L&L ENVIRONMENTAL, INC.
REGULATORY SERVICES
BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

WESTERN RIVERSIDE COUNTY MULTIPLE SPECIES HABITAT CONSERVATION PLAN CONSISTENCY ANALYSIS

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

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1.0) EXECUTIVE SUMMARY

The proposed Project is division of a ±5.74-acre parcel into four (4) lots and construction of a single-family home on each of three (3) of those lots. No grading work is proposed on the open space easement. The fuel modification zone extends into the open space easement and this area is subject to ongoing impacts. Permanent impacts consist of 2.70 acres (including the fuel modification zone) and there are no temporary or offsite impacts.

The Project site consists of APN 243-230-027 (APN 243-600-025 on RCA MSHCP Information Map, located at 841 Alpine Meadows Lane in the Alessandro Heights area of the City of Riverside.

The site is located within the area covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) but is not within the Criteria Area. 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. Areas of Lots 2 through 4 outside the grading footprint will be an open space easement.

Surveys required by the MSHCP are a habitat assessment to address riparian/riverine and vernal pool habitats and associated species and burrowing owl (*Athene cunicularia*). If suitable habitat is present, focused surveys are required.

Vegetation on the site consists of disturbed/developed/ornamental areas and coastal scrub. There is no riparian or Riversidean alluvial sage scrub habitat present. A total of 0.72 acre of native habitat (disturbed brittlebush scrub) will be impacted by grading and fuel modification. Brittlebush scrub is not a sensitive vegetation community and no mitigation is proposed for this impact. An ephemeral drainage runs through the southeast portion of the site and a jurisdictional delineation found 0.46 acre of MSHCP riverine habitat present. Based on current Project plans (TPM 38174), this drainage will be avoided.

No state or federally listed or special status plants were identified on the site during the survey. Listed and special status plants known from the region are either absent, not expected to occur, or have a low potential for occurrence onsite, except Payson's jewelflower (*Caulanthus simulans*). This species is covered under the MSHCP and considered adequately conserved. No mitigation is proposed for any potential impacts to this species.

There are a number of non-native and ornamental trees on the site. The only native trees onsite are blue elderberry (*Sambucus nigra ssp. cerulea*) and one black willow (*Salix gooddingii*) with its

trunk offsite but a portion of its canopy extending over the site boundary and into the open space easement area. There are no oak species present.

No vernal pools or ponding areas were observed and there is no habitat for fairy shrimp. There is no habitat for riparian birds on the site, but potentially suitable habitat is present in adjacent areas of Prenda Creek. The grading areas on the Project site (plus a 20-foot buffer) are at least 300 feet away from the suitable riparian habitat in Prenda Creek. However, impacts to riparian birds 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, proposed mitigation 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.

A protocol breeding season burrowing owl survey found no owls or owl sign, but suitable habitat is present and a preconstruction clearance survey will be required within 30 days prior to the start of ground/vegetation disturbance. If burrowing owl is found at that time, additional mitigation will be required in accordance with MSHCP species objectives.

Three (3) special status wildlife species were observed during the survey, Cooper's hawk (*Accipiter cooperii*), San Diego desert woodrat (middens) (*Neotoma lepida intermedia*), and Nuttall's woodpecker (*Dryobates nuttalli*). Cooper's hawk and San Diego desert woodrat are covered species under the MSHCP and considered adequately conserved. Nuttall's woodpecker is not a covered species. Recommended mitigation includes avoidance of Project impacts during the nesting season (February 1 to August 31) or implementation of preconstruction nesting bird clearance surveys and avoidance buffers for active nests.

Most listed and special status wildlife species known from the region are absent, not expected to occur, or have a low potential for occurrence. Several species have a higher potential to occur and these are covered under the MSHCP and considered adequately conserved, with the exception of Crotch bumble bee (*Bombus crotchii*), Southern California legless lizard (*Anniella stebbinsi*), Allen's hummingbird (*Selasphorus sasin*), pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis californicus*). These five (5) species are not covered under the MSHCP.

Prenda Creek is adjacent to the Project 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. The site is not within or near any MSHCP Core Areas or Linkages.

An ephemeral drainage that is tributary to Prenda Creek crosses the southeast portion of the parcel. This unnamed drainage is not a blueline stream. A jurisdictional delineation found 0.46 acre of MSHCP riverine habitat and no MSHCP riparian habitat on the parcel. The proposed Project will avoid the drainage.

Full text of Mitigation Measure BIO-1 (Burrowing Owl) is provided in Section 7.3.4. Mitigation Measures BIO-2 (Nesting Birds) and BIO-3 (Crotch Bumble Bee) are provided in Section 8.3. Mitigation Measure BIO-4 (Riparian Birds) is provided in Section 5.4.4. With implementation of recommended mitigations, the Project would be consistent with the MSHCP.

2.0) INTRODUCTION

The purpose of this Consistency Analysis is to summarize the biological data for the proposed Alpine Meadows Estates Project (Project) and to document the Project's consistency with the goals and objectives of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Dudek 2003). The proposed project consists of division of a single parcel into four (4) lots and construction of a single-family home on each of three (3) of those lots. No grading work is proposed within the proposed open space easement but the fuel modification zone extends into the easement.

2.1) Project Area

The Project site consists of APN 243-230-027 (APN 243-600-025 on RCA MSHCP Information Map) totaling ±5.74 acres. Tentative Parcel Map (TPM) 38174 is provided in Appendix B. No offsite areas are included in the Project.

As shown on TPM 38174, an existing residence is present on the westernmost lot (Lot 1) and will remain. No additional impacts are proposed to Lot 1 except the road dedication area. Areas outside of the grading footprint on Lots 2 through 4 will be 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.

Based on the grading limits as shown on the TPM plus the fuel modification zone, the total impact area would be 2.70 acres. The impact area consists of 1.99 acres of disturbed/developed/ornamental areas and 0.72 acre of brittlebush scrub. No temporary impact areas are proposed and all impacts would be permanent.

An ephemeral streambed (not a blueline) runs through the southeastern portion of the parcel and includes 0.46 acre of MSHCP riverine habitat. The TPM shows that there would be no grading impacts to this streambed.

2.2) Project Description

The Project is a residential development of three (3) single-family homes. Grading will occur on the northern portions of Lots 2 through 4. No detention basins or other water quality features are proposed. The existing residence on Lot 1 will remain and no impacts to Lot 1 are proposed other

than the road dedication area. Areas outside of the grading footprint on Lots 2 through 4 will be placed in an open space easement.

2.3) Covered Roads

The Project site is adjacent to Alpine Meadows Lane and a portion of the parcel is reserved for road dedication. Alpine Meadows Lane is not a covered road under the MSHCP and the Project does not involve construction or improvement of any covered roads.

2.4) Covered Public Access Activities

The Project does not involve construction or improvement of any covered public access activities.

2.5) General Setting

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

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 and 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, specifically brittlebush scrub (*Encelia farinosa* Shrubland Alliance). Several rock piles are present on the northeastern corner of the site, including concrete debris.

The project is located within the Santa Ana River watershed in Riverside County and more specifically in the City of Riverside. 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. The trunk of this willow is offsite but a portion of its canopy overhangs the eastern site 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 (Figure 4).

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), Cieneba rocky sandy loam (CkF2), Hanford coarse sandy loam (HcC), and terrace escarpments (TeG) (NRCS 2021) (Figure 5).

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 1a and 1b provide precipitation data from the Clark and Lake Mathews RAWS, respectively, from October 2018 through July 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 1a. 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 1b. 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.

