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

A BIOLOGICAL RESOURCES ASSESSMENT FOR TTM 36544; SKYLINE HEIGHTS PROJECT CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA

±271 Acre Property, ±271 Acres Surveyed

APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006, USGS 7.5-minute topographic Corona South Quadrangle Township 4 South, Range 7 West, portions of Sections 3, 4 and 9

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GEC- Data Collection: 2005, 2006, 2008 and 2013
GEC Draft Report Dates: November 24, 2014
L&L Final Report: March 2015

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SUMMARY

Richland Communities, LLC is proposing to develop the Skyline Heights (TTM 36544) project on 270.9 acres of vacant land situated in the hills to the southwest of the City of Corona in Western Riverside County, California. At the request of Richland Communities, LLC, L&L Environmental, Inc. (L&L) conducted a third party review and produced this biological assessment based on biological survey reports by Gonzales Environmental Consulting, LLC. GEC conducted a habitat assessment and focused surveys for botanical species, coastal California gnatcatcher, least Bell's vireo, burrowing owl and a jurisdictional delineation. L&L supplemented field data with an updated jurisdictional delineation. An updated Determination of Biological Equivalent or Superior Preservation (DBESP) is being submitted under separate cover.

The survey area consists of disturbed and undisturbed native habitat in the eastern foothills of the Santa Ana Mountains. Habitat within the survey area consisted of *Quercus agrifolia* Alliance (Coast Live Oak Woodland), *Baccharis salicifolia* Alliance (Mulefat Scrub), *Platanus racemosa* Alliance (California sycamore woodlands), *Salix lasiolepsis* Alliance (Arroyo Willow thickets), *Bromus* Semi-natural Stands (California Annual Grassland), sage scrub Alliances (mix of multiple Alliances), chaparral Alliances (mix of multiple Alliances), ornamental (Eucalyptus and *Schinus spp*. Semi-natural Stands) and disturbed habitat.

The focused surveys for coastal California gnatcatcher (*Polioptila californica*), burrowing owl *(Athene cunicularia)* and least Bell's vireo (*Vireo bellii pusillus*) were all negative.

Focused botanical surveys identified Coulter's matilija poppy (*Romneya coulteri*) within the survey area. Based on the current project design, approximately 60% of the documented population within the survey area will be avoided. No other sensitive botanical species were observed.

Sensitive wildlife species observed within the survey area include; northern red-diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), Lawrence's goldfinch (*Spinus lawrencei*) and the San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). These species could be impacted by the proposed project. Mitigation measures will reduce the potential for impacts, particularly for bird species.

As a result of the location of the site within and adjacent to a large expanse of open space, the relatively undisturbed habitat on portions of the property, variety of habitats and presence of blue-line drainages, the unimpacted survey area and vicinity provide suitable habitat and a moderate potential for other special status wildlife to occur in the survey area. Impacts to the observed sensitive species and those that have a moderate or high potential of occurrence would not

impact the survival of a local or regional population. These impacts are considered adverse, but not generally considered significant and do not require specific mitigation measures (with the exception of the burrowing owl and migratory birds). The proposed mitigation and minimization measures for the project will also minimize impacts to these species.

Although no burrowing owl or burrowing owl sign was observed on the subject property during the focused survey or any of the other surveys conducted on the site, a 30-day preconstruction clearance survey will be required under current MSHCP guidelines due to the presence of suitable habitat and burrows suitable for use by the owl.

Trees suitable for raptor nesting and vegetation suitable for migratory bird nesting are present within and around the site. The Cooper's hawk was observed flying over the survey area and on adjacent lands. Mitigation measures are recommended including avoidance of the nesting season, if possible, in order to prevent impacts to raptors and migratory birds. If clearing and grubbing cannot be avoided during the nesting season (January 1 and September 1, annually) a nesting bird survey should be conducted no more than three days prior to vegetation clearing or ground disturbance activities by a qualified biologist. If active nest are located during pre-construction surveys, a qualified biologist should develop and implement a plan to avoid nests and minimize and prevent impacts to nesting birds

Three mapped blue-line streams occur within the project area, Wardlow Canyon Wash, Mabey Canyon Wash and an unnamed blue-line stream. Wardlow Canyon Wash and Mabey Canyon Wash are not proposed for development. Jurisdictional areas calculated in the survey area include 10.2 acres of State of California Streambeds Jurisdiction. Within the 10.2 acres, 2.6 acres is considered ACOE non wetland "waters" of the US. No Federal wetlands were found in the survey area. Based on the current development plans provided by KWC Engineers the project will impact 6.17acres of State of California, Department of Fish and Wildlife Jurisdiction and 1.57acres of Army Corps of Engineers, Waters of the U.S. (WoUS).The area identified as California Streambeds also qualifies as MSHCP Riparian/Riverine habitat. Therefore, 10.2 acres of Riparian/Riverine habitat is present in the survey area and 6.17acres are proposed for impacts. The project area supports 1.17 acres of coast live oak woodland in six locations. Of this the two smallest areas at the southeastern most edge of the development area will be impacted by the proposed project. This location is immediately adjacent to where the southern access road (Trudy Way) will enter the proposed development. During construction, the actual impacted oak trees will be counted and mitigated for at a ratio no less than 1:1 within landscaped areas.

The project, as proposed, will separate a 10 acre parcel of designated Private/Quasi-Public Conservation Lands and additional, avoided land from the MSHCP Core B (Cleveland National Forest). Since this parcel will be separated from the Core and will be prevented from

contributing to the reserve assembly, the proponent will purchase and preserve an additional 10 acres of natural habitat (biologically equivalent or superior) adjacent to Forest Service land. The land will be deed restricted to prevent any future development.

As proposed, the project design will avoid impacts to 117.5 acres of native habitat, 4 acres of state streambeds and MSHCP Riparian/Riverine habitat and 0.6 acres of federal jurisdiction. Most of the avoided areas are adjacent to the Cleveland National Forest and large areas of existing open space.

Mitigation Measures outlined in Section 5.0 are designed to reduce, minimize and mitigate project related impacts to the lowest practicable alternative and to a level of less than significant impact.

1.0) INTRODUCTION

The following report has been prepared for Mike Byer, Richland Communities, LLC, of Irvine CA, by L&L Environmental, Inc. It describes the proposed Skyline Heights project and its potential impacts on biological resources. The Skyline Heights project (TTM 36544) consists of APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 totaling ±270.9 acres immediately adjacent to the southwest of the City of Corona, Riverside County, California.

