occurrence have been extirpated.
<i>Eumops perotis californicus</i> Western mastiff bat	Lowlands (with rare exceptions), many open, semi-arid to arid habitats, conifer and deciduous woodlands, coastal scrub, grasslands, chaparral. Central & S CA, S AZ, NM, SW TX. Roosts in deep rock crevices, high buildings, trees, and tunnels; forages over wide area.	Fed: None Calif: SSC, S3S4 BLM: S	Moderate (foraging), low (roosting); potentially suitable foraging habitat, no or marginal roosting habitat, no documented occurrences within 5 mi., no evidence of bat roosting observed during surveys.
<i>Lasiurus xanthinus</i> Western yellow bat	Valley foothill riparian, desert riparian, desert wash, palm oasis. Roosts in trees, particularly palms. Forages over water and among trees. Desert regions of the SW US. Distributed in S CA, AZ, NM, & TX, into Mexico.	Fed: None Calif: SSC, S3	Low (foraging), not expected (roosting); no or marginal foraging habitat, one documented occurrence within 5 mi. (from 1996, Riverside area – exact location unknown, mapped 3.0 mi. NW of site), no evidence of bat roosting observed during surveys.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Chaparral, coastal, or Riversidean sage scrub with adjacent open grassland. Los Angeles Co. S to San Quintin, Baja California, Mexico.	Fed: None Calif: SSC, S3S4 MSHCP: AC	Low; no or marginal habitat, two documented occurrences within 5 mi. (from 2001, 3.8 mi. SW of site; from 2005, 3.0 mi. SE of site), not observed during surveys.

Species	Habitat and Distribution	Conservation Status	Potential for Occurrence
<i>Myotis yumanensis</i> Yuma myotis	Variety of habitats; optimal habitat is open forest with water sources over which to feed. Widespread in CA except for deserts. Elev. 0-1,000 ft but rare over 8,000 ft. Feeds over ponds and streams. Roosts in buildings, mines, caves, or crevices, under bridges. Hibernates in winter.	Fed: None Calif: SA, S4 BLM: S	Low (foraging and roosting); no or marginal foraging habitat, potentially suitable roosting habitat, no documented occurrences within 5 mi., no evidence of bat roosting observed during surveys.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Arid shrublands, rocky outcrops, & crevices. Cismontane CA., San Luis Obispo to San Diego Co. & NW Baja California. 0-7000 ft. elev. Variety of shrub and desert habitats, primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth. Constructs elaborate middens of sticks and other materials.	Fed: None Calif: SSC, S3S4 MSHCP: AC	Occurs; four middens observed onsite although no evidence of current occupation.
<i>Nyctinomops femorosaccus</i> Pocketed free-tailed bat	Deserts & arid lowlands, pinyon juniper woodlands, desert scrub, riparian scrub, Joshua tree woodland, rocky areas with high cliffs. E Riverside & San Diego Cos. and Imperial Co., through SW US, Baja California, mainland Mexico. Roost mainly in crevices of high cliffs. Few records in So CA. Prefers rocky desert areas with high cliffs or rock outcrops. Feeds over ponds, streams, and arid desert.	Fed: None Calif: SSC, S3	Not expected (foraging and roosting), no suitable habitat, two documented occurrences within 5 mi. (from 1985, March Air Reserve Base, 4.0 mi. SE of site; 1988, Riverside area – exact location unknown, mapped 2.9 mi. NW of site), no evidence of bat roosting observed during surveys.
<i>Onychomys torridus ramona</i> Southern grasshopper mouse	Nocturnal, active year-round. Desert scrub, coastal scrub, mixed chaparral, sagebrush, especially scrub habitats with friable soil, prefers low to moderate shrub cover. LA through San Diego counties and northwest Baja.	Fed: None Calif: SSC, S3	Low; potentially suitable or marginal habitat, one documented occurrence within 5 mi. (from 1908, 3.2 mi. E of site).
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	Nocturnal, active Apr-Aug. Annual grassland, sage scrub, alluvial sage scrub. S California from Rancho Cucamonga (W boundary), San Geronio (E), Aguanga & Oak Grove, San Diego (S). Open ground with fine, sandy soils.	Fed: None Calif: SSC, S1S2 MSHCP: AC c	Low; potentially suitable habitat, two documented occurrences within 5 mi. (both on March Air Reserve Base; from 1992, 4.2 mi. ESE of site; from 1993, 4.6 mi. ESE of site).
<i>Taxidea taxus</i> American badger	Mountains, deserts, interior valleys where burrowing animals are available as prey & soil permits digging. Throughout Central & W North America.	Fed: None Calif: SSC, S3	Low; potentially suitable or marginal habitat, no documented occurrences within 5 mi., no evidence of badger burrows or diggings observed during surveys.