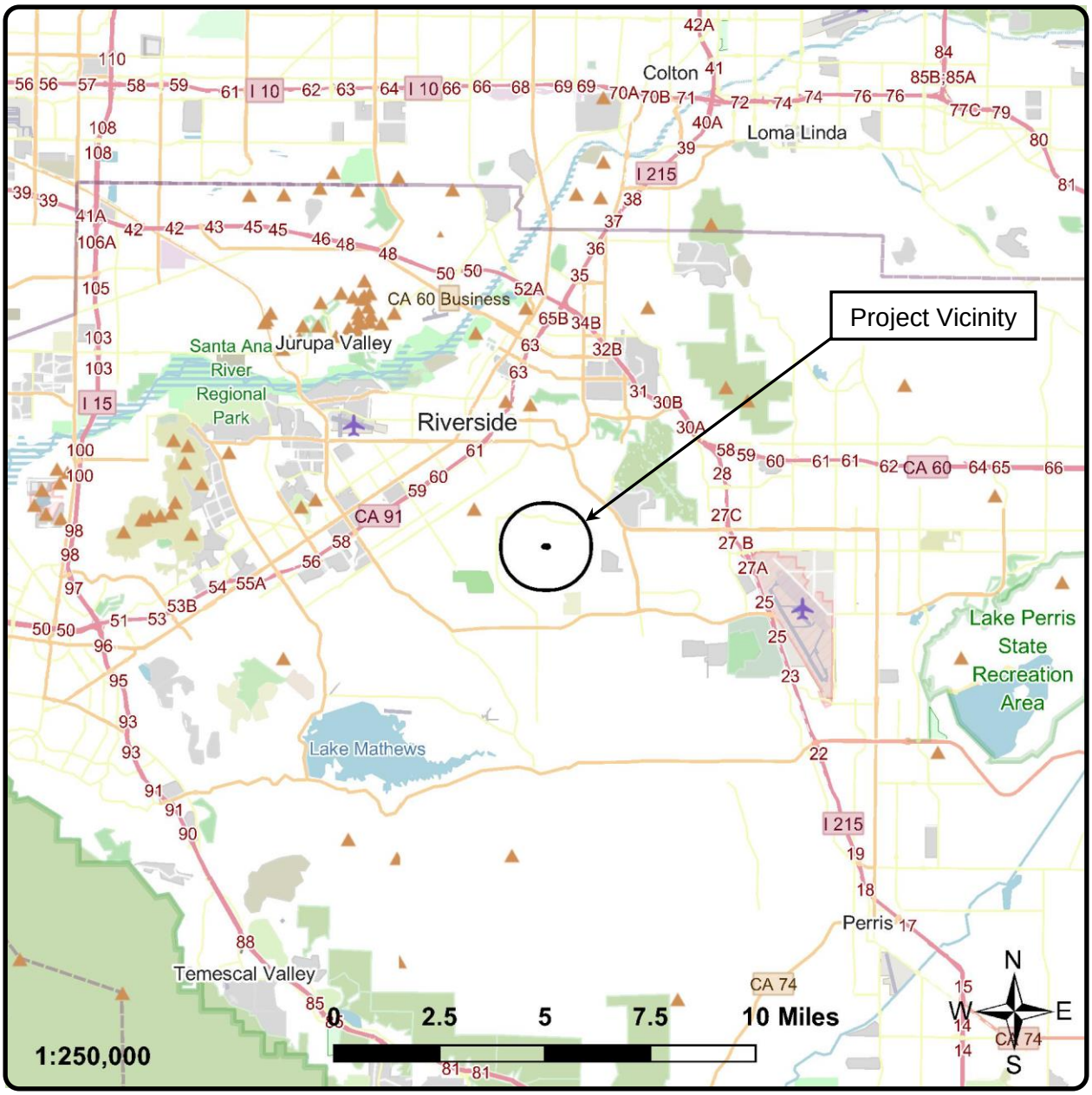

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Figure 1

Project Vicinity Map

Alpine Meadows Lane, City of Riverside
Riverside County, California

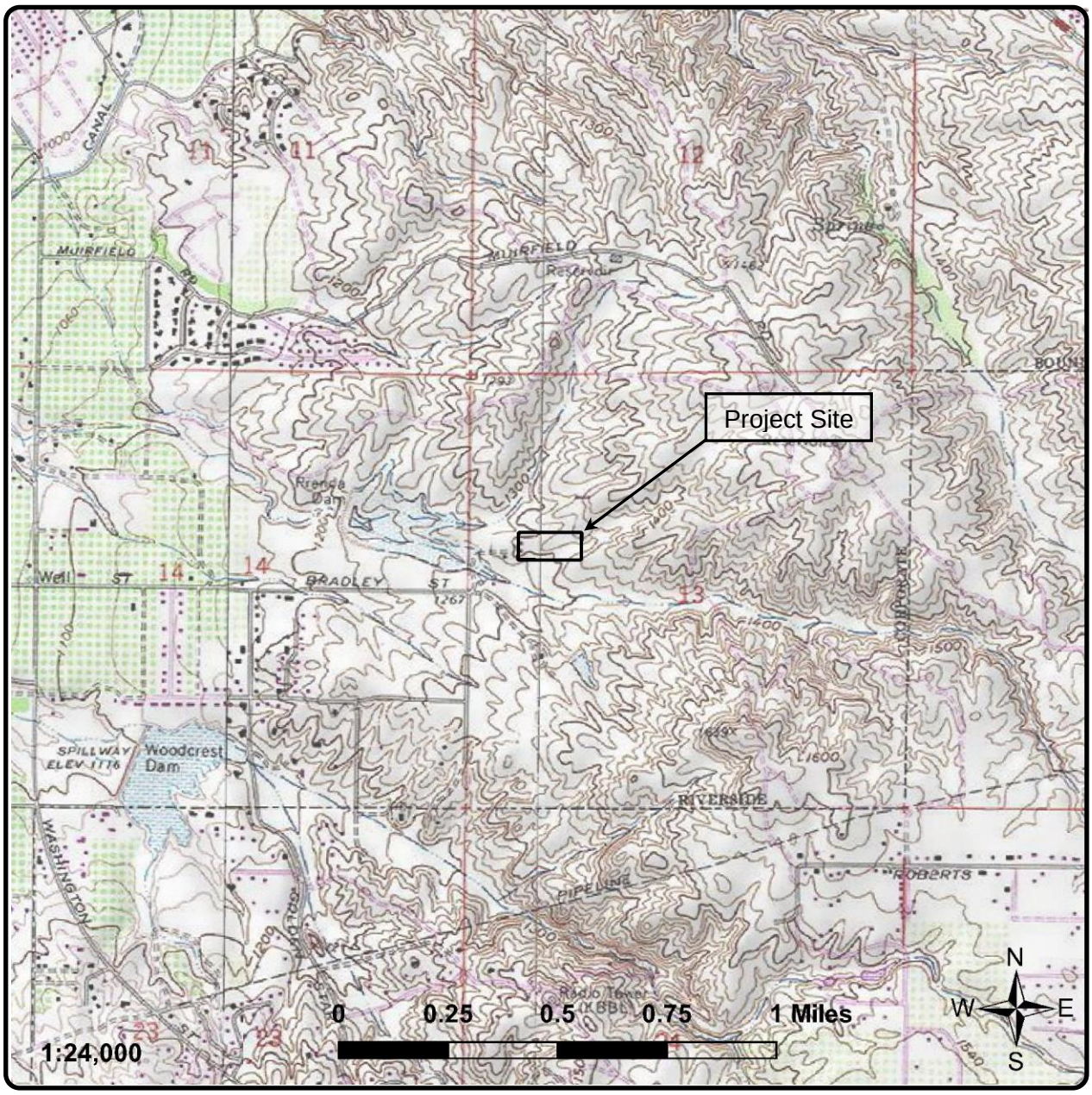

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Figure 2

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

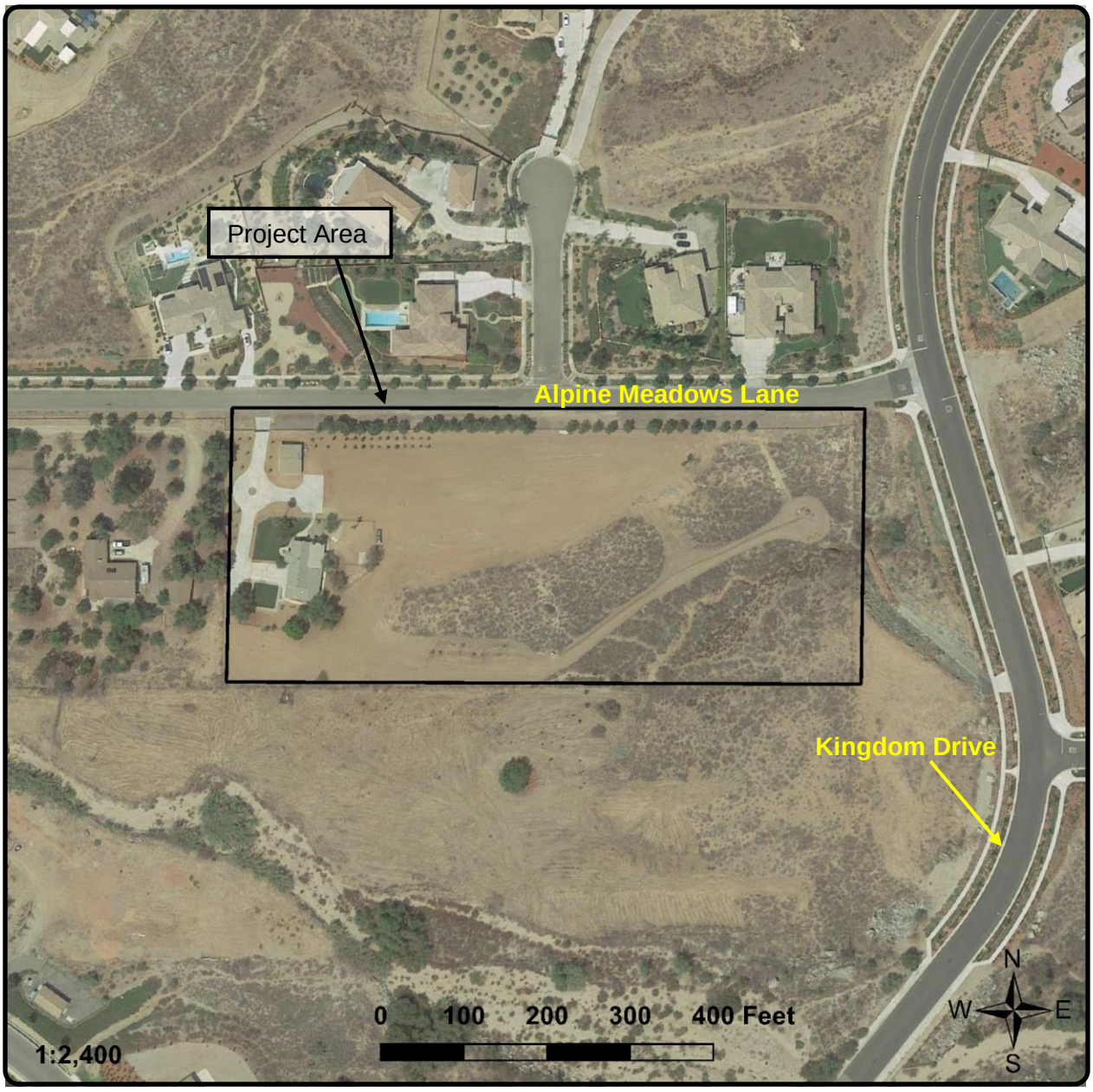

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Figure 3

Aerial Photograph
(Aerial obtained from Google Earth, August 2018)

Alpine Meadows Lane, City of Riverside
Riverside County, California

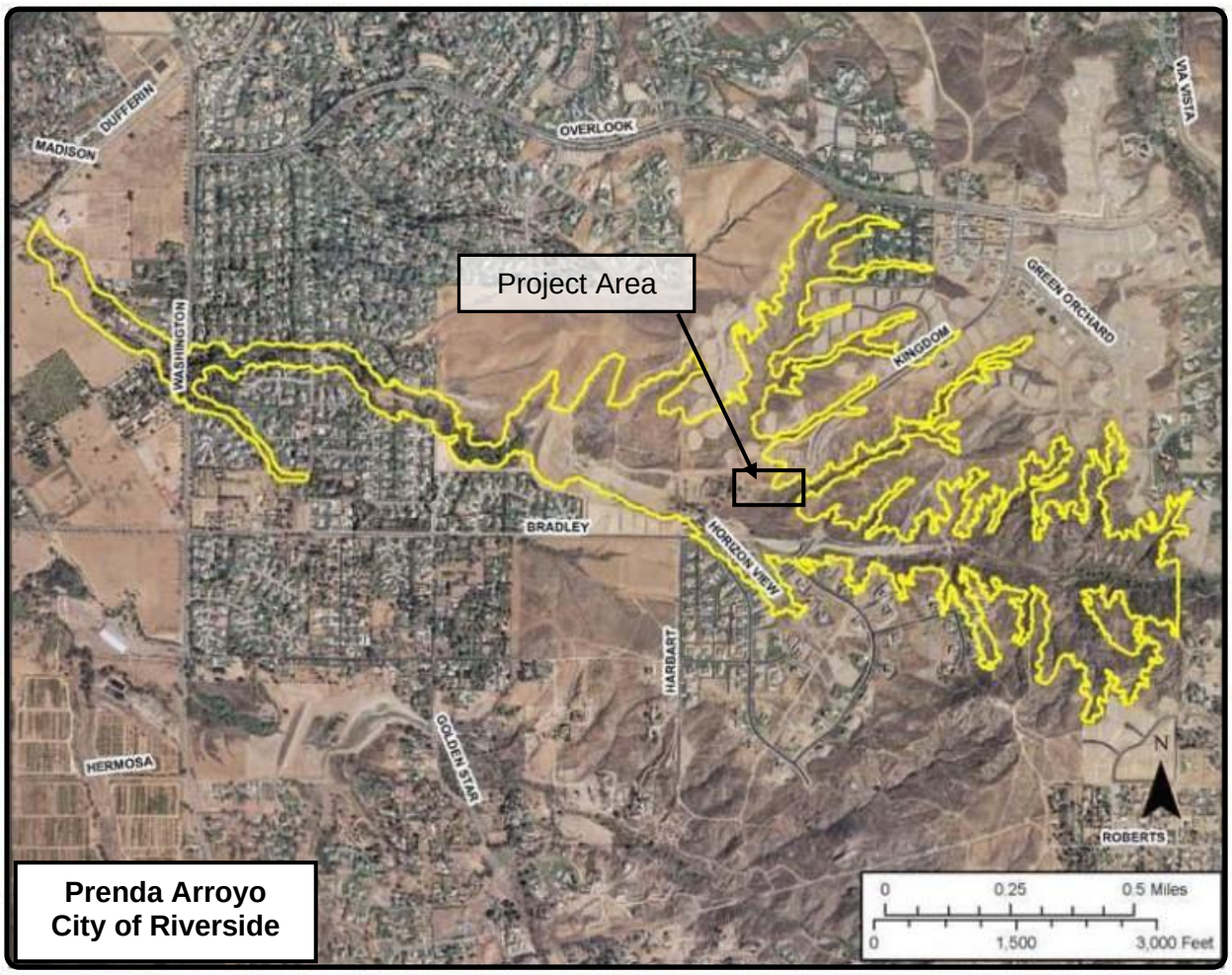

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Figure 4
Mapped Area of
Prenda Arroyo

(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

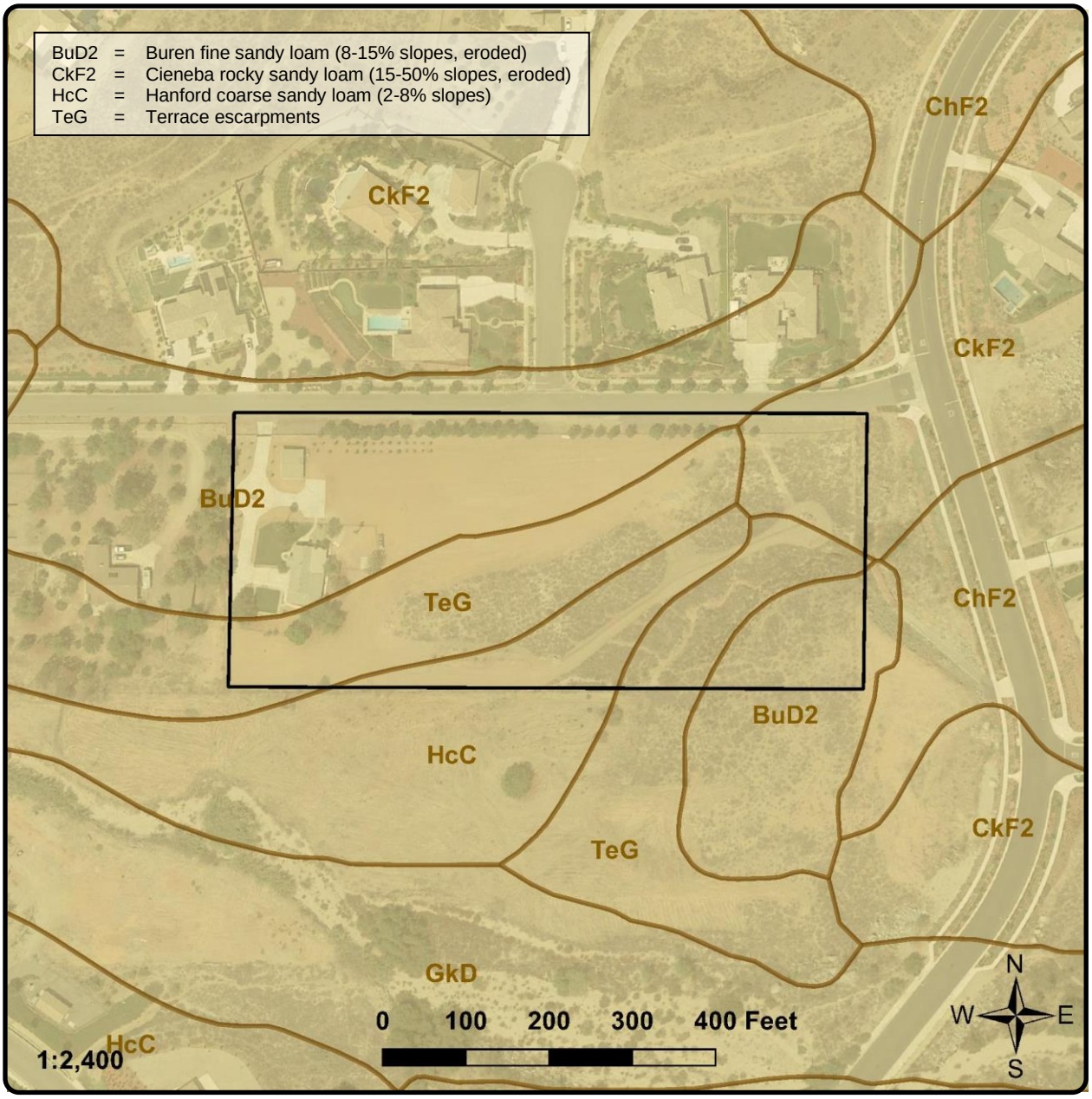

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Figure 5
Soils Map
(NRCS 2021)

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

3.0) RESERVE ASSEMBLY ANALYSIS

The Project site is not within any MSHCP Criteria Cells or Cell Group and a reserve assembly analysis is not required. PQP Conserved Lands identified as Alessandro Arroyo Big Bend are one mile to the east of the site. There are no other existing PQP or MSHCP Conserved Lands within a mile of the site. The Project is located within the mapped extent of the Prenda Arroyo one mile east of and at a lower elevation that the PQP lands on the Alessandro Arroyo and would have no direct or indirect impacts on the PQP lands. The site is not within or near any MSHCP Core Areas or Linkages (Figure 6). Areas of the site outside of the grading footprint on Lots 2 through 4 will be placed in an open space easement.