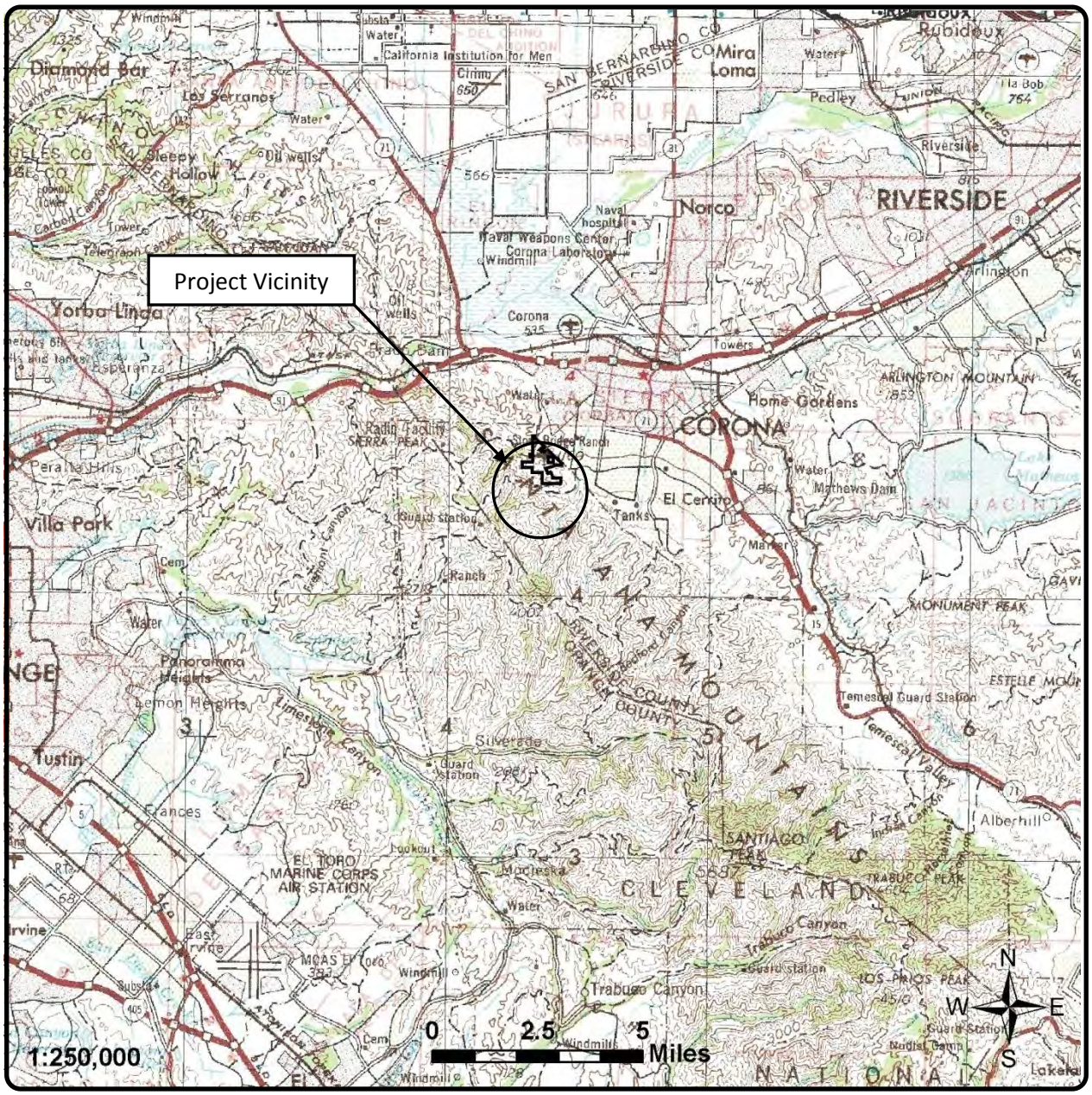
L&L's assessment consisted of (1) a review of previous data and reports documenting biological surveys on the site, (2) a records search, conducted to verify special status species or habitats addressed and (3) review of comment letters regarding the project and (4) an evaluation of available resources (aerial photography and topographic maps) with field visits to verify jurisdictional data / impacts.

1.1) Project Location

The survey area discussed in this report is located southwest of the City of Corona, south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive, Riverside County, California (Figure 1).

The survey area is located within San Bernardino Meridian in portions of Sections 3, 4 and 9, Township 4 South, Range 7 West in Riverside County, California (Figure 2). This location is shown on the Corona South, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Corona South 1979); page 772 Blocks G1, G2, G3, H2, H3 and J3 of the Riverside County Street Guide and Directory (Thomas Brothers Maps Design 2013). The approximate center of the survey area is located at 33°50'39.72"N/117°36'41.11"W.

The survey area is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels (Figure 3). Within the general boundaries of the survey area is an undeveloped 10.0-acre parcel which is considered "Not a Part" and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded Forest Service access road, is located just to the south of the project. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.



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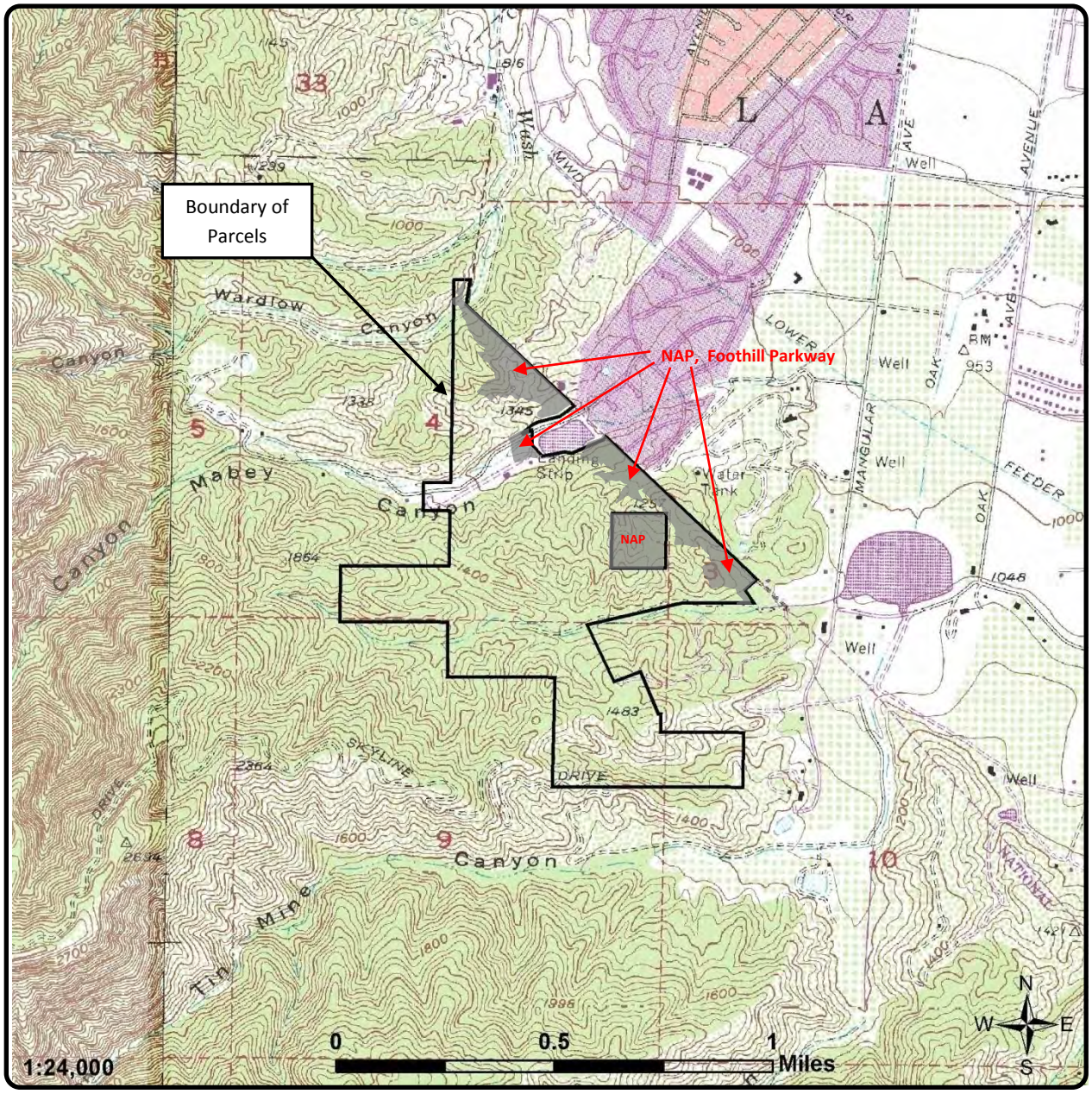
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RLCC-14-458
March 2015