References: CDFW (2021b, 2021c), USFWS (2021), Dudek (2003), RCA (2020); Cornell (2021); eBird (2021); USFS (2013)

"Documented occurrences" refers to species occurrences in the California Natural Diversity Database (CNDDB) unless otherwise noted. For plant species that are not tracked in the CNDDB, records from the Consortium of California Herbaria (CCH) may be used (only CCH records that include map coordinates are utilized). eBird (eBird.org) is an online database of bird distribution and abundance sponsored by the Cornell Laboratory of Ornithology and compiled from observations submitted by citizen scientists. eBird records of bird observations are noted but should be interpreted with caution. eBird records "in vicinity" means records within about a 5-mile radius of the site.

Federal designations: (Federal Endangered Species Act, U.S. Fish and Wildlife Service):

END: Federally listed, endangered; an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range.

THR: Federally listed, threatened; an animal or plant which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range.

Cand Candidate for federal listing as threatened or endangered; species that has been studied by the U.S. Fish and Wildlife Service, and the Service has concluded that it should be proposed for addition to the Federal Endangered and Threatened species list.

Prop Proposed for federal listing as Endangered or Threatened under Section 4 of the Endangered Species Act.

Delisted: Previously federally listed as endangered or threatened, but is no longer listed (e.g., due to recovery).

None: The species has no federal conservation status.

BGEPA: Federal Bald and Golden Eagle Protection Act; protects bald and golden eagles.

BCC: USFWS Bird of Conservation Concern; migratory and non-migratory bird species (beyond those already designated as Federally threatened or endangered) that represent USFWS highest conservation priorities.

State designations: (California Endangered Species Act, California Dept. of Fish and Wildlife)

END: State listed, endangered; 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.

CanE: Candidate Endangered; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of endangered species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of endangered species.

CanT: Candidate Threatened; a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of threatened species.

THR: State listed, threatened; 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 special protection and management efforts.

RARE: State listed as rare: a native plant species, subspecies, or variety 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 (Native Plant Protection Act of 1977).

SSC: CDFW Species of Special Concern; vertebrate species of concern due to declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

FP: Fully Protected; California Fish and Game Code states that Fully Protected species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected" species, although take may be authorized for necessary scientific research.

Delisted: Previously state listed as threatened or endangered, but no longer listed (e.g., due to recovery).

SA: CDFW Special Animal; wildlife of state conservation concern.

SH: All California sites are historical, still some hope of rediscovery.

- SX: All California sites are historical, presumed extirpated.
PFB: Protected Fur-bearing Mammal under Title 14 of the California Code of Regulations.
None: The species has no state conservation status.

State Rank (S Rank): A reflection of the condition and imperilment of an element (plant, animal, vegetation community) throughout its range within the state. The S ranks are determined through a combination of rarity, threat, and trend factors, weighted more heavily on the rarity factors. Where correct category is uncertain, the S rank includes two categories or a question mark. Older ranks, which need to be updated, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats.

- S1: Critically imperiled; imperiled in the state because of extreme rarity or some factor(s) making it especially vulnerable to extirpation from the state.
S2: Imperiled; imperiled in the state because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from the state or nation.
S3: Vulnerable; vulnerable in the state due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.
S4: Apparently secure; uncommon but not rare, some cause for long-term concern due to declines or other factors.
S5: Secure; common, widespread, and abundant in the state.
SH: Possibly extirpated; species or community occurred historically in the state, and there is some possibility that it may be rediscovered. The element has not been seen for at least 20 years, but suitable habitat still exists.
SX: Presumed extirpated; species or community is believed to be extirpated from the state.