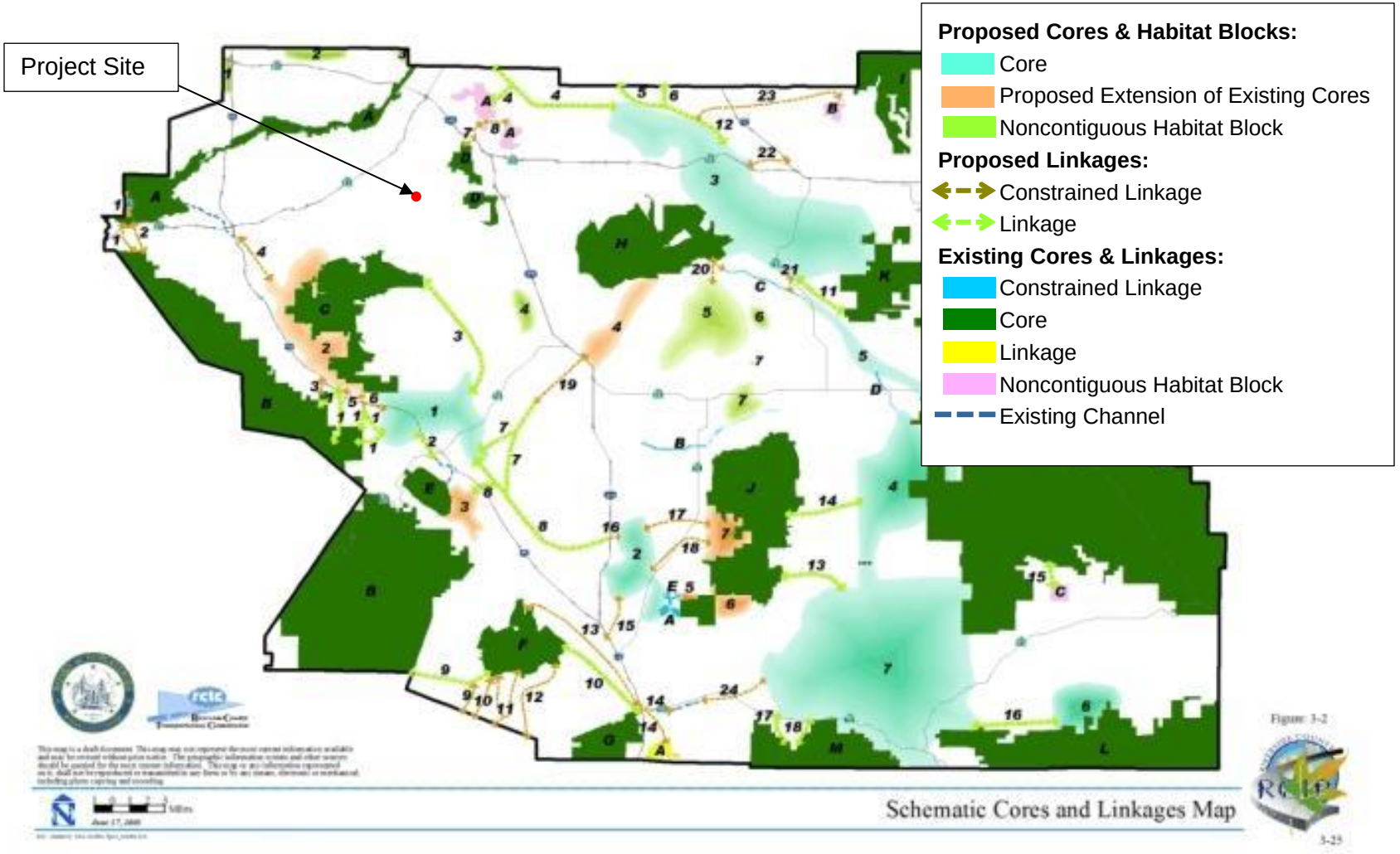

Figure 6. MSHCP Cores and Linkages

4.0) VEGETATION MAPPING

4.1) Methods

Vegetation mapping was conducted during a biological resources assessment survey conducted by L&L biologist Guy Bruyea. Mr. Bruyea visited the Project site during June and July of 2021 to describe vegetation and habitat and evaluate the site for presence of suitable habitat for special status plant and wildlife species (Table 2). A protocol breeding season burrowing owl survey was conducted concurrently (see Section 7.3).

Table 2. 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).

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 (CNDDB; 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 2021) 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 CNDDB 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). Documented occurrences are from CDFW (2021c) unless otherwise indicated.

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.

4.2) Existing Conditions and Results

The site, particularly the western portion, has been disturbed for residential use since 1947 (L&L 2006b). A review of historical aerial images finds that the entire 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 site is currently occupied by developed areas and ornamental vegetation associated with the residence, disturbed/ruderal areas, and disturbed and relatively undisturbed brittlebush scrub (Table 3 and Figures 7a and 7b).

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. A portion of this willow's canopy extends over the site boundary

but no native riparian or wetland vegetation is present on the site. 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 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 the fuel modification zone, the total impact area on Lots 2 through 4 plus the road dedication area would be 2.70 acres. The impact area consists of 1.99 acres of disturbed/developed/ornamental areas and 0.72 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.

Table 3. Vegetation communities present

Vegetation Community	Acres			
	Total Present Onsite	Lot 1 (No impacts[1])	Total Impacts[2]	Open Space Easement
Disturbed/Developed/Ornamental	3.59	1.07	1.99	0.52
Brittlebush Scrub	2.15	0	0.72	1.94
Total	**5.74**[3]	**1.07**[4]	**2.70**[4]	**2.46**[4]

1. Total area of Lot 1 minus road dedication area. 2. Total impacts calculated as grading area on Lots 2 through 4 (plus 20-foot buffer) plus road dedication area on Lots 1 through 4 along Alpine Meadows Lane. 3. Based on recorded acreage of parcel; discrepancy in total impact plus total avoidance for disturbed/developed/ornamental due to using recorded acreage rather than geographic acreage of parcel as required by the City. 4. Based on acreages as shown on TPM.

Brittlebush Scrub

Patches of native scrub vegetation are present in the eastern, southeastern, and south-central portions of the site (Figures 7a and 7b). 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).

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*), tocalote (*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).

4.3) Impacts

Grading will include the northern portions of Lots 2 through 4. Grading areas plus the road dedication area and fuel modification zone will impact 1.99 acres of disturbed/developed/ornamental areas and 0.72 acre of disturbed brittlebush scrub.

4.4) Mitigation

The majority of the impact area is disturbed/developed/ornamental areas. Brittlebush scrub is not considered sensitive and no mitigation is proposed.

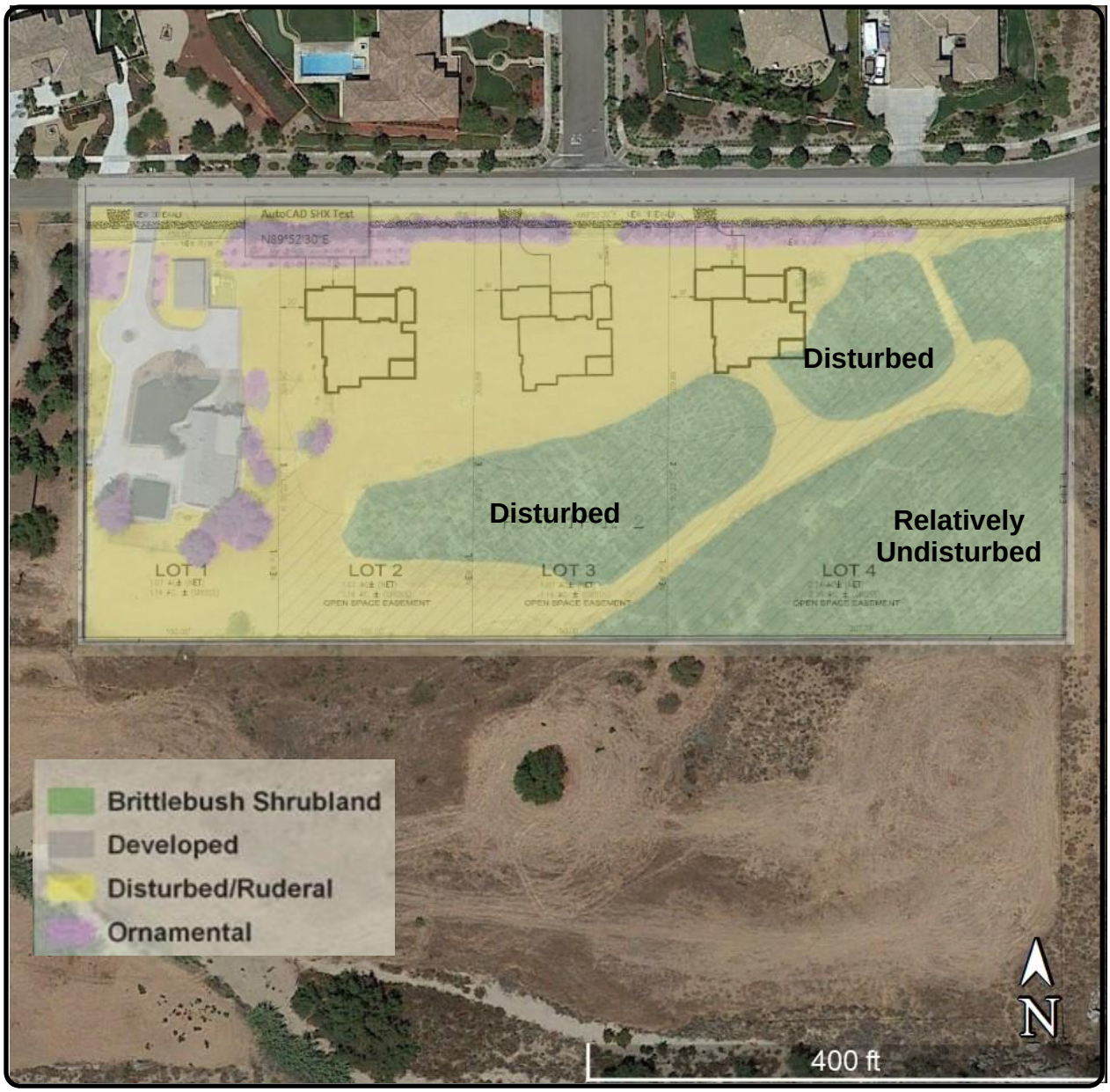

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Figure 7a

Habitat with Tract Map
(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
Riverside County, California