Figure 1

Project Vicinity Map

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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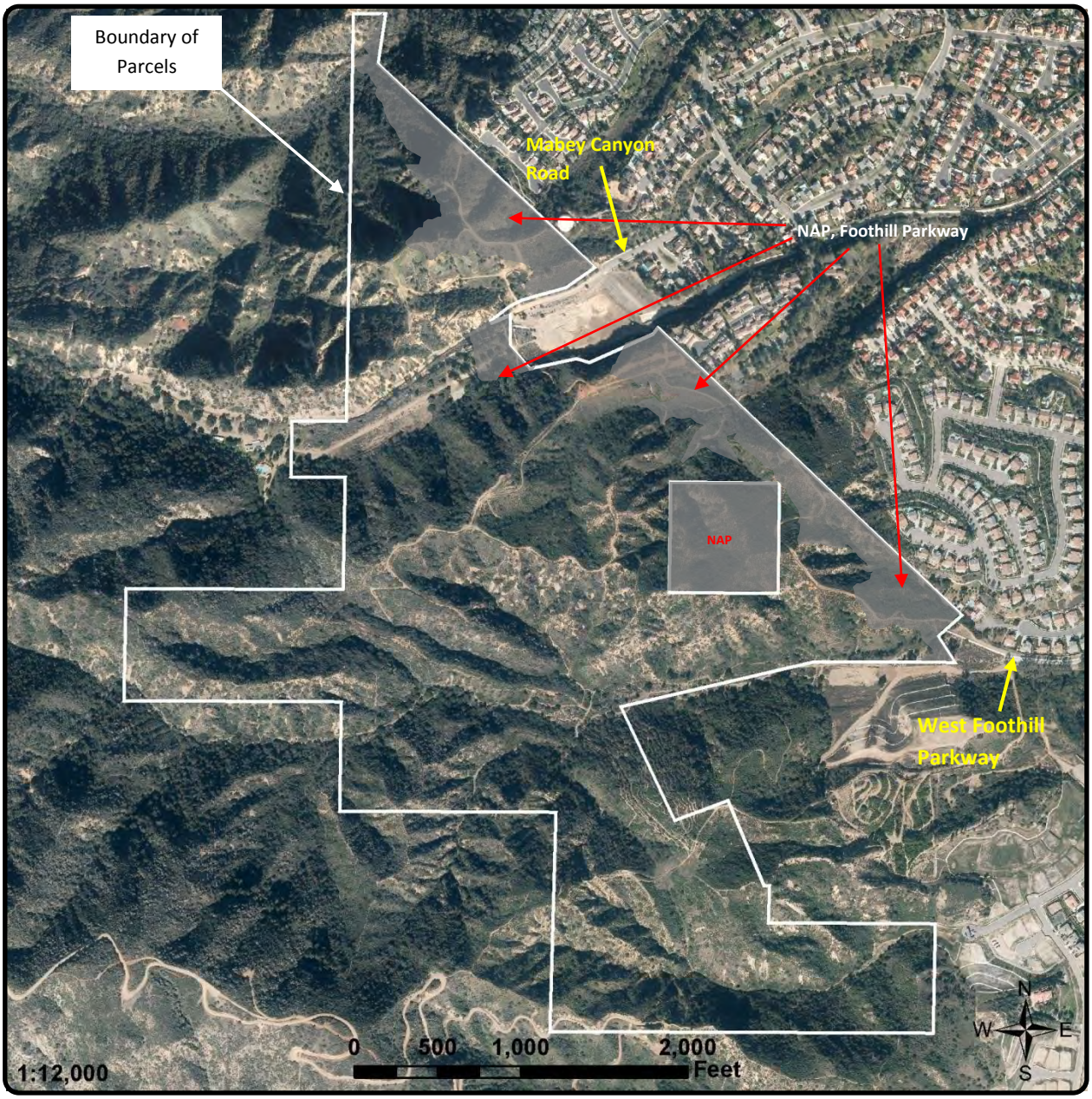
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Figure 2

Project Location Map
(USGS Corona South [1982] quadrangle,
Sections 3, 4, 9, & 10, Township 4 South, Range 7 West)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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Figure 3

Aerial Photograph
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

1.2) Project Description

1.2.1) Proposed Project

The Skyline Heights (TTM 36544) survey area is comprised of 270.9 acres vacant land situated in the hills to the southwest of the City of Corona in Western Riverside County, California, adjacent to Foothill Parkway. The survey area includes the land to be acquired by RCTC/City of Corona for the construction of the future Foothill Parkway westerly extension and Mabey Canyon Debris Basin. The site is located approximately 3 miles south of the 71 and 91 Freeways and approximately 4 miles west of Interstate 15 (I-15). The site is within the City of Corona's Sphere of Influence and is proposed to be annexed to the City during the entitlement process. The City of Corona is currently processing the Capital Improvement Project for the Foothill Parkway Westerly Extension between Green River Road and Trudy Way. Construction is planned to be completed in the next few years. Foothill Parkway will border the eastern portion of the proposed Skyline Heights development (Project) and will be the primary access to the site.

A Conceptual Site Plan has been prepared for the Project and will consist of two (2) graded areas. The area north of Mabey Canyon is proposed to be 45 Single Family lots and the area to the south will be 247 Single Family lots. This totals to 292 Single Family Low Density Residential lots for a project density of 1.07 du/ac.

The Skyline Heights Project will be developed in three map recording phases, but will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the Project development. The anticipated maximum cuts and fills depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor.

The proposed Project requires the construction of Foothill Parkway and infrastructure improvements along the Project frontage as proposed by the City of Corona's Foothill Parkway Westerly Extension Capital Improvement Project. The anticipated completion date of this section of Foothill Parkway is 2016. This development assumes that Foothill Parkway is in place prior to the construction of the Project.

A portion of the survey area (33 acres) will be graded by the Foothill Parkway project (Figures 2 and 3). While this area is mapped within the project footprint (and disclosed in the overall project description, the impacts have been considered in the Foothill Parkway documents and have been excluded here.

1.2.2) Annexation Properties

Several properties, not part of the project described in this report, are part of the general plan amendment/annexation or study area. As part of the process the City of Corona requested that technical reports address additional properties within the annexation boundary. Annexation properties include: JHB Colony Investments (APN 275030006, 275040006, 275040011, 275040012, 275040015, 275050004, 275070003, and 275080010), Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009). According to the City of Corona no immediate development is planned for Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007),Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009) at this time.

While survey of these areas occurred as a result of the general plan amendment / annexation study, no impacts are planned to these areas at this time and no impacts to these properties have been considered here. If development of these properties is planned in the future, additional studies and permits will be required.

2.0) REGULATORY REQUIREMENTS

2.1) The Federal Endangered Species Act

By law, it is a requirement of the Endangered Species Act (ESA), 1973 (as amended) at section 7(a)(2) that Federal agencies insure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of critical habitat. In order to meet compliance with this requirement, the agency must conduct a Biological Assessment (BA), in which effects to listed species are analyzed and disclosed in the form of an "effects determination."

Section 7 requires Federal agencies to consult with the U. S. Fish and Wildlife Service (USFWS) should it be determined that their actions may affect federally listed threatened or endangered species. Section 9 of the Act prohibits "take" (e.g. harm, harassment, pursuit, injury, kill) of federally listed wildlife. "Harm" is further defined to include habitat modification or degradation where it kills or injures wildlife by impairing essential behavioral patterns such including breeding, feeding, or sheltering. Take incidental to otherwise lawful activities can be authorized under Section 7 of the Act.