California Rare Plant Rank (CRPR): The *California Rare Plant Ranks* are a ranking system originally developed by the California Native Plant Society (CNPS) to better define and categorize rarity in California's plants. These ranks were previously known as the CNPS lists but were renamed to the *California Rare Plant Ranks* to better reflect the joint effort among the CNPS, the CDFW, and a wide range of botanical experts, who work together to assign a rarity ranking.

- 1A: Plants presumed extinct in California and rare/extinct elsewhere.
1B: Plants rare, threatened, or endangered in California and elsewhere.
2A: Plants presumed extirpated in California, but more common elsewhere.
2B: Plants rare, threatened, or endangered in California but more common elsewhere.
3: Plants about which we need more information.
4: Plants of limited distribution.
X.1: Extension to CRPR (e.g., 1B.1); seriously threatened in California.
X.2: Extension to CRPR (e.g., 1B.2); fairly threatened in California.
X.3: Extension to CRPR (e.g., 1B.3); not very threatened in California.
CBR: Considered but rejected.

U.S. Forest Service (USFS) designation:

- S: Sensitive; plant and animal species identified by a regional forester that are not listed or proposed for listing under the Federal Endangered Species Act for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

Bureau of Land Management (BLM) designation:

- S: Sensitive; plant and animal species requiring special management considered to promote their conservation and reduce the likelihood for future listing under the Federal Endangered Species Act. Includes species designated as sensitive by the BLM State Director and all Federal Candidate species and Federal delisted species in the 5 years following delisting. Sensitive species are managed as special status species.

Western Riverside County Multiple Species Habitat Conservation Plan: Applied to species that are covered under state and federal permits for the MSHCP.

NAC: Species Not Adequately Conserved

AC: Species Adequately Conserved

- (a): Surveys may be required for these species as part of wetlands mapping as described in Section 6.1.2 of the MSHCP.
- (b): Surveys may be required for these species within Narrow Endemic Plant Species survey area as described in Section 6.1.3 of the MSHCP.
- (c): Surveys may be required for these species within locations shown on survey maps as described in Section 6.3.2 of the MSHCP.
- (d): Surveys may be required for these species within Criteria Area as described in Section 6.3.2 of the MSHCP.
- (e): These Covered Species will be considered 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 MSHCP. Please refer to Table 9-3 of the MSHCP for specific conservation objectives that must be met for these species prior to including them on the list of Covered Species Adequately Conserved.
- (f): These Covered Species will be considered Adequately Conserved when a Memorandum of Understanding is executed with the U.S. Forest Service that addresses management for these species on Forest Service Land. Refer to Table 9-3 of the MSHCP.

No entry: Not a Covered Species

Definitions of occurrence probability:

These definitions provide general guidance. Classifications for individual species may be modified based on biologists' experience and expert opinion.

Occurs:

Species was detected during surveys or previously documented on the Project site or adjacent areas.

High:

Species documented in the vicinity (i.e., within 5 miles) of the Project site and suitable habitat is present, but species not detected during surveys.

Moderate:

Species documented in the vicinity of the Project site or suitable habitat present and site is within geographic and elevational range of the species.

Low:

Species not documented in the vicinity of the Project site or suitable habitat is marginal.

Not Expected:

Species not documented in the vicinity of the Project site and suitable habitat marginal or absent, or site is not within geographic and elevational range of the species.