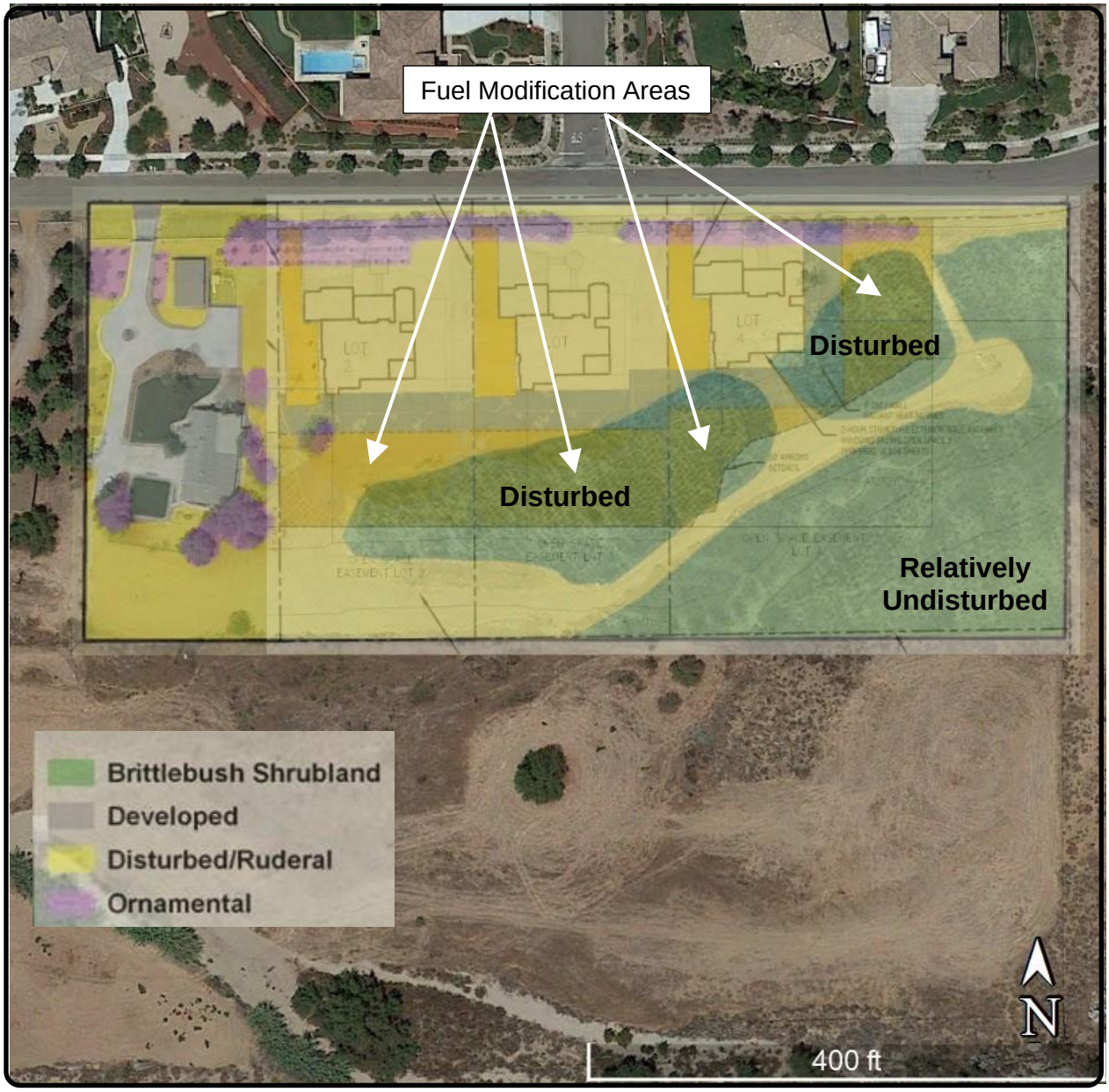

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Figure 7b

Habitat with Fuel Mod

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside
Riverside County, California

5.0) PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

5.1) Riparian/Riverine

5.1.1) Methods

Pre-Survey Research Methods and Purpose

A wealth of information is available online and is updated at regular intervals by the agencies and universities. To ensure efficiency and greater accuracy in the field, areas of interest are identified during the research stage prior to conducting the field survey. Useful maps are uploaded to handheld GPS and applications are downloaded in preparation for real-time data inquiries. Potential for jurisdictional features (riparian/riverine) to occur onsite is assessed via aerial photography, topographic mapping, soil types, trends to hydric conditions, area hydrology, and prior wetlands inventory mapping, etc. Finally, condition of area drainages is forecast based on available rainfall data.

Online data sources include wildlife agencies, California Native Plant Society (CNPS), California Natural Diversity Database (CNDDB), WebSoil, GlobeXplorer, Google Earth, 2016 Arid West Regional Wetland Plant List, Natural Resources Conservation Service, University of California at Davis, Agriculture and Natural Resources, California Soil Resources Lab, U. S. Department of the Interior Geological Survey and the following web pages:

- https://www.wunderground.com/dashboard/pws/KCAMONRO6 (Accessed October 27, 2019)
- http://wetland-plants.usace.army.mil/nwpl_static/v33/home/home.html (Accessed October 27, 2019)
- http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (Accessed October 27, 2019)
- https://www.fws.gov/wetlands/Data/Mapper.html (Accessed October 27, 2019)
- https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/docs/2019/New/Chapter_3_June_2019.pdf (Accessed October 27, 2019)
- https://viewer.nationalmap.gov/basic/ (Accessed October 27, 2019)
- http://agacis.rcc-acis.org/?fips=06065 Accessed October 27, 2019)
- RIRMette Map Accessed October 27, 2019)
- https://viewer.nationalmap.gov/basic/ Accessed October 27, 2019)
- https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca Accessed October 27, 2019)

- https://msc.fema.gov/portal/search?AddressQuery=10701%20Desert%20Lawn%20Drive%2C%20Calimesa%2C%20Riverside%20County%2C%20CA#searchresultsanchor (Accessed on 11/5/19)

Field Survey Methods and Purpose

Field work was conducted by L&L delineator Leslie Irish on September 7, 2021. L&L visited the site and examined the drainage width and length. Aerial images of previous years available in Google Earth were reviewed and compared to verify consistency and to detect any anomalies for further examination in the field.

Project boundaries were investigated to identify areas where water is received onto the property or transmitted offsite to downstream resources. These areas were then walked, measured, and assessed via three (3) criteria to determine presence or absence of evidence of flow, hydrophilic vegetation, or hydric soil conditions. Where evidence of flow was present, combined with or without hydrophytes, soils were examined for anoxic conditions. Soils identified as suitable for development of hydric conditions were given special attention. Soil color characteristics were evaluated using a “Munsell color chart” and all data were reported on appropriate Arid West Wetland Determination Data Forms (WD).

The hydrology criterion is satisfied by the observation of standing or flowing water. The soil condition is satisfied by the development of saturated soils with anoxic conditions. The vegetation criterion is satisfied if half or more of the dominant plant species within a feature are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively, see Table 4) for federal jurisdiction or by presence of any of these species for state/local jurisdiction. A Wetland Data Point (WDP) was collected for each test pit location and a WD Form was completed. During analysis, L&L used the indicators found in Table 4 as evidence of wetlands vegetation.

Table 4. Summary of wetlands vegetation indicator categories

Indicator Status	Symbol	Definitions
Obligate	OBL	Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.
Facultative Wetland	FACW	Usually occur in wetlands but may occur in non-wetlands. These plants predominantly occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.
Facultative	FAC	Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.
Facultative Upland	FACU	Usually occur in non-wetlands but may occur in wetlands. These plants predominantly occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.
Upland	UPL	Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

Vernal Pools

During our investigation, the property was searched for vernal pools. To meet the definition of a vernal pool three (3) factors must be addressed: (1) suitable soil and soil conditions, (2) proper hydrology, and (3) one or more indicator species. Two (2) pools/ponds were assessed during our study. Test pits were excavated at both locations and a wet season fairy shrimp survey was initiated.

Nomenclature Used

Terminology has changed over the years. Toward greater clarity and understanding, L&L used terms in this report that follow RCA guidelines, both published and expressed. We also describe linear features or channels as riverine and woody facultative habitat as riparian.

5.1.2) Existing Conditions and Results

An ephemeral drainage (not a blueline) runs from east to west through the southeastern portion of the site. The jurisdictional delineation found 0.46 acre of MSHCP riverine habitat and no MSHCP riparian habitat in this drainage (Table 5 and Figure 8).

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.

Table 5. 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

5.1.3) Impacts

Impacts to MSHCP riparian/riverine habitat require the preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP). Based on TPM 38174 (Appendix B), the Project will avoid impacts to the drainage and riverine habitat and a DBESP is therefore not required.

5.1.4) Mitigation

No MSHCP riparian habitat is present and Project will avoid the riverine habitat. Therefore, no mitigation is proposed.

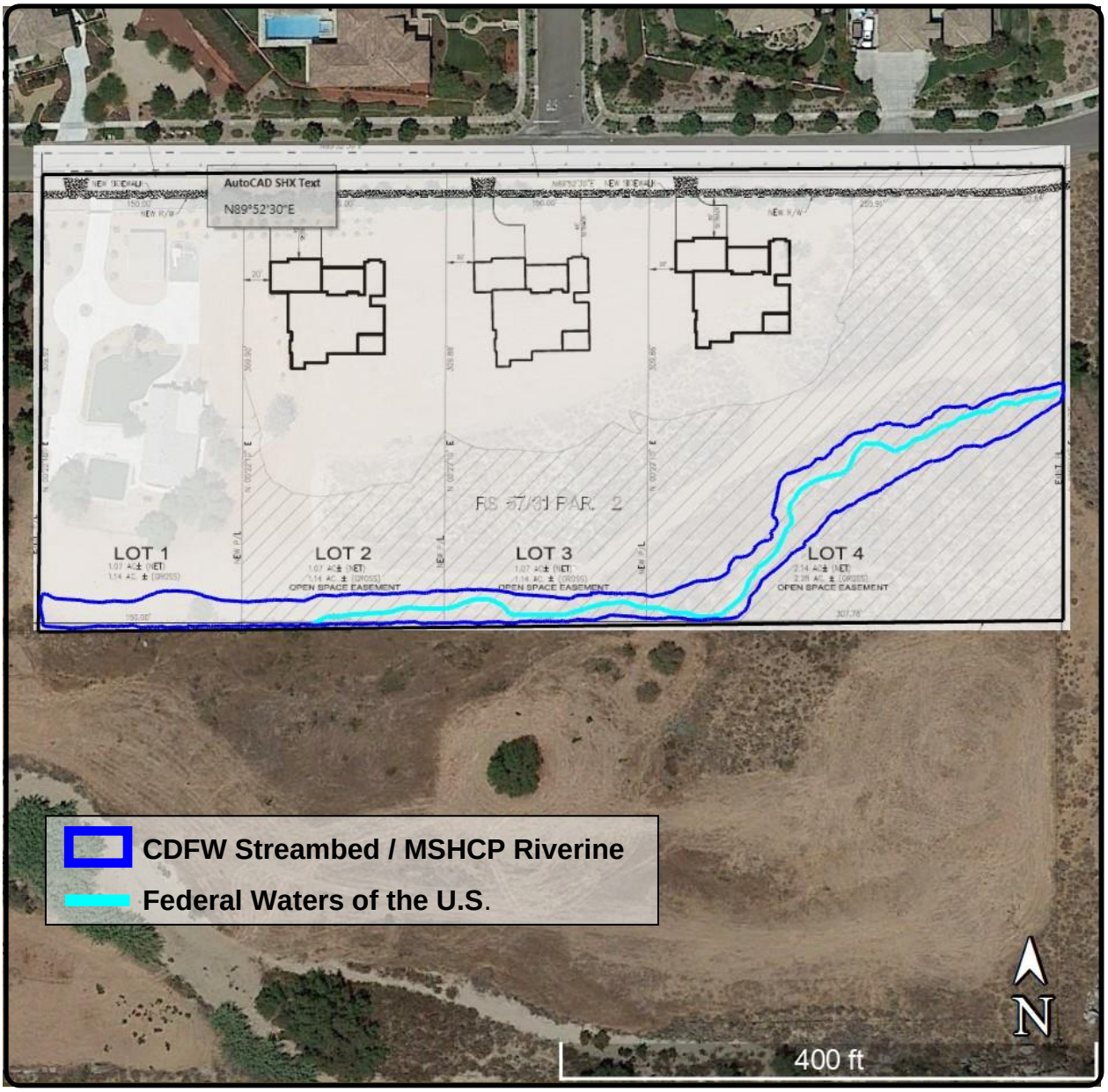

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Figure 8

Jurisdictional Delineation
(Aerial obtained from Google Earth, August 2018)

Alpine Meadows Lane, City of Riverside
Riverside County, California

5.2) Vernal Pools

5.2.1) Methods

The site was surveyed in June and July of 2021 (see Table 2) including an assessment of the potential for vernal pools or ponding areas and associated species. The jurisdictional delineation also evaluated the site for the presence of vernal pools or evidence of ponding areas.

5.2.2) Existing Conditions and Results

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.

5.2.3) Impacts

No vernal pools are present on the site and none would be impacted.

5.2.4) Mitigation

The Project would not impact any vernal pools and no mitigation is proposed.

5.3) Fairy Shrimp

5.3.1) Methods

The site was surveyed in June and July of 2021 (see Table 2) including an assessment of the potential for vernal pools or ponding areas and associated species. The jurisdictional delineation also evaluated the site for the presence of vernal pools or evidence of ponding areas.

5.3.2) Existing Conditions and Results

No fairy shrimp or potential fairy shrimp habitat was observed during the surveys.

5.3.3) Impacts

No fairy shrimp habitat is present on the site and no fairy shrimp would be impacted.

5.3.4) Mitigation

The Project would not impact fairy shrimp and no mitigation is proposed.

5.4) Riparian Birds

5.4.1) Methods

A biological resources assessment survey and vegetation mapping was conducted by L&L biologist Guy Bruyea (see Section 4.1). No protocol surveys for riparian birds were conducted.

5.4.2) Existing Conditions and Results

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 CNDDB 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 in an area of dense riparian vegetation that extends along Prenda Creek for about a mile. 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 CNDDB 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 CNDDB 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 CNDDB 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.