Procedures for obtaining a permit for incidental take are identified under Section 7 of FESA for federal properties or where federal actions are involved, and are identified under Section 10 of FESA for non-federal actions. During the Section 7 process, measures to avoid and minimize project effects to listed species and their habitat will be identified and incorporated into a biological opinion (written by the USFWS) that includes an incidental take by the Federal agency and applicant.

The County of Riverside has been issued a Section 10(a) permit for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which this project falls within.

2.2) The Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) is an international treaty that makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Sections 3503, 3503.5, and 3800 of the CDFW Code prohibit the take, possession, or destruction of birds, their nests, or eggs. Executive Order 13186 ensures that environmental analyses of Federal actions required by the NEPA or other established environmental review processes evaluate the effects of actions on migratory birds, with emphasis on species of concern. The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle

(January 1 and September 1). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or loss of habitat upon which the birds depend could be considered "take" and constitute a violation of the MBTA.

2.3) Jurisdictional Determination of Wetlands, "Waters of the U.S."

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

2.3.1) United States Clean Water Act, Section 404

The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was later amended and became known as the Clean Water Act. The Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States. The Federal Clean Water Act gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions.

Clean Water Act 404 permits are issued by the U.S. Army Corps of Engineers (ACOE) for dredge/fill activities within wetlands or non-wetland waters of the U.S. Permitting of activities that would result in a discharge of dredge or fill material into Waters of the United States or adjacent Wetlands and associated habitat is required. By definition, these include all waterways, streams, and intermittent streams, which could be used for interstate commerce, and their tributaries. The term "interstate commerce" has been broadly interpreted to include use by migratory waterfowl and out-of-state tourism.

In non-tidal WoUS, jurisdictional limits extend to the ordinary high water mark (OHWM). The OHWM is a method for determining the lateral limits of non-wetland WoUS. Non-wetland waters are regulated under the "Waters of the United States" (WoUS) in Section 404 of the Clean Water Act (33 USC 1344) and are defined by a line on the shore established by fluctuations of water. This OHWM is indicated by shelving, changes in sediment texture and changes in vegetation. Effective discharge events that are capable of moving the greatest proportion of sediment over time established the OHWM. In the Arid West region, these ordinary high flows are low-to moderate-discharge events (Lichvar et al 2006). Identifying the

lateral extent of this boundary on the landscape in the Arid West ephemeral and intermittent streams is often challenging because the storm systems are flashy and the channel morphology shifts frequently.

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

2.3.2) United States Clean Water Act, Section 401

The RWQCB has jurisdiction over similar "Wetlands" and "Waters of the United States" under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act under the California Water Code. Permitting is required for activities that will result in a discharge of soils, nutrients, chemicals, detrital materials, or other pollutants into Waters of the United States or adjacent wetlands that will affect water quality of those bodies and the area watershed.

2.3.3) California Department of Fish and Wildlife Code, Section 1600

The CDFW, through provisions of the CDFW Code (Sections 1600-1616), is empowered to issue agreements ("Streambed Alteration Agreement") for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. Streams and rivers are defined by the presence of a channel bed, banks, and intermittent flow. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Determining limits of a wetland is not typically done in obtaining CDFW Agreements because the intent of the 1600 program is to safeguard riparian associated wildlife habitat. Riparian habitat includes willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations wetlands associated with a stream or lake will fall within the limits of riparian habitat. Thus, the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet ACOE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

2.4) California Department of Fish and Wildlife

2.4.1) California Endangered Species Act

California Endangered Species Act (CESA) definitions of endangered and threatened species parallel those defined in the FESA. The CESA defines an endangered species as ". . . a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious

danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition or disease." Endangered species are in serious danger of becoming extinct and threatened species are likely to become endangered species in the foreseeable future (according to Sections 2062 and 2067, respectively, of the California Fish and Wildlife Code). Candidate species are those under formal review by the CDFW for listing as endangered or threatened (Section 2067). Prior to being considered for protected status the CDFW designates a species as being of special concern. Species of special concern are those for which the CDFW has information indicating decline. The County of Riverside has been issued a permit from the CDFW for the Western Riverside County MSHCP, which this project falls within.

2.4.2) California Department of Fish and Wildlife Code, Section 1600

This section allows the CDFW to issue agreements ("Streambed Alteration Agreement") for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. A detailed discussion of Section 1600 under the Fish and Wildlife Code can be found in section 2.3.3 above.

2.5) California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires identification of environmental effects from discretionary projects. Significant effects are to be mitigated by avoidance, minimization, rectification, or compensation whenever possible.

Effects to all state and federal listed species are considered significant under CEQA. In addition to formally listed species, CEQA Section 15380(d) considers effects to species that are demonstrably endangered or rare as important or significant. These definitions can include state designated species of special concern, federal candidate and proposed species, CNDDB tracked species, and California Native Plant Society 1B and 2 plants.

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

2.6) California Natural Diversity Database

The California Natural Diversity Database (CNDDB) is a database that ranks overall condition of sensitive species and vegetation communities on global (throughout its range) and state (within California) levels. Additionally, subspecies and varieties are assigned a ranking for global condition as well. Ranking is numerical ranging from 1 to 5, with 1 indicating very few remaining individuals or little remaining habitat and 5 indicating a demonstrably secure to ineradicable

population condition. State ranks may also include a threat assessment ranging from 1 (very threatened) to 3 (no current threats known).

2.7) California Native Plant Society

The California Native Plant Society (CNPS) has cataloged California's rare and endangered plants into lists according to population distributions and viability. These lists are numbered and indicate the following: (1A) presumed extinct in California; (1B) rare, threatened, or endangered throughout their range; (2) rare, threatened, or endangered in California, but more common in other states; (3) more information is needed to establish rarity; and (4) plants of limited distribution in California (i.e., naturally rare in the wild) but whose populations do not appear to be susceptible to threat.

2.8) NatureServe

NatureServe Explorer provides conservation status, taxonomy, distribution and life history information for plants, animals and ecological communities and systems in North America. NatureServe uses a suite of factors to assess the conservation status of species and ecosystems. Rankings provide an estimate of extinction risk or, for communities, risk of elimination. NatureServe status ranks and the documentation that support them, are often used by Federal agencies in making official determinations, particularly in the identification of candidates for legal protections, although they do not always coincide. Conservation status ranks are based on a one to five scale, ranging from critically imperiled (G1) to demonstrably secure (G5). Status is assessed and documented at three distinct geographic scales-global (G), national (N) and state/province (S).