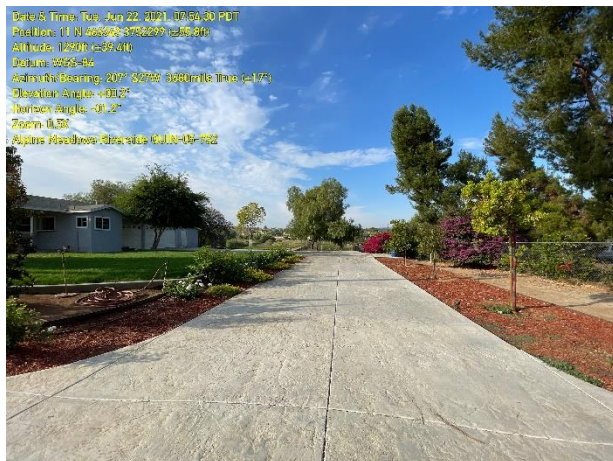
Absent:

No potential for the species to occur due to lack of habitat, geographic or elevation range, species life history, survey results, etc.

Unknown:

No focused surveys have been performed in the region, and the species' distribution and habitat are poorly known.

APPENDIX C: SITE PHOTOGRAPHS



Developed/ornamental area of the site, existing residence on Lot 1 is visible on the left, northwest corner of the site, facing south-southwest (06.22.2021).



Existing residence on Lot 1 with lawn and ornamental vegetation, northwest corner of site, facing southwest (06.22.2021).



Disturbed area of the site, north-central area of the site, facing west (06.22.2021).



Disturbed area of the site, existing residence on Lot 1 in background, southwest corner of the site, facing north (06.22.2021).



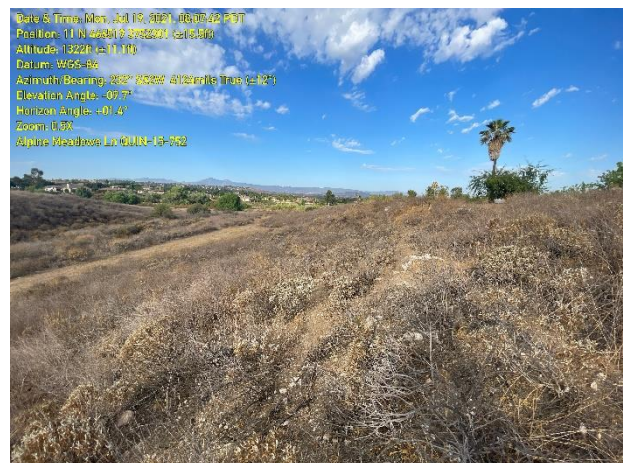
Disturbed area surrounding one of the wells on the property, northeast area of the site, facing north-northwest (06.22.2021).



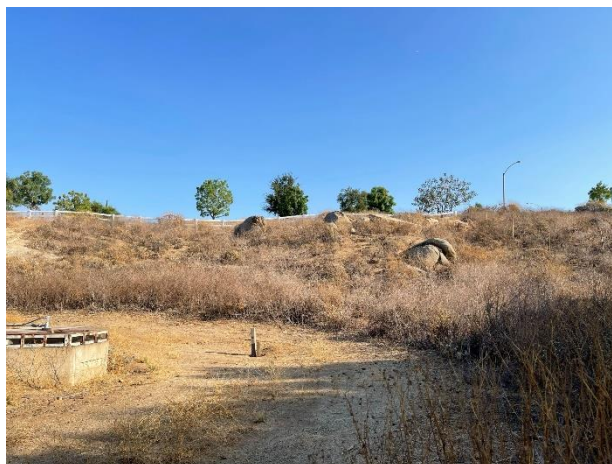
Road on the property leading to the wells, northeast area of the site, facing west-southwest (06.22.2021).



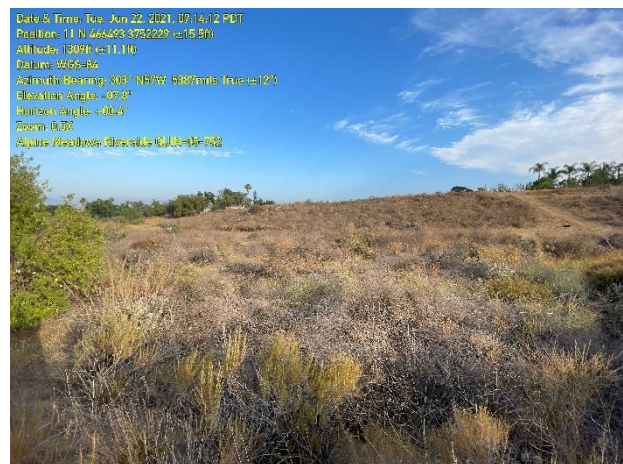
Disturbed brittlebush scrub, southwest portion of site, facing south-southeast (07.28.2021).