5.4.3) Impacts

Based on TPM 38174 and review of aerial images (Google Earth 2021), the grading areas on the Project site are at least 300 feet away from the suitable riparian habitat in Prenda Creek (Figure 9). 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. Project-related disturbance could cause avoidance of the habitat and/or territory/nest abandonment.

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).

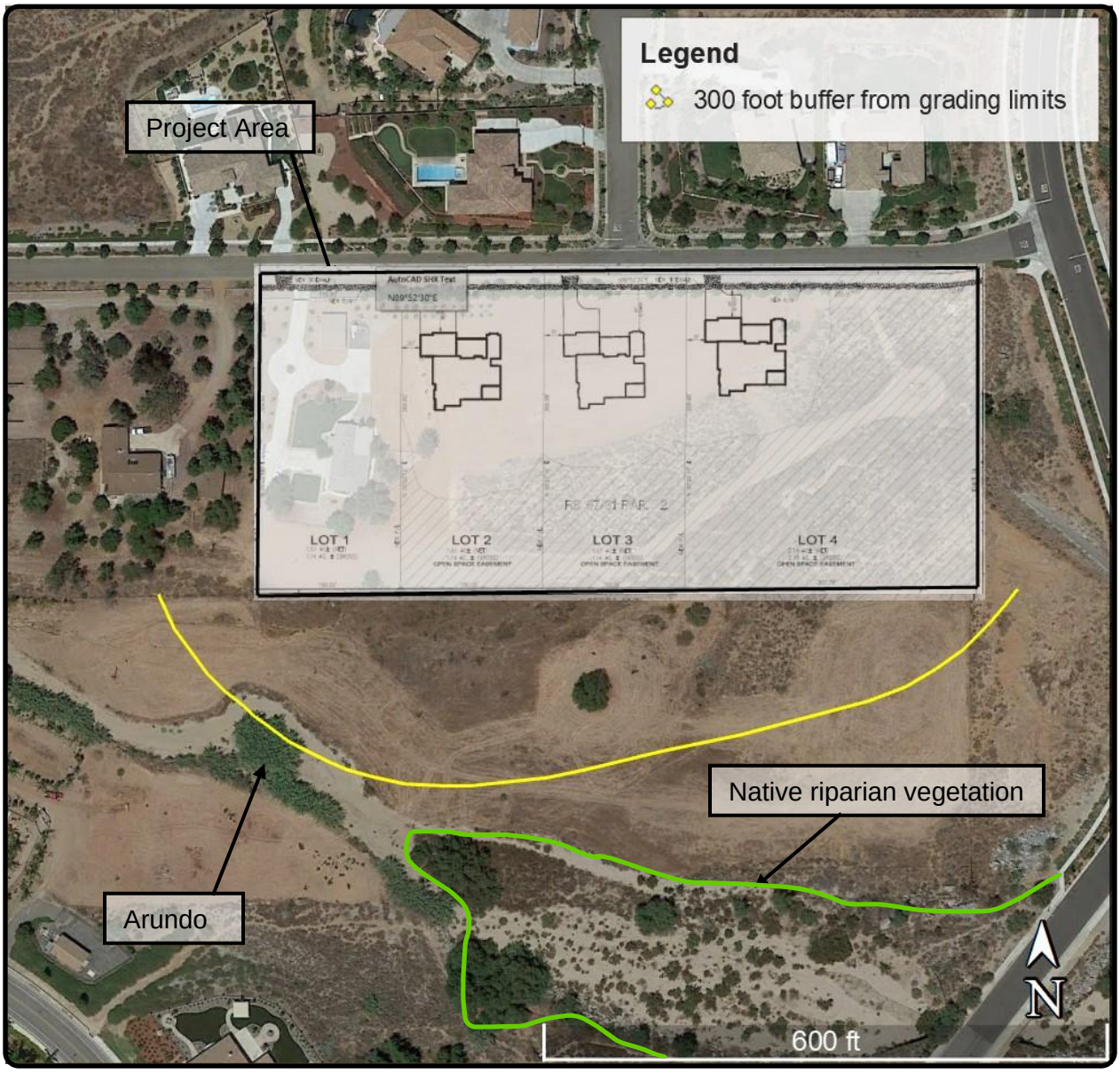

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Figure 9

300-Foot Buffer from Riparian

(Aerial obtained from Google Earth, August 2019)

Alpine Meadows Lane, City of Riverside

5.4.4) Mitigation

If the Project is revised such that grading impacts will encroach within 300 feet of the riparian habitat in Prenda Creek, proposed mitigation 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.

Text of the proposed mitigation measure:

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.

With implementation of recommended mitigation, the Project would be consistent with the MSHCP.

5.5) Other Section 6.1.2 Species

Other Section 6.1.2 species are either absent, not expected to occur, or have a low potential for occurrence (Table 6). The Project will avoid impacts to the riverine habitat.

Table 6. Potential for Occurrence of Section 6.1.2 Species

Species	Habitat and Distribution	Potential for Occurrence
AMPHIBIANS		
Anaxyrus californicus Arroyo toad	Washes & intermittent streams of semi-arid regions, sandy-banked rivers, riparian woodlands, & loose gravel. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range, below 4600 ft. Southern California to tip of Baja California. Desert pop. along Mojave River.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.
Rana muscosa Southern mountain yellow-legged frog	Always encountered within a few feet of water. Tadpoles may require up to 2 years to complete development.	Absent; no perennial aquatic habitat.
Rana draytonii California red-legged frog	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Absent; no perennial aquatic habitat.
BIRDS		
Haliaeetus leucocephalus 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. CNDDB tracks nesting and wintering.	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.
Falco peregrinus anatum American peregrine falcon	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site. CNDDB only tracks nesting.	Not expected (foraging and nesting), no or marginal habitat, no documented occurrences (nesting) within 5 mi., several eBird records in vicinity, not observed during surveys.
FISH		
Catostomus santaanae Santa Ana sucker	Small to medium permanent streams. LA & San Gabriel drainage, lower Santa Ana River.	Absent; no perennial aquatic habitat.
PLANTS		
Phacelia stellaris 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. Flowers Mar-Jun.	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Orcuttia californica California Orcutt grass	Annual grass. Vernal pools at 15-660m elevation. LA, Orange, Riverside, San Diego, Ventura Co., Baja. Flowers Apr-Aug.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Habitat and Distribution	Potential for Occurrence
Juglans californica 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. Flowers Mar-Aug.	Absent; no or marginal habitat, conspicuous plant not observed during surveys.
Romneya coulteri 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. Flowers Mar-Jul(Aug). Not tracked in CNDDB.	Absent; potentially suitable habitat, conspicuous plant not observed during surveys.
Quercus engelmannii 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). Flowers Mar-Jun. Not tracked in the CNDDB.	Absent; no or marginal habitat, conspicuous plant not observed during surveys
Polygala cornuta var. fishiae Fish's milkwort	Perennial deciduous shrub. Chaparral, cismontane woodland, riparian woodlands at 100-1000m elevation. LA, Orange, Riverside, Santa Barbara, San Diego, and Ventura Co., Baja. Flowers May-Aug. Not tracked in CNDDB.	Absent; no suitable habitat, no mapped CCH records within 5 mi., not observed during surveys.
Holocarpha virgata ssp. elongata Graceful (curving) tarplant	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 60-1100m elevation. Orange, Riverside, San Diego Cos. Known in Riverside County only from the Santa Rosa Plateau. Flowers May-Nov. Not tracked in CNDDB.	Not expected; potentially suitable habitat, outside known geographic range, no mapped CCH records within 5 mi., not observed during surveys (June-July).
Lilium parryi Lemon lily	Perennial bulbiferous herb. Mesic soils in upper and lower montane coniferous forest, riparian forest, meadows and seeps at 1220-2745m elevation. LA, Riverside, San Bernardino, San Diego Co, Arizona, Sonora Mex. Flowers Jul-Aug.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Deinandra mohavensis Mojave tarplant	Annual herb. Mesic areas in chaparral, coastal scrub, riparian scrub at 640-1600m. Inyo, Kern, Riverside, San Diego, Tulare Cos. Presumed extirpated in San Bernardino Co. Flowers (May)Jun-Oct(Jan).	Not expected; no or marginal habitat, below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Nama stenocarpa Mud nama	Annual/perennial herb. Found in marshy habitat on lake margins and riverbanks at 5-500m elevation. S CA, San Clemente Island, central CA, AZ, TX, Baja, Sonora. Flowers Mar-Oct.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys.

Species	Habitat and Distribution	Potential for Occurrence
Lilium humboldtii ssp. ocellatum Ocellated Humboldt lily	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland at 30-1800m elevation. LA, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, Ventura Co, some Channel Islands. Lower stream benches in riparian corridors in lower montane coniferous forest and coastal chaparral or shaded, dry slopes beneath a dense oak or conifer canopy. Flowers Mar-Jul(Aug).	Not expected; no or marginal habitat; no mapped CCH records within 5 mi., not observed during surveys (June-July).
Brodiaea orcuttii Orcutt's brodiaea	Perennial bulbiferous herb. Mesic, clay soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, vernal pools at 30-1692m elevation. Riverside and San Diego Cos. Flowers May-Jul.	Not expected; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Limnanthes alba ssp. parishii Parish's meadowfoam	Annual herb. Vernally mesic areas in lower montane coniferous forest, meadows and seeps, vernal pools at 600-2000m elevation. Riverside and San Diego Cos. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Navarretia prostrata 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. Flowers Apr-Jun.	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Eryngium aristulatum var. parishii San Diego button-celery	Annual/perennial herb. Mesic areas in coastal scrub, valley and foothill grassland, vernal pools at 20-620m elevation. Riverside, LA, Orange, San Diego Cos. and Baja. Flowers Apr-Jun.	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Atriplex coronata var. notatior 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. Flowers Apr-Aug.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Clinopodium chandleri San Miguel savory	Perennial shrub. Rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodlands, coastal scrub, riparian woodland, valley and foothill grassland at 120-1075m elevation. Orange, Riverside, San Diego Co., Baja. Flowers Mar-Jul.	Not expected; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Eriastrum densifolium ssp. *sanctorum* 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. Flowers Apr-Sep.	Absent; no or marginal habitat, outside known geographic range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Dodecahema leptoceras 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. Flowers Apr-Jun.	Low; limited potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).

Species	Habitat and Distribution	Potential for Occurrence
Centromadia pungens ssp. *laevis* 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. Flowers Apr-Sep.	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).
Navarretia fossalis 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. Flowers Apr-Jun.	Absent; no suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Brodiaea filifolia 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 Cos.; scattered in Southern CA foothills & valleys. Flowers Mar-Jun.	Not expected; no or marginal habitat/soils, no documented occurrences within 5 mi., not observed during surveys (June-July).
Hordeum intercedens 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. Flowers Mar-Jun. Not tracked in the CNDDB.	Absent; no suitable habitat, no mapped CCH records within 5 mi., not observed during surveys (June-July).

"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.

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.

6.0) PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

Based on review of the MSHCP Information Map (RCA 2021) for the parcel, the Project site is not within a Narrow Endemic Plant Species Survey Area and no surveys for narrow endemic plant species are required.

7.0) ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

7.1) Criteria Area Plant Species

Based on review of the MSHCP Information Map (RCA 2021) for the parcel, the Project site is not within a mapped survey area for Criteria Area plant species and surveys for Criteria Area plant species are not required.

7.2) Amphibians

Based on review of the MSHCP Information Map (RCA 2021) for the parcel, the Project site is not within a mapped survey area for amphibian species and surveys for amphibian species are not required.

7.3) Burrowing Owl

Based on review of the MSHCP Information Map (RCA 2021) for the parcel, the Project is within the mapped survey area for burrowing owl (*Athene cunicularia*) and a habitat assessment is required. If suitable habitat is present, focused surveys are required.

7.3.1) Methods

A habitat assessment for burrowing owl was conducted on June 22, 2021 and found potentially suitable habitat for burrowing owl, including open areas onsite and areas where California ground squirrel (*Spermophilus beechyi*) or other small mammal activity was observed (i.e., potentially suitable burrows).

A focused burrow survey and focused burrowing owl survey was conducted on June 22, July 7, July 19, and July 28, 2021 in areas identified during the habitat assessment as potential burrowing owl habitat (Table 7). 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 10). Any developed areas were visually surveyed with binoculars due to private property trespassing concerns.

Table 7. 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

The site and buffer area were 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.

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 7).

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Figure 10

Burrowing Owl Survey Area
(Aerial obtained from Google Earth, August 2018)

Alpine Meadows Lane, City of Riverside
Riverside County, California

7.3.2) Existing Conditions and Results

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 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. 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 owl sign (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) CNDDB 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 CNDDB 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 CNDDB 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 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 records are in close proximity to each other at/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, including small mammal burrows and cavities under rock/concrete debris. Potentially suitable habitat is also present within the 150-meter buffer area, but no owls, owl sign, or occupied burrows were observed in the buffer.