2.9) Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

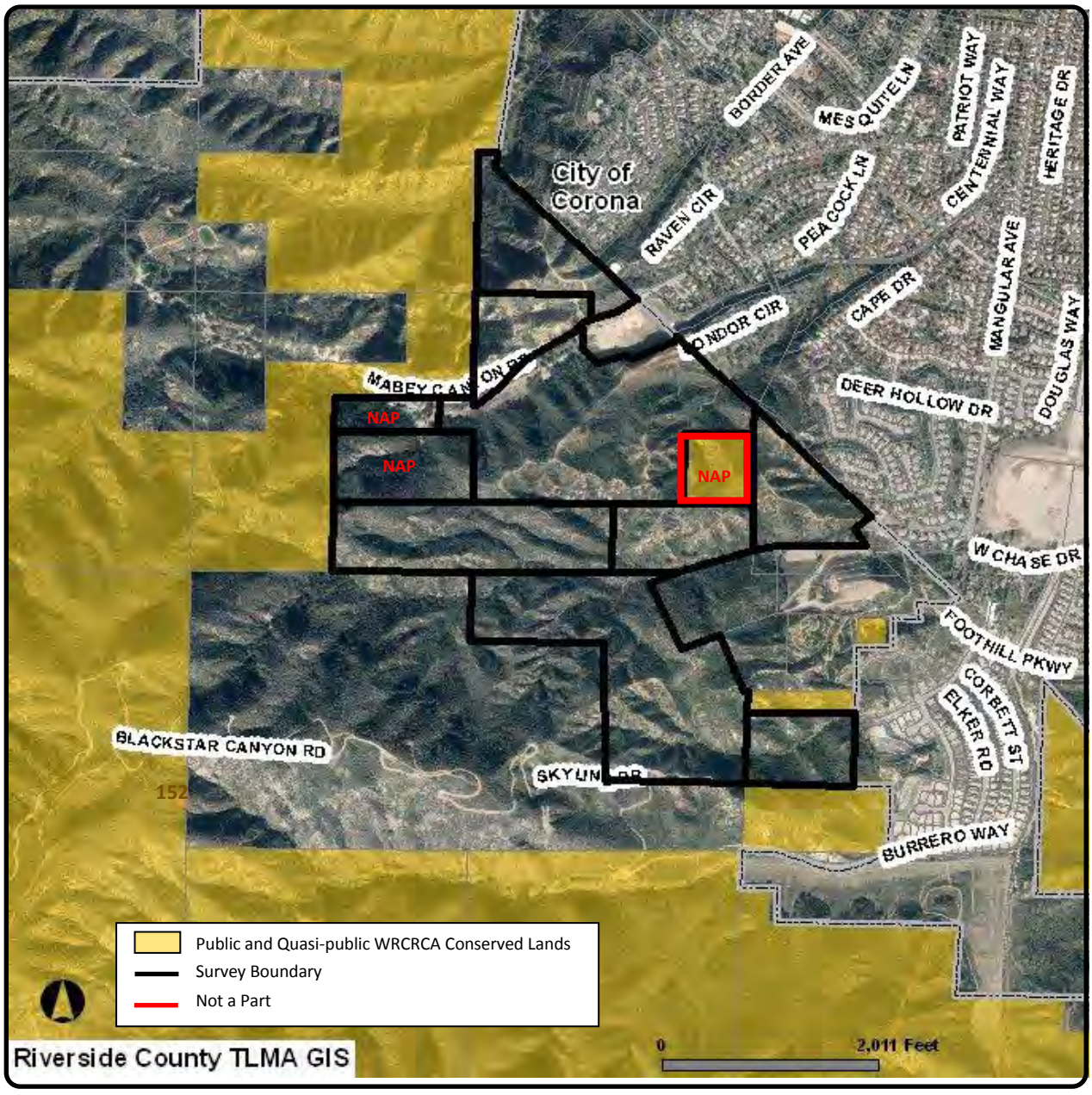
Riverside County has reached the end of a comprehensive planning effort called the Riverside County Integrated Project (RCIP). RCIP integrates three regional planning efforts: 1) County General Plan, 2) Community and Environmental Transportation Acceptability Process to determine present and future road-way infrastructure, and 3) Multiple Species Habitat Conservation Plan (MSHCP) to conserve listed and sensitive species and their habitats. The final MSHCP was approved by the County Board of Supervisors on June 17, 2003.

The MSHCP is a comprehensive, multi-jurisdictional effort that includes portions of Western Riverside County and fourteen cities. Rather than deal with endangered species on a one-by-one basis, the MSHCP plans for the conservation of 146 species. The MSHCP proposes a reserve system of approximately 500,000 acres of which approximately 347,000 acres are currently within public ownership and 153,000 acres are currently in private ownership. The approved MSHCP is intended to contribute to the economic viability of the region by providing

landowners, developers and those who build public infrastructure with regulatory certainty, a streamlined regulatory process and identified project mitigation.

The MSHCP has been adopted by the County, the Implementation Agreement signed, and federal/state permits have also been issued. Since the permits are granted, no further surveys for 75% of the 146 species covered by the MSHCP will be required. Habitat assessments and/or surveys may be undertaken within suitable habitat areas within specific areas, depending on Cell Group Criteria.

The project site is in Temescal Canyon Area Plan. The survey area is adjacent to the east of Core B (Cleveland National Forest) and surrounds a single 10 acre parcel identified in the MSHCP as Public/Quasi-Public Lands (PQP) (Figure 4). Habitat assessment for burrowing owl is required.



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Figure 4

PQP/WRCRCA Conserved Lands Map
(Riverside County TLMA GIS, 2/10/2015)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Section 6.1.2

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

- **Riparian/Riverine Areas** are lands that have flow for all or a portion of the year and which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.

- **Vernal pools** are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses, to which it has been subjected, and weather and hydrologic records.

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

2.10) City of Corona General Plan

Chapter 5 of the City of Corona General Plan addresses Environmental Resources within the City of Corona Corporate Boundaries, and provides direction regarding the conservation and development of natural resources. Considered in this report are those sections on Hydrological and Biological Resources, including habitats, drainages and species. Where State, Federal or MSHCP exceed the Corona General Plan requirements we considered them in those sections above because many of these goals are considered routinely in project design based on constraints from the State of California, ACOE and CDFW permit processing and the Riverside County MSHCP. For example: Goal 10.1.2, to "…minimize adverse impacts on water resources through the use of Best Management Practices," is also a goal of the CDFW and the MSHCP and is considered in the DBESP and the Jurisdictional Mitigation Plan.

However, two goals:

- Goal 10.10.5 - "Conserve the oak tree resources in the City and SOI areas," and
- Goal 10.9.1 - "Where riparian corridors are retained, they shall be protected by an adequate buffer with a minimum 100 foot protection zone from the edge of the tree, shrub, or herb canopy."

are not otherwise addressed in these processes specifically and are assessed in this report.

3.0) METHODOLOGY

3.1) Literature Review

Preliminary investigations included review of information obtained from the USFWS, and CDFW; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. A list of special status species was compiled, including all species in the project area that were:

- Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
- Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
- Included in one of the CDFW publications on species of special concern;
- "Fully protected" by the State of California;
- Included in the CNPS compilation ; or
- Identified as plants meeting the definition of rare or endangered under CEQA.
- Listed as U.S. Forest Service sensitive species

The information provided by these agencies included both regional and site-specific data on sensitive species. These species are detailed in Tables 11and 12.

In addition, current 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 the resource agencies (CDFG2000, 2006, 2013; USFWS 1999), California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (Skinner and Pavlik, 1994), and California Natural Diversity Data Base [NDDB] (CDFW, 2013) reports for the USGS Alberhill, Black Star Canyon, Corona North, Corona South, El Toro, Lake Mathews, Prado Dam, Riverside West and Santiago Peak 7.5' minute topographic quadrangles. A search was made of the California Native Plant Society Electronic Database (CNPS 2013) to determine those plant species considered sensitive and known to occur within an approximately 10-mile radius of the subject property. Special status species information from standard reference works, field guides, existing literature, and unpublished reports were also included as part of the background research.

In addition to the efforts described above, standard reference works, field guides, existing literature, and unpublished reports were reviewed as part of the background research on general biological issues.

The MSHCP requires that a habitat assessment be conducted to address potential impacts to habitat for the burrowing owl and riparian species. If potential habitat for the burrowing owl and/or selected riparian species is present, focused surveys are required. More specifically, the MSHCP Implementation Structure specifies protection of species associated with Riparian/Riverine areas. A function and values assessment of a project site's jurisdictional features is part of the implementation structure (RCIP 2003). Assessment must consider species composition, topography/hydrology, and soil analysis. Analysis of the downstream functions and values related to conservation of covered species within criteria cells that may be affected by the project is also required.