Disturbed brittlebush scrub, southeast portion of site, facing southwest (07.19.2021).



Relatively undisturbed brittlebush scrub and rock piles in northeast corner of site, eastern well visible on left, facing north (09.07.2021).



Relatively undisturbed brittlebush scrub in southeast portion of site, facing northwest (06.22.2021).



Relatively undisturbed brittlebush scrub, southeast corner of the site, facing north, eastern fence line visible on right (06.22.2021).



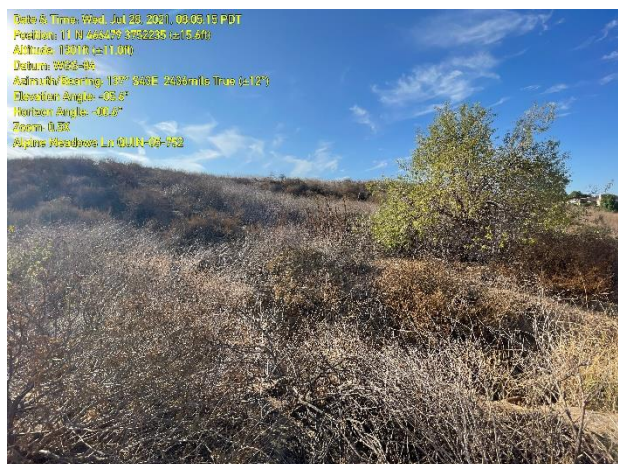
Woodrat midden in northeast corner of site, facing north (09.07.2021).



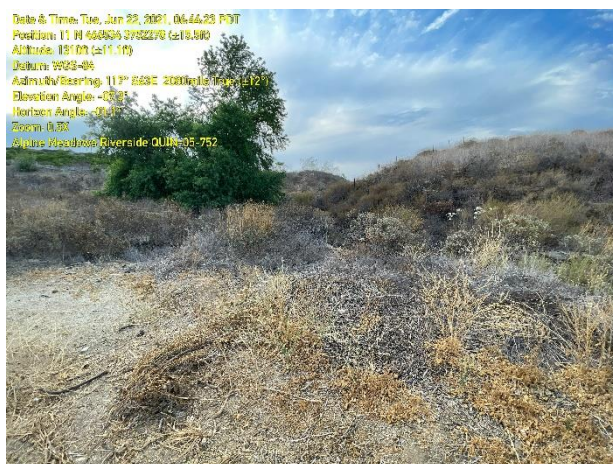
Woodrat midden in northeast corner of site, facing east (09.07.2021).



Woodrat midden in northeast corner of site, facing south (09.07.2021).



Native blue elderberry tree, southeast portion of site, facing southeast (07.28.2021).



Native black willow tree on eastern boundary with trunk offsite and canopy extending over the fence line, facing southeast (06.22.2021).



Ornamental trees by existing residence on Lot 1, southwest corner of site, facing northwest (07.28.2021).



Ornamental acacia trees along northern fence line on right. One of the palm trees on the site is visible in the background, northeast corner, facing west (06.22.2021).



Drainage at eastern boundary of site where it enters the property, facing east/upstream. Offsite willow visible at left (09.07.2021).



Drainage in southeast portion of property, facing northeast/upstream (09.07.2021).



Drainage along southern boundary of site in south-central portion of property, facing west/downstream (09.07.2021).



Drainage along southern boundary of site in southwest portion of property, facing west/downstream (06.22.2021).



Drainage along southern boundary of site in southwest corner of property where it leaves the site, facing east/upstream. Non-native Peruvian pepper tree visible on right (09.07.2021).



Riparian vegetation in Prenda Creek about 440 feet southeast of the site, facing east (09.07.2021).