Potentially suitable burrowing owl habitat is present on the site, including small mammal burrows (see Figure 11 and Exhibit 1). No burrowing owls, owl sign (pellets, scat, feathers, tracks, etc.), or occupied burrows were observed onsite during the 2006 or 2021 surveys. Potentially suitable habitat is also present within the buffer area (Figure 6), but no owls, owl sign, or occupied burrows were observed in the buffer.

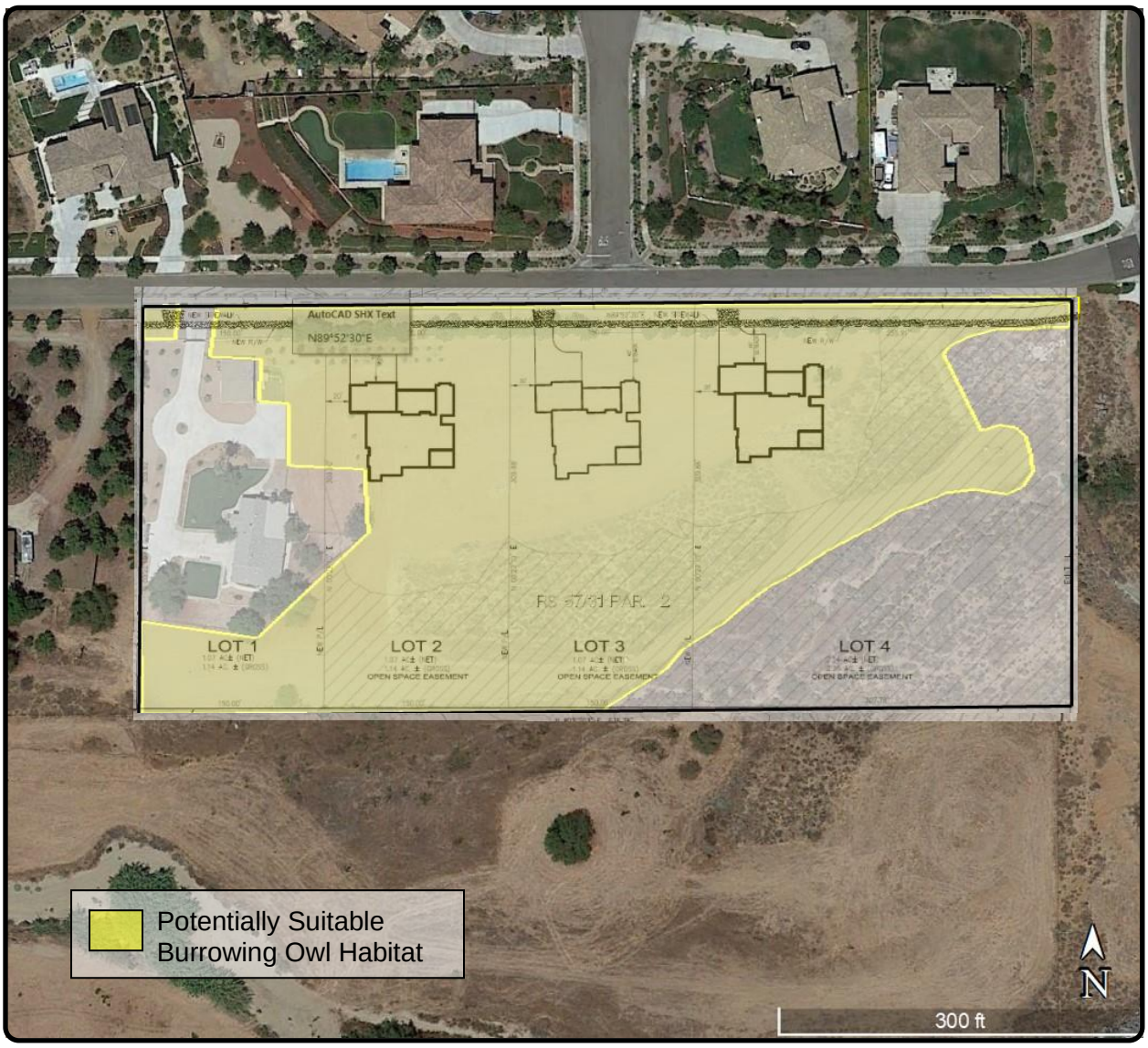

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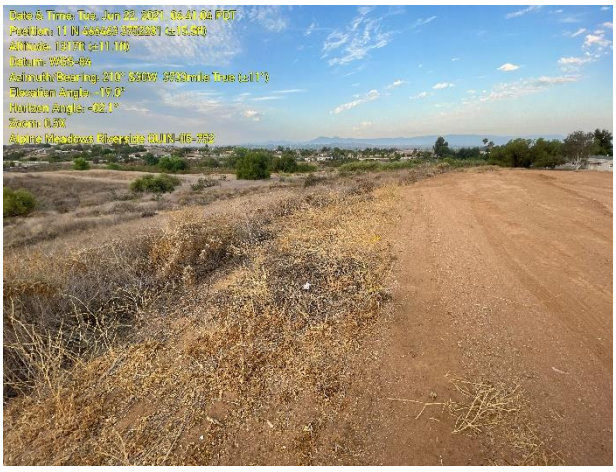
Figure 11

Burrowing Owl Habitat
(Aerial obtained from Google Earth, August 2018)

Alpine Meadows Lane, City of Riverside
Riverside County, California

Exhibit 1. Photos of potentially suitable burrowing owl habitat on the site.



7.3.3) Impacts

No burrowing owls were detected utilizing the site and under current conditions, impacts to burrowing owl would be limited to loss of potential but unoccupied habitat. If burrowing owls colonize the site prior to the start of construction, potential Project impacts include loss of occupied habitat and active burrows and potential injury/mortality of burrowing owls, including eggs and chicks.

7.3.4) Mitigation

Since potentially suitable habitat is present, the MSHCP requires a preconstruction clearance survey for burrowing owl within 30 days prior to initial ground and/or vegetation disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing has not colonized the site since it was last disturbed. If burrowing owl is present during a preconstruction survey, the Project proponent will be required to prepare a Burrowing Owl Protection and Relocation Plan (Plan).

Text of the proposed mitigation measure:

MM BIO-1. Burrowing Owl

> A preconstruction clearance 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 clearing/grubbing, 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.

With implementation of recommended mitigation, the Project would be consistent with the MSHCP.

7.4) Mammals

Based on review of the MSHCP Information Map (RCA 2021) for the parcel, the Project site is not within a mapped survey area for mammal species and surveys for mammal species are not required.

8.0) INFORMATION ON OTHER SPECIES

8.1) Delhi Sands Flower Loving Fly

There are no Delhi soils mapped on the site and there is no habitat present for Delhi sands flower-loving fly (Figure 5). The proposed Project is not within an area with Delhi soils mapped within the MSHCP baseline data and no surveys for Delhi sands flower-loving fly are required.

8.2) Species Not Adequately Conserved

Of the 28 species listed on Table 9-3 of the MSHCP, none were observed on the Project site during surveys. The conservation requirements for ten of the 28 species have been met and these ten species are now considered adequately conserved. The remaining 18 species are absent, not expected to occur, or have a low potential for occurrence on the Project site (Table 8).

Table 8. Potential for Occurrence of Species Not Adequately Conserved

Species	Habitat and Distribution	Potential for Occurrence
REPTILES		
Lampropeltis zonata (parvirubra) California mountain kingsnake (San Bernardino pop.)	Forests & chaparral with rock outcrops or talus, often riparian. 1200-8100ft. elev. San Gabriel, San Bernardino, & San Jacinto Mts. Not tracked in the CNDDB.	Absent; no or marginal habitat, well below elevation range, outside geographic range.
Lampropeltis zonata (pulchra) California mountain kingsnake (San Diego pop.)	Found most commonly near rocks/boulders by streams or lake shores, may also shelter under rotting logs or dense shrubs. Variety of habitats including hardwood, hardwood conifer, conifer, chaparral, riparian, wet meadows. San Diego, Orange, western Riverside, LA, Ventura Co. in the Laguna, Palomar, Volcan, and Hot Springs Mountains; Santa Ana Mountains; Hollywood Hills, Santa Monica mountains. Unverified reports from Whittier Hills, Palos Verde Hills, and Baldwin Hills. Not tracked in the CNDDB.	Absent; no suitable habitat, outside geographic range.
Charina umbratica Southern rubber boa	Found in a few locales in San Bernardino & San Jacinto Mtn. ranges. Moist coniferous forest and woodlands from about 5000-9000 ft. elev. Fossorial, nocturnal, sometimes crepuscular. Hibernates in rock outcrops, rotting logs, or other underground refuges. Active April-October. Thick duff and downed logs important for cover. Usually found within several hundred meters of water.	Absent; no suitable habitat, outside geographic range, well below elevation range, no documented occurrences within 5 mi.

Species	Habitat and Distribution	Potential for Occurrence
Sceloporus graciosus vandenburgianus Southern sagebrush lizard	Shrublands, chaparral, open pine and Douglas fir forests, mainly found in the mountains above 5,000 ft elevation. Prefers open, sunny areas with scattered low shrubs. Hibernates during winter in rock cracks and mammal burrows. LA, Orange, San Bernardino, Riverside, and San Diego Cos. Not tracked in the CNDDB.	Absent; no suitable habitat, well below elevation range.
BIRDS		
Strix occidentalis occidentalis California spotted owl	Hardwood and mixed conifer/hardwood forests at mid to high elevations, oak and riparian woodlands at lower elevations with large old trees and snags, dense canopies, multiple canopy layers, and downed woody debris. Nests in tree cavities. Foraging habitat also includes more open stands.	Absent (foraging and nesting); no suitable habitat, well below elevation range, no documented occurrences within 5 mi.
Ammodramus savannarum Grasshopper sparrow	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting. Year-round resident in southern California range. CNDDB only tracks nesting.	Absent (foraging and nesting); no suitable habitat, no documented occurrences (nesting) within 5 mi., no eBird records in vicinity, not observed during surveys.
Melospiza lincolni Lincoln's sparrow	Winter transient and migrant in southern California, rare breeder in mountains. Shrubby areas, particularly riparian, brushy forest edges, weedy fields, marshes, thickets; breeds in montane riparian and wet meadows. Not tracked in the CNDDB.	Low (foraging), absent (nesting); no or marginal habitat, many eBird records in vicinity,
Sphyrapicus thyroideus Williamson's sapsucker	Summer resident in conifer forests at 5500-9500 ft. elevation, nests in lodgepole pine, aspens next to stands of fir/pine. Requires snags or rotted trees for nest cavities. May be resident in breeding habitat or descent into lower elevation conifer habitats. Mountains of No and Central CA, San Bernardino, San Gabriel, and San Jacinto Mts of So CA. Not tracked in the CNDDB.	Absent (foraging and nesting); no suitable habitat, well below elevation range, outside geographic range, not observed during surveys.
MAMMALS		
Glaucomys oregonensis (sabrinus)californicus San Bernardino flying squirrel	Mature mixed conifer forest (white fir, Jeffrey pine, & black oak) with large trees & snags, closed canopy, downed woody debris, & riparian areas. 4000-8500 ft. elev. San Bernardino & San Jacinto Mt. Ranges (may be extirpated in the San Jacinto Mts.).	Absent; no suitable habitat, well below elevation range, outside geographic range.
PLANTS		
Arctostaphylos rainbowensis Rainbow manzanita	Perennial evergreen shrub. Chaparral at 205-670m elevation. Riverside and San Diego Cos. Flowers Dec-Mar.	Not applicable, Table 9-3 requirement met (RCA 2020).

Species	Habitat and Distribution	Potential for Occurrence
Calochortus plummerae 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. Flowers May-Jul.	Not applicable, Table 9-3 requirement met (RCA 2020).
Chorizanthe leptotheca 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. Flowers May-Aug. Not tracked in the CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).
Chorizanthe parryi var. *parryi* 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. Flowers Apr-Jun.	Not applicable, Table 9-3 requirement met (RCA 2020).
Deinandra mohavensis Mojave tarplant	Annual herb. Mesic areas in chaparral, coastal scrub, riparian scrub at 640-1600m. Inyo, Kern, Riverside, San Diego, Tulare Cos. Presumed extirpated in San Bernardino Co. Flowers (May)Jun-Oct(Jan).	Not expected; no or marginal habitat, below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Diplacus (Mimulus) clevelandii Cleveland's bush monkeyflower	Perennial rhizomatous herb. Gabbroic, rocky, often in disturbed areas and openings in chaparral, cismontane woodlands, lower montane coniferous forest at 450-2000m elevation. Orange, Riverside, San Diego Co., Baja. Flowers Apr-Jul. Not tracked in CNDDB.	Not expected; no or marginal habitat, somewhat below elevation range, no mapped CCH records within 5 mi., not observed during surveys (June-July).
Dudleya viscida Sticky dudleya	Perennial herb. Rocky soils in chaparral, coastal scrub, valley and foothill grassland at 15-790m elevation. Orange, Riverside, San Diego Co. Flowers May-Jun.	Low; potentially suitable habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Galium californicum ssp. *primum* Alvin meadow bedstraw	Perennial herb. Granitic, sandy soils in chaparral, lower montane coniferous forest at 1350-1700m elevation. Riverside, San Bernardino Cos. Flowers May-Jul.	Absent; no suitable habitat, well below elevation range no documented occurrences within 5 mi., not observed during surveys (June-July).
Heuchera hirsutissima Shaggy-haired alumroot	Perennial rhizomatous herb. Rocky, granitic soils in subalpine and upper montane coniferous forest at 1520-3500m elevation. Riverside and San Bernardino Cos. Flowers (May)Jun-Jul.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Holocarpha virgata ssp. elongata Graceful (curving) tarplant	Annual herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland at 60-1100m elevation. Orange, Riverside, San Diego Cos. Known in Riverside County only from the Santa Rosa Plateau. Flowers May-Nov. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).