For the production of this Biological Resources Assessment, L&L reviewed and utilized direct text from GEC's biological reports including:

- Determination of Biologically Equivalent or Superior Preservation APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Burrowing Owl APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Rare Plant Surveys for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Coastal California Gnatcatcher APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Least Bell's Vireo APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Jurisdictional Delineation for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.

3.2) General Biological Field Methods

Baseline biological studies of the proposed project were conducted in 2005, 2006, 2008 and again in April 2013 by GEC. GEC collected data using Personal Computers (PCs) and

Geographic Positioning System (GPS). Data layers uploaded onto these PCs included recent aerial photography, and topographic contours. Biological data was mapped onto the aerial photograph layers as polygon, line, and point attributes.

Field work was conducted using checklists of biological information developed via record searches and updated and revised following field work visits, as they progressed. Collected data points were labeled. Updated lists were used in subsequent field visits to ensure consistency, and keep a running electronic account of all species encountered during the surveys. Finally, these checklists allowed for the inclusion of supplemental field notes, most notably, ranking of the quality of the various habitats including dominant and associate species for each vegetation polygon; assessing habitats for the potential presence of sensitive species not observed during the surveys; and identifying areas that would require protocol-level sensitive species surveys (i.e., USFWS protocol-level surveys for federal threatened and endangered species).

3.2.1) Vegetation

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

GEC mapped the vegetation at the alliance level according to CNPS-CDFW mapping protocols described in CNPS's *Manual of California Vegetation* (Sawyer, Keeler-Wolf and Evens, 2009), CNDDB Natural Communities alliance level vegetation information (CDFW, 2010) and CNPS's Vegetation Alliances of Western Riverside County, California (Klein and Evens, 2006).

Mapping of upland vegetation alliances was performed with the aid of ArcGIS programs. A preliminary vegetation map was drawn onscreen at a scale of 1:2,000 to 1:5,000 using color aerial photographs (Google), and used as a base layer. The polygons of this preliminary map differentiate the distinct land cover signatures related to patterns observed on the aerial. These polygons were attributed with different vegetation alliances after checking all available vegetation data gathered onsite by GEC. Field data (from GEC) and the vegetation community map created by GEC were also consulted in order to discern the boundaries of vegetation alliances that were not easily detected with the color aerial photo. This preliminary vegetation map was then checked onsite for accuracy, and subsequently modified into the final vegetation alliance map.

During our review L&L recalculated the GEC habitat mapping to verify information using archview, aerial photos and field visits on portions of the project, where needed.

Riparian/Riverine Habitat

GEC mapping of streambed vegetation alliances was performed much in the same manner as they mapped upland communities. Data points were collected onsite during streambed survey transects and office mapping conducted using the data points, creating polygons of vegetation alliances, which were later re-verified or ground-truthed for accuracy. A point shapefile was created that described the vegetation associated with individual wetland delineation plots. Any vegetation alliances that were greater than one-tenth acre in size were exhibited as polygons. Habitats less than 0.1 acre were not mapped.

L&L reviewed the jurisdictional mapping by GEC and considered agency comments regarding the results and conclusions by GEC. Following this L&L conducted a supplemental jurisdictional delineation evaluation and determination of Riparian/Riverine habitats.

In general, L&L considered channels, either unvegetated or vegetated with upland species, to be state streambeds and MSHCP riverine habitat. While wetlands or facultative wet species were considered to be MSHCP riparian and State Wetlands. For calculation purposes L&L considered the outside limits, including the dripline in our calculations. L&L describes jurisdiction in terms of streambed (unvegetated or upland vegetated) and wetland (lowland or facultative) to aide in the development of a functions and values assessment.

The term riparian is loosely applied to woody water dependent vegetation and is a descriptive term recognized by some local agencies. While the CDFW has moved away from the use of these terms in some regions, to the extent that this document will be used to assess compliance with the Western Riverside MSHCP we also used the terms riverine and riparian.

3.2.2 Wildlife Survey and Habitat Assessment

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. An inventory of all species observed during the course of the surveys is included in Tables 9and 10, Appendix A.

Habitats for specific species of wildlife and plants identified during surveys were classified as: not expected, low, moderate, high, or expected. These classifications were based on the quality of the habitat for each species and the proximity of the habitat to a known occurrence of a species obtained from CNDDB data. The definitions of each of the classifications are as follows:

- Not Expected: Species not previously reported in the vicinity of the site, and suitable habitat very marginal due to disturbances, fragmentation, and/or isolation.
- Low: Species previously reported from the vicinity of the site, but suitable habitat is marginal due to disturbances, fragmentation, and/or isolation.
- Moderate: Species previously reported from the vicinity of the site, and large areas of contiguous high-quality habitat present; or species previously reported in the vicinity of the site, but suitable habitat quality is moderate due to disturbances, fragmentation, and/or isolation.
- High: Species previously reported from regional vicinity of the site, and large areas of contiguous high-quality habitat are present.
- Expected: Species previously reported from very close vicinity of the site, and large areas of contiguous high-quality habitat are present.

Based on the results of the habitat assessments and evaluation of special status species, some focused surveys were determined to be appropriate for the project area and adjacent lands (where warranted by protocol). While impacts to the annexation properties were not calculated and focused surveys not required, those focused surveys where protocol requires a buffer zone overlapped portions of the annexation area (i.e. burrowing owl surveys).

3.3) Focused Botanical Field Methods

Information on special status rare plant species within the project vicinity was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2013), CNDDB (CDFW,2013), CalFlora (CalFlora 2013) and the U.S. Forest Service, Cleveland National Forest, Santa Ana Mountain Area (CDFW, 2015 and USFS, 1999). Table 11documents all special status botanical species that may occur in the vicinity of the project area. Table 12separately documents all U.S. Forest Service, Cleveland National Forest special status botanical species that may occur in the Santa Ana Mountain area. Maps depicting all known sensitive plant species locations within the project vicinity were produced to aid in determining the target species for survey.

GEC conducted a habitat assessment for the species in Table 11and Table 12. The habitat assessment followed the recommendations of the California Native Plant Society (CNPS, 2001). The habitat assessment was performed to determine the survey area's suitability to support sensitive species. Key indicators included the presence of suitable habitat, moisture and soil conditions.

A complete floristic study of the survey area, as required in a complete CEQA analysis, was conducted between March and July 2013 (Table 1). Focused plant surveys were conducted when most of the plants were blooming in the area. GEC made repeated trips to the project site to determine the bloom time for the microhabitat in the area, prior to beginning focused surveys.

The plant surveys followed protocols recommended in the USFWS, CDFW (CDFG, 2009), and CNPS guidelines for rare plant surveys and the standards set forth in the Western Riverside MSHCP. All plants encountered were identified to a level necessary to ensure detection of covered or special status species.

This methodology is consistent with recommendations by the California Native Plant Society (CNPS, 2001) because it provides more than a "reasonable coverage" of all habitat types and was "floristic in nature." Systematic field techniques in all habitats of the site (transects) were employed to ensure thorough coverage of potential impact areas that is sufficient to provide comprehensive reporting. All plant species seen were recorded in field notes.

The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was assessed. Sensitive species that were not observed due to unusual climate patterns, but potentially could occur within the project area, were also documented. A floral inventory of all botanical species observed during the course of the surveys is included in Table 9, Appendix A.