Riparian vegetation in Prenda Creek about 330 feet south of the site, facing north. The site is visible in the background (09.07.2021).



APPENDIX D: RIVERSIDE COUNTY DOCUMENTATION

Certification

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



DATE: revised May 10, 2023

SIGNED: _____

Leslie Irish, Principal, L&L Environmental, Inc.
909-335-9897

1) Fieldwork Performed By:

Guy Bruyea
Name

2) Fieldwork Performed By:

Leslie Irish
Name

3) Fieldwork Performed By:

Name

4) Fieldwork Performed By:

Name

5) Fieldwork Performed By:

Name

6) Fieldwork Performed By:

Name

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

BIOLOGICAL REPORT SUMMARY SHEET

Applicant Name: LandBuild
Assessor's Parcel Number(s): 243-230-027 (243-600-025 on RCA MSHCP Map)
Section, Township and Range: Section 13, Township 3 South, Range 5 West
Building and Safety Log Number: _____
Case Number: TPM 38174 Lot/Parcel _____ EA Number _____

MARK ITEM(S) SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE of CONCERN	(Mark Yes, No, or N/A regarding species findings on the referenced site)		
		Yes	No	n/a
	Arroyo Southwestern Toad			X
X	Blueline Stream(s)		X	
X	Burrowing Owl		X	
	Coachella Valley Fringed-toed Lizard			X
	Coastal California Gnatcatcher			X
X	Coastal Sage Scrub	X		
	Delhi Sands Flower-loving Fly			X
	Desert Pupfish			X
	Desert Slender Salamander			X
	Desert Tortoise			X
	Flat-tailed Horned Lizard			X
X	Least Bell's Vireo (habitat)		X	
X	Oak Woodlands		X	
	Quino Checkerspot Butterfly			X
X	Riverside Fairy Shrimp (habitat)		X	
	Santa Ana River Woollystar			X
	San Bernardino Kangaroo Rat			X
	Slender-horned Spineflower			X
	Stephens' Kangaroo Rat			X
X	Vernal Pools		X	
X	Wetlands (MSHCP Riverine)	X		
X	Cooper's hawk	X		
X	Nuttall's woodpecker	X		
X	San Diego desert woodrat (middens)	X		

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened, or candidate species by either state, or federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (CNDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report or habitat assessment.



L & L Environmental, Inc.

Signature and Company Name

revised May 10, 2023

Date

10(a) Permit Number (if applicable)

Permit Expiration Date

Received By: _____
PD-B# _____

County Use Only

Date: _____

Attachment E-4

LEVEL OF SIGNIFICANCE CHECKLIST
For Biological Resources
(Submit two copies to the County)

Case Number: TPM 38174 Lot/Parcel No. _____ EA Number _____

Assessor's Parcel Number(s): 243-230-027 (APN 243-600-025 on RCA MSHCP Information Map)

Date: May 10, 2023

Biological Resources: (Check the level of impact that applies to the following questions.)

Potentially
Significant
Impact

Less than Significant
Impact with Mitigation
Incorporated

Less than
Significant
Impact

No
Impact

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

☐☒☐☐

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

☐☒☐☐

c) 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?

☐☒☐☐

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

☐☐☒☐

LEVEL OF SIGNIFICANCE CHECKLIST
For Biological Resources
(Submit two copies to the County)

e) 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 the U. S. Fish and Wildlife Service?

☐☐☐☒

f) 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 pools, coastal, etc.) through direct removal, filling, hydrological interruption)

☐☐☐☒

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

☐☐☒☐

Findings of Fact:

The site is largely within the mapped extent of the Prenda Arroyo in the City Municipal Code Section 17.08.011, but the Project disturbance area is not within the actual boundaries of the arroyo. There are no riparian, Riversidean alluvial fan sage scrub, or other sensitive vegetation communities present.

No listed or special status plant species were observed. Payson's jewelflower has potential to occur but is covered under the MSHCP and considered adequately conserved.

There are no oak trees present. Other trees are present, mostly non-native.

Cooper's hawk and San Diego desert woodrat present; these are covered under the MSHCP and considered adequately conserved. Nuttall's woodpecker present; not covered under the MSHCP.