Species	Habitat and Distribution	Potential for Occurrence
Hulsea vestita ssp. parryi Parry's sunflower	Perennial herb. Granitic or carbonate soils, rocky areas, openings in pinyon and juniper woodlands, upper and lower montane coniferous forest at 1370-2895m elevation. Kern, LA, Mono, San Bernardino, Ventura Cos. Flowers Apr-Aug	Not applicable, Table 9-3 requirement met (RCA 2020).
Lilium humboldtii ssp. ocellatum Ocellated Humboldt lily	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland at 30-1800m elevation. LA, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, Ventura Co, some Channel Islands. Lower stream benches in riparian corridors in lower montane coniferous forest and coastal chaparral or shaded, dry slopes beneath a dense oak or conifer canopy. Flowers Mar-Jul(Aug). Not tracked in the CNDDB.	Not expected; no or marginal habitat; no mapped CCH records within 5 mi., not observed during surveys (June-July).
Lilium parryi Lemon lily	Perennial bulbiferous herb. Mesic soils in upper and lower montane coniferous forest, riparian forest, meadows and seeps at 1220-2745m elevation. LA, Riverside, San Bernardino, San Diego Co, Arizona, Sonora Mex. Flowers Jul-Aug.	Absent; no suitable habitat, well below elevation range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Microseris douglasii ssp. platycarpha 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. Flowers Mar-May. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).
Muhlenbergia californica California muhly	Perennial rhizomatous herb. Mesic areas, seeps, and streambanks in chaparral, coastal scrub, lower montane coniferous forest at 100-2000m elevation. LA, Riverside, San Bernardino Co. Flowers Jun-Sep.	Not expected; no or marginal habitat, no documented occurrences within 5 mi., not observed during surveys (June-July).
Polygala cornuta var. fishiae Fish's milkwort	Perennial deciduous shrub. Chaparral, cismontane woodland, riparian woodlands at 100-1000m elevation. LA, Orange, Riverside, Santa Barbara, San Diego, and Ventura Co., Baja. Flowers May-Aug. Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).
Potentilla rimicola Cliff cinquefoil	Perennial herb. Granitic, rocky soils in subalpine and upper montane coniferous forest at 2400-2800m elevation. Riverside Co. (San Jacinto Mts.), Baja. Flowers Jul-Sep.	Absent; no suitable habitat, well below elevation range, outside geographic range, no documented occurrences within 5 mi., not observed during surveys (June-July).
Romneya coulteri 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. Flowers Mar-Jul(Aug). Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).

Species	Habitat and Distribution	Potential for Occurrence
Sidotheca (Oxytheca) caryophylloides Chickweed oxytheca	Annual herb. Sandy soils in lower montane coniferous forest at 1114-2600m elevation. LA, Riverside, San Bernardino, Tulare, Ventura Co. Flowers Jul-Sep(Oct). Not tracked in CNDDB.	Not applicable, Table 9-3 requirement met (RCA 2020).

See Table 6 for legend.

8.3) Other Species

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 (middens) (*Neotoma lepida intermedia*; CDFW Species of Special Concern). Details of these observations are provided in Table 9 and observation locations are shown on Figure 12. No special status wildlife species were noted during the 2006 survey.

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. Recommended mitigation includes avoidance of Project impacts during the nesting season (February 1 to August 31) or implementation of preconstruction nesting bird clearance surveys and avoidance buffers for active nests.

Text of the proposed mitigation measure:

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.

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.

Table 9. Special status species observed during surveys.

Species	GPS Coordinates (Decimal Degrees)	Number Detected	Location on Site	Elevation (feet)
Cooper's hawk (perching) *Accipiter cooperii*	33.910084, -117.363975	1 individual (possibly 2)	Southwest	1,293
Nuttall's woodpecker (vocalization) *Dryobates nuttallii*	33.909378, -117.364299	1 individual	Offsite to southwest in Prenda Creek	1,274
San Diego desert woodrat (midden) *Neotoma lepida intermedia*	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. Species that have a low to moderate, moderate, or high potential to occur are:

- Crotch bumble bee (*Bombus crotchii*; candidate for state listing as endangered[2]),
- 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),
- 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 (foraging) (*Antrozous pallidus*; CDFW Species of Special Concern),
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*; CDFW Species of Special Concern), and
- Western mastiff bat (foraging) (*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

[2] 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).

bee, Southern California legless lizard, Allen's hummingbird, pallid bat, and western mastiff bat. These five species are not covered under the MSHCP.

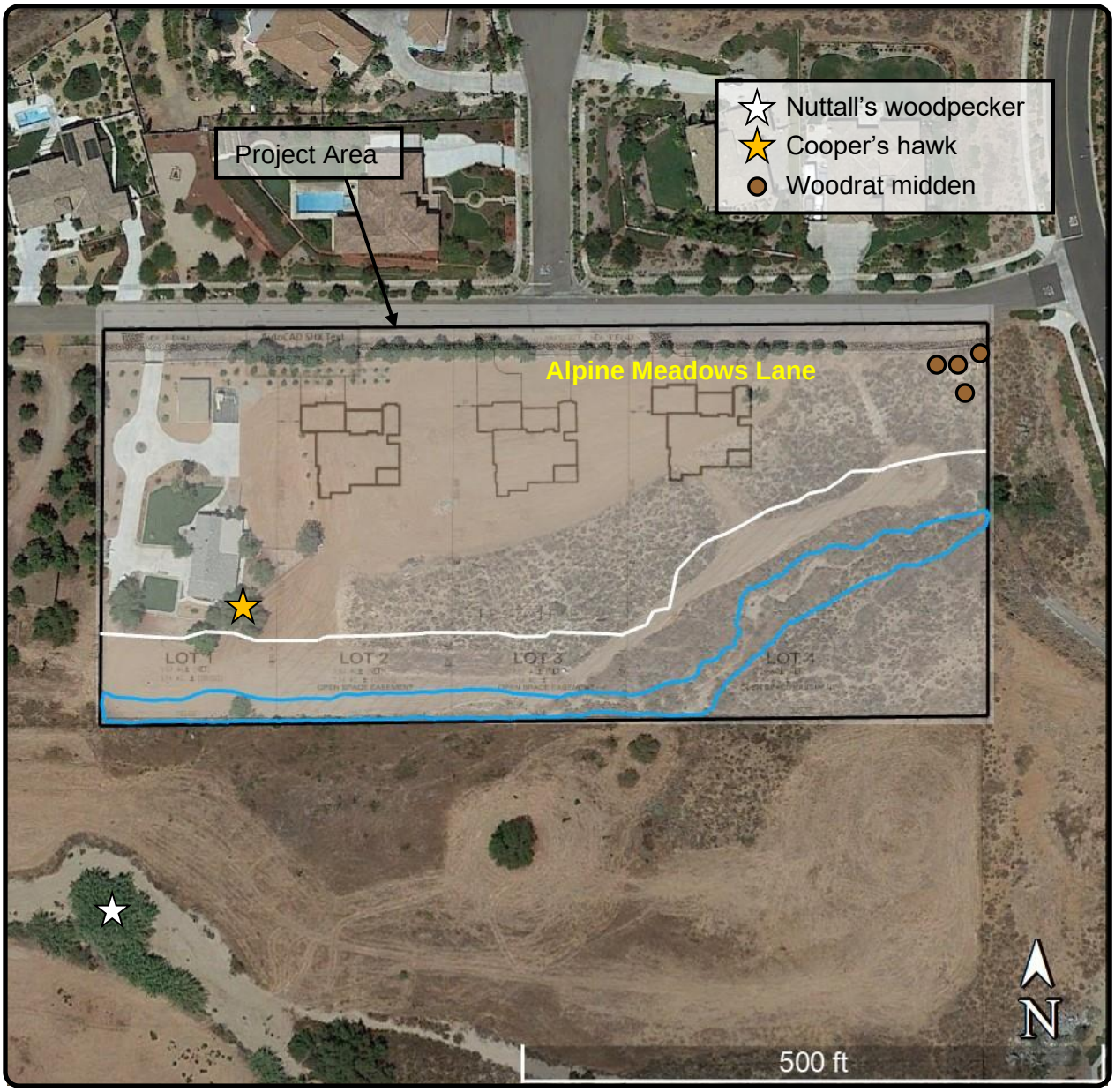
Crotch bumble bee was originally advanced to candidacy for state listing in June 2019. This status was challenged in court and a trial court decision temporarily removed its candidacy in February 2021. A State Supreme Court ruling reversed this judgement and reinstated its candidacy on September 30, 2022 (Supreme Court Case S275412). The latest information from CDFW indicates that crotch bumble bee is a candidate for state listing as endangered. 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.

Text of proposed mitigation measure:

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.

Impacts to the other four (4) species not covered under the MSHCP are not expected to be significant. The Project site is not within the Criteria Area or PQP Lands so the restriction on clearing coastal California gnatcatcher occupied habitat between March 1 and August 15 does not apply.



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

QUIN-05-752

Figure 12

Special Status Species
(Aerial obtained from Google Earth, August 2018)

Alpine Meadows Lane, City of Riverside
Riverside County, California

9.0) BEST MANAGEMENT PRACTICES (MSHCP VOLUME 1, APPENDIX C)

Volume 1, Appendix C of the MSHCP includes best management practices (BMPs) to be implemented if project activities could directly or indirectly impact MSHCP resources. Based on the potential for direct or indirect impacts to MSHCP resources, the Project will implement BMPs #2, 3, 5, 6, 8, 9, 11, 13, 14, and 15 and these will be added as notes in the grading plans. BMPs #7 and 12 are not applicable to the Project. BMPs #1, 4, 10 are associated with biological monitoring and are not proposed for the Project.

The MSHCP BMPs are:

1. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

2. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB [Regional Water Quality Control Board] requirements.

3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

4. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

5. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

6. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian [species] identified in MSHCP Global Species Objective No. 7.

7. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

8. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS [U.S. Fish and Wildlife Service], and CDFG [California Department of Fish and Wildlife], [and] RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

9. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

10. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.

11. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.

12. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

13. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

14. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange

snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

15. The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

10.0) REFERENCES

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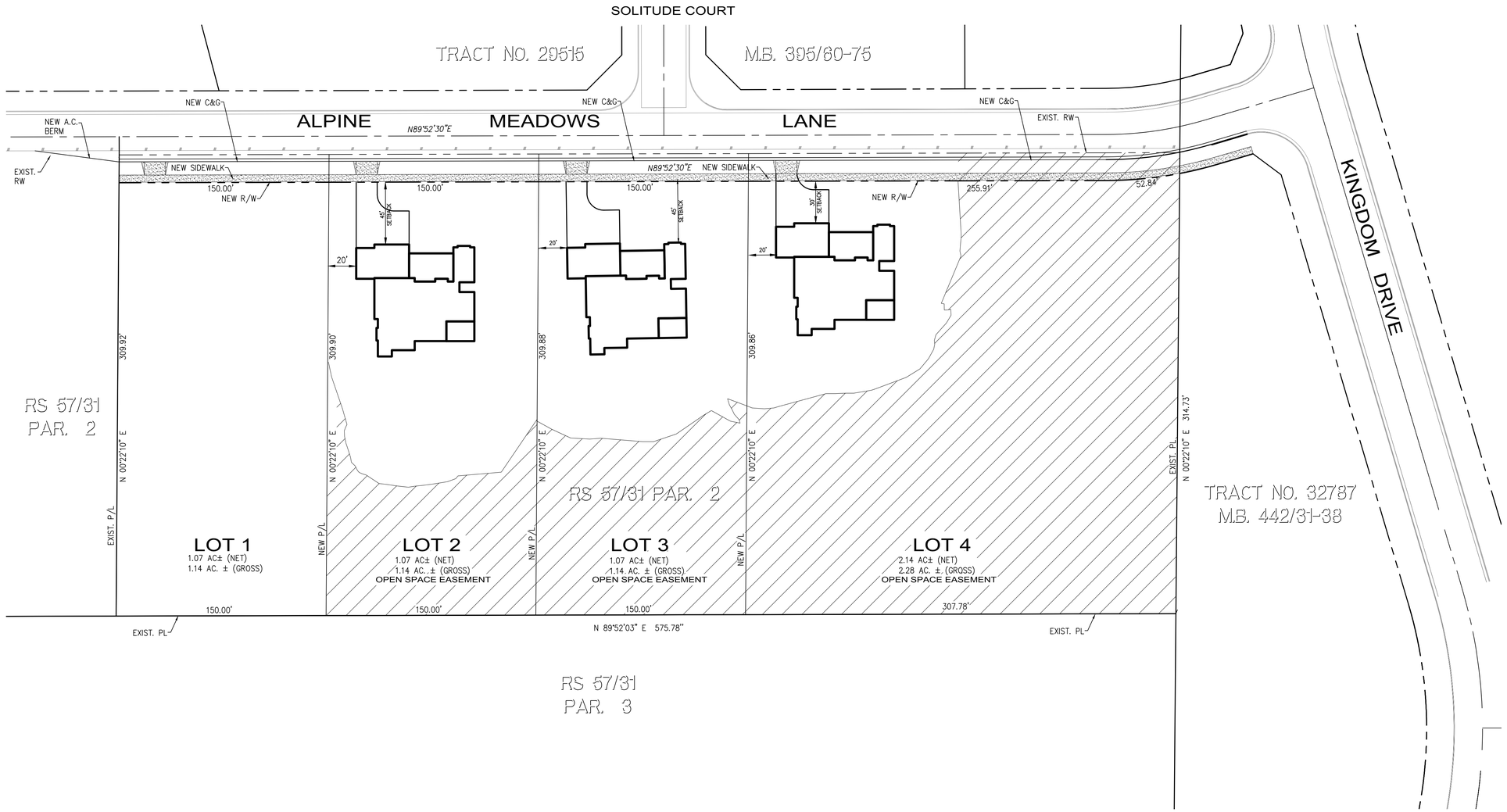
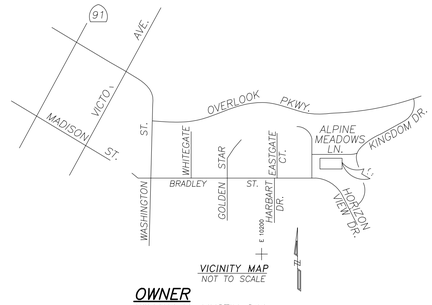
APPENDIX A: BIOLOGICAL RESOURCES ASSESSMENT AND BREEDING SEASON BURROWING OWL SURVEY