Table 1. Survey Information

Date	Air Temp (F)	Wind (mph)	Cloud Cover	Precipitation	Species Survey*	Time-Duration**
March 1, 2013	45-57	2-7	10%	None	BOT	6 AM- 4 PM/10 hours
March 7, 2013	46-58	0-4	70%	Sprinkle	BOT	6 AM- 4 PM/10 hours
March 8, 2013	41-48	1-6	80%	Light rain	BOT	6 AM- 4 PM/10 hours
March 15, 2013	45-86	0-3	Clear	None	BOT	6 AM- 4 PM/10 hours
March 17, 2013	43-73	0-3	Clear-fog	None	BOT	6 AM- 4 PM/10 hours
March 22, 2013	46-73	0-6	Clear-fog	None	BOT	6 AM- 4 PM/10 hours
March 23, 2013	37-77	0-2	Clear-fog	None	BOT	6 AM- 4 PM/10 hours
March 25, 2013	40-81	0-2	Clear-fog	None	BOT	6 AM- 4 PM/10 hours
April 6, 2013	51-72	0-6	Clear	None	BOT	6 AM- 4 PM/10 hours
April 7, 2013	45-73	0-4	Clear-fog	None	BOT	6 AM- 4 PM/10 hours
April 12, 2013	48-79	0-4	20%	None	BOT	6 AM- 4 PM/10 hours
April 14, 2013	50-61	0-8	Clear	None	BOT	6 AM- 4 PM/10 hours
April 20, 2013	43-89	0-10	Clear	None	BOT	6 AM- 4 PM/10 hours
April 21, 2013	62-78	0-5	Clear	None	BOT, LBV, HA for CAGN & BUOW	5:30 AM-4 PM/10.5 hours
April 28, 2013	48-88	0-5	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
April 29, 2013	48-86	0-4	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
May 4, 2013	46-84	2-8	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
May 5, 2013	53-66	4-9	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
May 10, 2013	53-84	2-8	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
May 12, 2013	56-78	0-4	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
May 17, 2013	56-75	3-7	20%	None	BOT	5:30 AM-4 PM/10.5 hours
May 19, 2013	64-73	0-4	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
May 24, 2014	54-77	1-6	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
May 26, 2013	51-75	0-5	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
May 27, 2013	50-80	4-9	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
June 2, 2013	52-72	0-5	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
June 3, 2013	50-70	0-5	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
June 7, 2013	53-86	1-5	30%	None	BOT	5:30 AM-4 PM/10.5 hours
June 9, 2013	55-85	0-5	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
June 14, 2013	51-87	3-8	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
June 16, 2013	59-85	0-4	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
June 21, 2013	55-87	2-6	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
June 23, 2013	59-80	0-4	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
June 28, 2013	65-100	1-5	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
June 30, 2013	67-88	0-5	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
July 3, 2013	67-97	2-6	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
July 5, 2013	61-85	0-5	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
July 11, 2013	69-83	1-7	70%	Sprinkle	BOT	5:30 AM-4 PM/10.5 hours
July 13, 2013	59-89	0-5	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours
July 16, 2013	59-93	2-6	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
July 20, 2013	64-86	0-1	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
July 25, 2013	63-94	2-9	Clear	None	BOT	5:30 AM-4 PM/10.5 hours
July 26, 2013	64-89	0-1	Clear	None	BOT, BUOW, CAGN	5:30 AM-4 PM/10.5 hours
July 28, 2013	73-78	0-1	Clear	None	BOT, BUOW, CAGN, LBV	5:30 AM-4 PM/10.5 hours

*BOT (botanical), BUOW (burrowing owl), CAGN (coastal California gnatcatcher), LBV (least Bell's vireo)

**On dates of multiple surveys, survey times listed include the full survey day encompassing all surveys. For each specific species actual survey times were based on protocol, i.e. CAGN surveys occurred between 6:00am and 12:00pm. See focused survey reports for species specific survey times.

3.4) Focused Burrowing Owl Field Methods

Burrowing owl habitat surveys were conducted on April 21, 2013. The habitat assessment and focused surveys followed the BURROWING OWL SURVEY INSTRUCTIONS for the Western Riverside Multiple Species Habitat Conservation Plan Area, dated March 29, 2006 (County of Riverside, 2006) per Section 6.3.2. of the MSHCP. These survey instructions are similar to and generally follow the California Burrowing Owl Consortium Burrowing Owl Survey Protocol and Mitigation Guidelines which were also reviewed before conducting surveys.

The habitat assessment was performed to determine the survey area's suitability to support burrowing owl. Key indicators of suitability included the presence of low-growing vegetation within grassland, desert, and scrublands, small fossorial mammals and their associated burrows and isolated features such as cement or wood debris piles, and/or cement culverts. All of these indicators were observed in the survey area. As a result, Focused Burrowing Owl Burrow Survey was determined to be warranted.

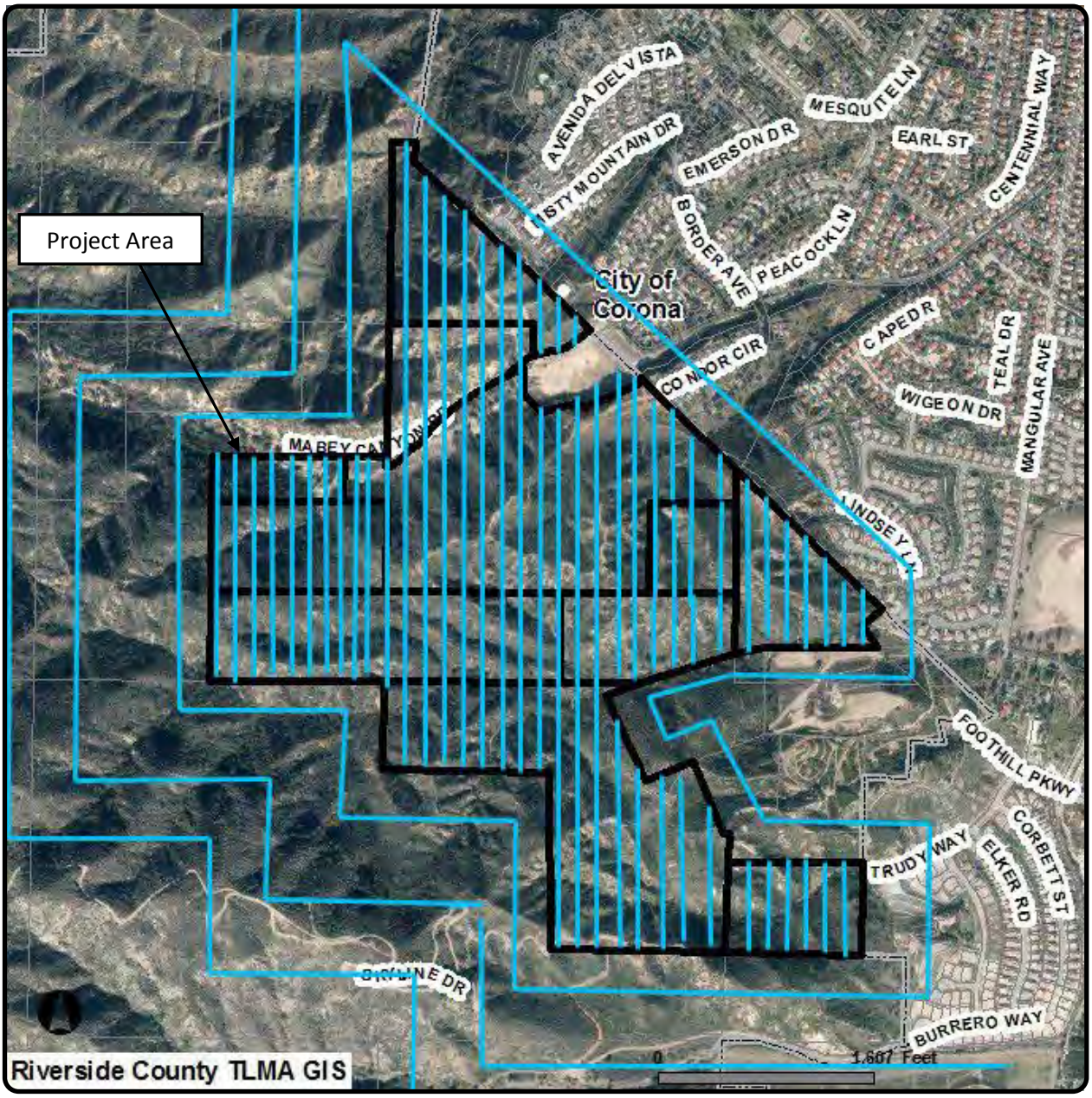
Immediately after the habitat assessment, a burrow survey was conducted on the survey area and buffer zone to determine if any of the debris piles contained evidence of burrowing owl. Surveys were conducted by Teresa Gonzales and Paul Gonzales (Table 1). Surveys consisted of slowly walking the Site and the 150-meter buffer zone that was previously delineated for the habitat assessment (Figure 5). All existing fossorial mammal burrows were thoroughly examined for evidence of burrowing owl, including molting feathers, prey remains, cast pellets, eggshell fragments, and excrement.