Most other wildlife species with potential to occur are covered under the MSHCP and considered adequately conserved. Impacts to non-covered species would be less than significant. Crotch bumble bee has a potential for occurrence on the site and it is a candidate for state listing as endangered.

No vernal pools or ponding areas and no habitat for fairy shrimp. No habitat for riparian birds present on the site. Potential habitat for least Bell's vireo and southwestern willow flycatcher in nearby Prenda Creek but grading limits are over 300 feet away.

No burrowing owls or owl sign observed; suitable habitat is present. Habitat for nesting birds present.

Onsite drainage may function as a corridor and contribute to limited local wildlife movement. CDFW streambed and federal Waters of the U.S. present, as well as MSHCP riverine. Project will avoid the drainage and permits from USACE, RWQCB, and CDFW and a DBESP are not required.

Proposed Mitigation:

Preconstruction survey for burrowing owl within 30 days prior to the start of Project activities. If burrowing owl is present, avoidance of occupied burrows during nesting season and develop and implement a mitigation plan based on MSHCP requirements.

Nesting bird clearance survey within three (3) days prior to the start of Project activities (vegetation and ground disturbance, including tree trimming/removal/encroachment) within the nesting season (February 1 to August 31). Avoidance buffers for active nests.

Conduct a focused survey for Crotch bumble bee. If present, consult with CDFW and obtain an incidental take permit from CDFW if any impacts.

If Project grading will occur within 300 feet of riparian habitat in Prenda Creek, conduct a habitat assessment for riparian birds (least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo) and a protocol survey if suitable habitat is present. Implement avoidance measures if species are present.

Monitoring Recommended:

None.

Source: CGP Fig. VI.36-VI.40

Revised October 1999

**APPENDIX E: TENTATIVE PARCEL MAP 38174 AND
FUEL MODIFICATION ZONE**



1. THIS PROPERTY IS NOT LOCATED WITHIN A SPECIFIC PLAN.
2. THOMAS GUIDE, 2006, PAGE 715, J-7.
3. NO PROTECTED OR ENDANGERED TREES EXIST ON THE PROPERTY.
4. SUBJECT PROPERTY IS NOT SUBJECT TO OVERFLOW, INUNDATION OR FLOOD HAZARD.
5. THIS TENTATIVE MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND DIVIDER.
6. SUBJECT PROPERTY IS NOT SUBJECT TO LIQUEFACTION, OR OTHER SEISMIC HAZA.

[illegible]

FIRE PROTECTION PLAN

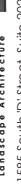
Alpine Meadows Lane

APN: 243-230-027-0000

Phone: (909)471-0808
Email: ryanwilliams1987@gmail.com

[illegible]

SIGN John Doe DATE 12/9/2022



SHEET 1 OF 2

e-mail: richardpopeassociates.la@gmail.com

www.richardpopeandassociates.com



JOB: 22-04 CKE LKD
 10/11/2022 06:00:22

**WESTERN RIVERSIDE COUNTY
MULTIPLE SPECIES HABITAT CONSERVATION PLAN
CONSISTENCY ANALYSIS**

**ALPINE MEADOWS ESTATES, TPM 38174,
CITY OF RIVERSIDE, RIVERSIDE COUNTY, CALIFORNIA**

Permittee:

City of Riverside
Community and Economic Development, Planning Division
Alyssa Berlino, Associate Planner
3900 Main Street
Riverside, CA 92522
Phone: 951.826.5371
ABerlino@riversideca.gov

Applicant:

Jerardo Reyes and Ryan Williams
785 Woodcrest Court
Bloomington, CA 92316
909-471-0342
reyesjerardo87@gmail.com and ryanpwilliams1987@gmail.com

Consultant:

Leslie Irish
L&L Environmental, Inc.
700 East Redlands Blvd., #U351
Redlands, CA 92373
Phone: 909.335.9897
lirish@llenviroinc.com

SEPTEMBER 2021, REVISED AUGUST 2022, OCTOBER 2022, MARCH 2023