APPENDIX B: TENTATIVE PARCEL MAP 38174 AND FUEL MODIFICATION ZONE

TENTATIVE PARCEL MAP NO. 38174





VICINITY MAP
NOT TO SCALE

OWNER

WILLIAM M. MUSTIN 841
BRADLEY STREET
RIVERSIDE CA 92506
(951) 776-2986

ENGINEER

ACKERMAN ASSOC. 2000 INC.
2288 MARYSA KATHRIN STREET
CORONA, CA. 92882
PH: (951) 454-1869

ASSESSOR'S PARCEL NO.

243-230-027

ACREAGE

TOTAL ACRES NET _____5.39 AC.
TOTAL NUMBER OF LOTS ____4
MINIMUM LOT SIZE_____46,476 SF

LEGAL DESCRIPTION

PARCEL 1:

PARCEL 2 OF RECORD OF SURVEY, AS SHOWN BY MAP ON FILE IN BOOK 57, PAGE 31 OF RECORDS OF SURVEY, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

PARCEL 2:

A NON-EXCLUSIVE EASEMENT OVER THE WESTERLY 30 FEET OF PARCEL 3 OF RECORD OF SURVEY ON FILE IN BOOK 57, PAGE 31 OF RECORDS OF SURVEY, RECORDS OF RNERSIDE COUNTY, CALIFORNIA.

PARCEL 3:

A NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS OVER THE NORTHERLY 20 FEET OF PARCEL 1 OF SAID RECORD OF SURVEY, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

PROJECT DESCRIPTION
TO SUBDIVIDE A 5.74 AC. PARCEL INTO FOUR (4) 1 AC. MINIMUM LOTS.

ZONING & LAND USE

LAND USE	ZONING
EXISTING: RESIDENTIAL-HILLSIDE	R-1-130
PROPOSED:	
SINGLE FAMILY RESIDENTIAL	R-1-130

SCHOOL DISTRICT

RIVERSIDE UNIFIED SCHOOL DISTRICT
3380 14TH STREET
RIVERSIDE CA. 92501
(951) 788-7134

UTILITIES

GAS .....THE GAS COMPANY
ELECTRICITY.....CITY OF RIVERSIDE
SEWER.....CITY OF RIVERSIDE
WATER.....WESTERN MUNICIPAL WATER DISTRICT
TELEPHONE.....SBC

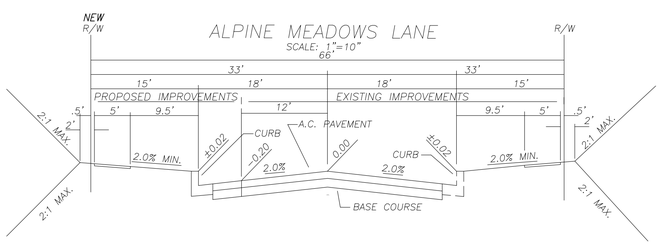
LEGEND

▨ — INDICATES OPEN SPACE EASEMENT

NOTES:

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 GEOLOGIC HAZA

NORTH
SCALE: 1" = 40'
40' 0' 40' 80' 120'
GRAPHIC SCALE: 1" = 40'



Ackerman Associates 2000, Inc.
2288 MARYSA KATHRIN STREET
CORONA, CA. 92882
PH: 951 454-1869
FAX: 951 736-8645

SHEET 1 OF 1

AMENDMENT		SCALE: 1" = 40'
DATE	No.	DESCRIPTION

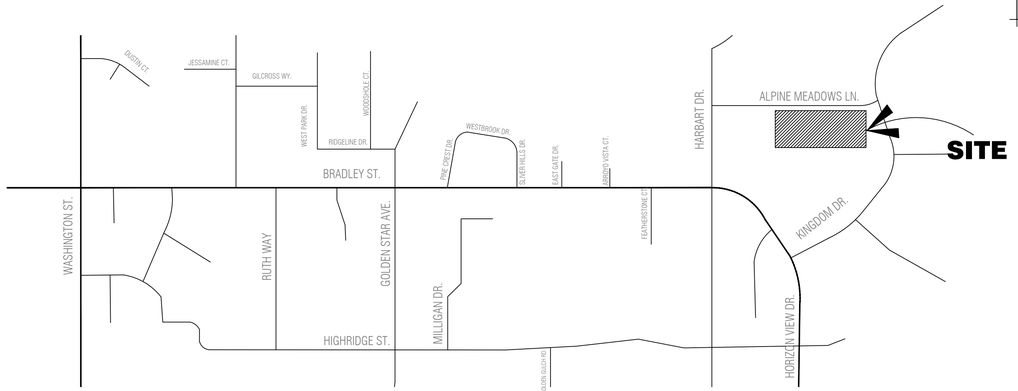
REV. 2/24/26

Three Single Family Homes

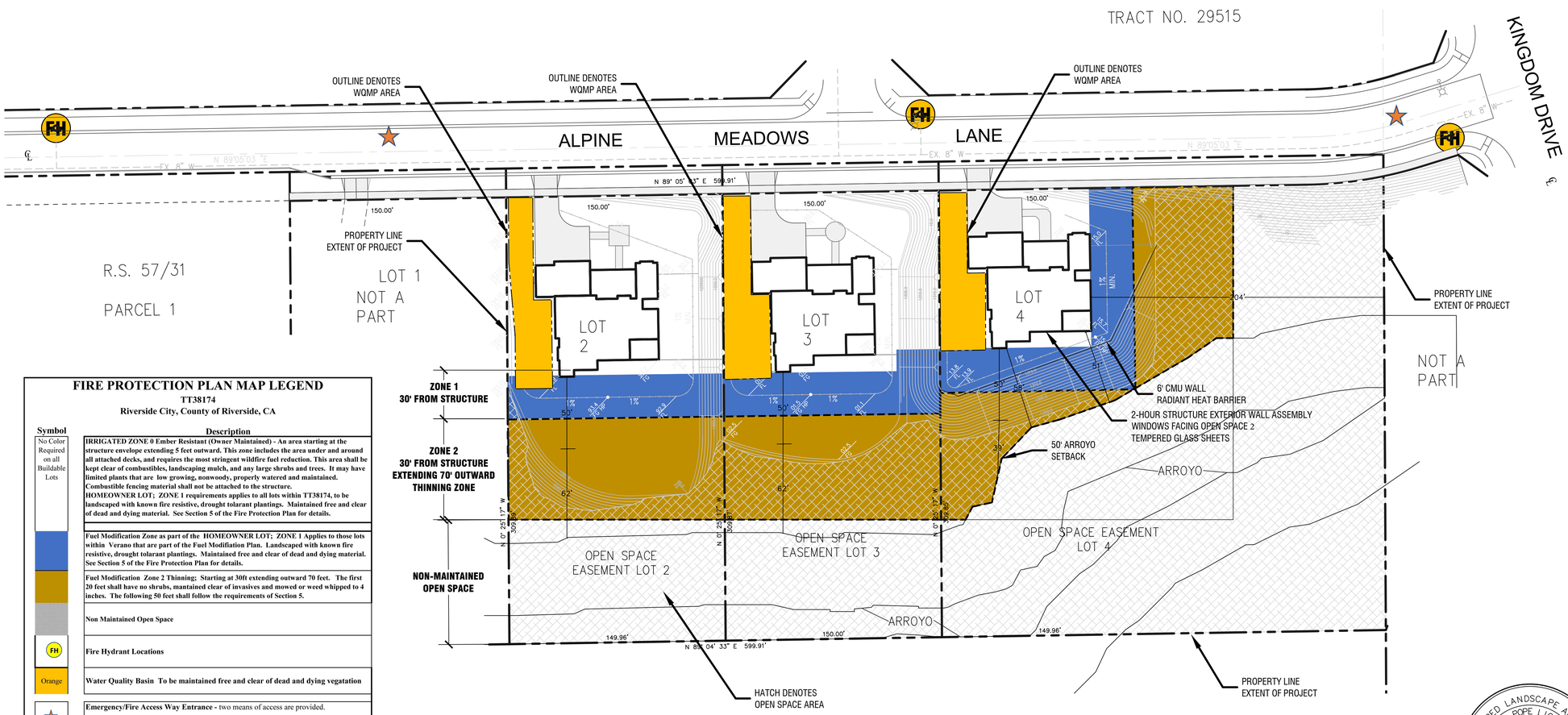
FIRE PROTECTION PLAN

Tract 38174
Alpine Meadows Lane
Riverside, CA 92506
APN: 243-230-027-0000

Applicant:
Ryan Williams
1649 Harrison Ln.
Redlands CA 92374
Contact: Ryan Williams
Phone: (909)471-0808
Email: ryanpwilliams1987@gmail.com



Vicinity Map
not to scale
North



CONCEPTUAL PLAN
Scale: 1" =40'
NORTH

FIRE PROTECTION PLAN MAP LEGEND

TT38174
Riverside City, County of Riverside, CA

Symbol	Description
No Color Required on all Buildable Lots	**IRRIGATED ZONE 0 Ember Resistant (Owner Maintained) - An area starting at the structure envelope extending 5 feet outward. This zone includes the area under and around all attached decks, and requires the most stringent wildfire fuel reduction. This area shall be kept clear of combustibles, landscaping mulch, and any large shrubs and trees. It may have limited plants that are low growing, nonwoody, properly watered and maintained. Combustible fencing material shall not be attached to the structure. HOMEOWNER LOT; ZONE 1 requirements applies to all lots within TT38174, to be landscaped with known fire resistive, drought tolarant plantings. Maintained free and clear of dead and dying material. See Section 5 of the Fire Protection Plan for details.**
	Fuel Modification Zone as part of the HOMEOWNER LOT; ZONE 1 Applies to those lots within Verano that are part of the Fuel Modifiation Plan. Landscaped with known fire resistive, drought tolarant plantings. Maintained free and clear of dead and dying material. See Section 5 of the Fire Protection Plan for details.
	Fuel Modification Zone 2 Thinning; Starting at 30ft extending outward 70 feet. The first 20 feet shall have no shrubs, mantained clear of invasives and mowed or weed whipped to 4 inches. The following 50 feet shall follow the requirements of Section 5.
	Non Maintained Open Space
FH	**Fire Hydrant Locations**
Orange	**Water Quality Basin To be maintained free and clear of dead and dying vegatation**
	Emergency/Fire Access Way Entrance - two means of access are provided.

Prepared for: Ryan Williams
1649 Harrison Lane
Redlands, CA 92374

Prepared By: FIREWISE 2000, LLC.
PO Box 339
Lower Lake, CA 95457
Telephone: 760-745-3947
info@firewise2000.com

Construction shall comply with CBC Chapter 7A required for development in areas subject to VHFHSZ designations

I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE CITY'S WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

SIGN Richard Pope DATE 12/9/2022

REGISTERED LANDSCAPE ARCHITECT RICHARD J. POPE LIC. NO. 2664 EXP.02/28/24 STATE OF CALIFORNIA

JOB: 22-04 CKE LKD
January 26, 2022

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Richard Pope, Landscape Architect CA# 2664