3.5) Focused Least Bell's Vireo Field Methods

Least Bell's vireo (LBV) prefer nesting habitat of dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak, in arid regions but often near water (AOU 1998); moist woodland, bottomlands, woodland edge, scattered cover and hedgerows in cultivated areas; willow-dominated riparian woodlands (Biosystems Analysis 1989); and, open woodland, brush in winter. Their nest(s) are found in shrub or low trees, usually averaging about 1 m above ground, usually in horizontal or downsloping twig fork, typically near the edge of a thicket. Nesting vegetation in California (often willow or rosa) averages 3-5 m in height. LBV usually returns to the same nesting territory in successive years (Franzreb 1989).

The survey area exhibited suitable habitat for the LBV. GEC biologist Teresa Gonzales performed the surveys, which were carried out according to USFWS protocol (USFWS 2001). Ms. Gonzales has a permit (TE-060175-3, expires 15 March 2015) authorized by the USFWS to perform such surveys for the least Bell's vireo.

Surveys included all habitats within the survey area potentially supporting riparian birds that



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Figure 5

GEC 2013 Transect Map
(Photo obtained from The National Map, May 2012)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

may be directly or indirectly affected by the impacts of the Project. A minimum width of a ¼ mile distance from the survey area was surveyed. Methods for the surveys consisted of walking through habitat that is considered appropriate for this species, i.e., riparian. Simultaneously with walking the habitat, the biologist doing the survey watches and listens for wildlife, observing any indirect signs of species presence. Binoculars (8.5 x 44) were used to assist in the detection and identification of any sighted wildlife. Information on habitat characteristics, locality and weather conditions were recorded onto field forms and mapped.

The small amount of appropriate habitat allowed for it to be surveyed completely during each of the survey visits. Weather conditions during surveys were generally conducive to a high level of bird activity. If weather conditions were not conducive to bird activity surveys were cancelled or not conducted.

3.6) Jurisdictional Delineation Methods

GEC developed their delineation of the property beginning with a site visit in April 2013. They used a modified "Routine Onsite Determination Method" data form to record their findings.

GEC recorded descriptive physical and biological attributes using their own field experience, references, assistance from others, and reconnaissance trips information resources and then compiled the information into a jurisdictional determination. They also took representative photographs of the features. The GEC approach was utilized on this project, with determination based on the three parameters of dominant plant species, soil characteristics, and hydrologic characteristics of the area.

Data sources used:

a. USGS quadrangle maps
b. County Soil Surveys
c. Aerial photos
d. State list of hydric soils
e. National Wetlands Inventory List of Plant Species that Occur in Wetlands (1988)
f. Munsell Soil Charts

The following steps were performed:

1. Project area was identified and mapped on USGS quadrangle map.
2. Vegetation for the project area was summarized and identified utilizing transects and observation points.
3. Area soils were characterized and identified.
4. Hydrology data was gathered utilizing field hydrologic indicators and available data.

GEC considered a wetland, an area exhibiting at least minimal hydric characteristics within

these three parameters. GEC based non-wetland waters of the U.S. on the limits of the OHWM as determined by erosion, the deposition of vegetation or debris, and changes in the vegetation. They considered RWQCB jurisdiction to share ACOE jurisdiction, unless isolated conditions are present. In the presence of isolated conditions, RWQCB takes jurisdiction from the OHWM and/or the 3—parameter wetland methodology utilized by the ACOE. CDFW takes jurisdiction defined to the top of the bank of the stream/channel or to the extreme limits of the adjacent riparian vegetation (drip line).

L&L utilized the same criteria, as outlined in the arid west manual and field forms to assess federal wetlands / jurisdiction. L&L reviewed the jurisdictional mapping by GEC and considered agency comments regarding the results and conclusions by GEC. Following this L&L imported and delineated riverine habitat based on topography supplied by the engineer, aerial photos, and field verification, where necessary. L&L visited each potential feature and clarified applicable jurisdiction. Where the numbers differed from the information provided by GEC, L&L numbers were used.

Vegetation

Regional lists of hydrophytic vegetation (indicator species) for wetland habitats are available from the USFWS. Vegetation cover is estimated and ranked relative to their dominance or abundance. Plant species cumulatively contributing >50% of the total dominant coverage, plus those species that comprise >20% dominance are recorded on a wetland data sheet (see Jurisdictional Delineation, Appendix A, Wetland data Forms). Wetland indicator status is assigned to each species using the List of Plant Species that Occur in Wetlands (Reed, 1988). If >50% of the dominant species from all strata were considered Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation was considered to have been met. The following indicator plant status categories were used:

- Obligate Wetland (OBL): Plants that occur almost always (estimated >99%) in wetlands under natural conditions, but which may also occur rarely (estimated <1% in non-wetlands (i.e., cat—tails or pickleweed).
- Facultative Wetland (FACW): Plants that occur usually (estimated 67-99%) in wetlands, but also occur (estimated 1-33%) in none—wetlands (i.e., mulefat or willow).
- Facultative (FAC): Plants with similar likelihood (estimated 33-67%) of occurring in both wetlands and none—wetlands.
- Facultative Upland (FACU): Plants that occur sometimes (estimated 1-32%) in wetlands, but occur more often (estimated 67-99%) in non-wetlands.
- Obligate Upland (UPL): Plants that occur rarely (estimated <1%) in wetlands, but occur almost always (estimated >99%) in none—wetlands under natural conditions.

Hydrology

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. In addition, indicators of wetlands or Riverine hydrology are recorded including the OHWM, drift lines, rack, debris, and sediment deposits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sandbars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

Wetland or hydric soils are defined on the basis of the soil's physical characteristics resulting from oxygen availability in response to increasing or decreasing soil saturation. These characteristics are observed from a transect of soil pits. Soil pits are dug 16 -24 inches along a transect within a drainage adjacent to vegetation. At each soil pit, soil texture and color are recorded in comparison with a Munsell Soil Chart (1994). The soil chart aids in designating the three color values of hue, value, and chroma. Additional indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low—chroma soils, or sulfuric odor are also recorded. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding, long enough during the growing season to develop anaerobic conditions in the upper 16 inches. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 16 inches of the soil profile.

Conditions Assessed from the Literature

Prior to onsite fieldwork, USGS topographic maps [Corona South 7.5' USGS topographic Quadrangle], National Resource Conservation Service Soil Survey for the Western Riverside Area of California (NRCS, 1971) and Hydric Soils List for California (SCS, 1985), Riverside County GIS Land Information System, the local precipitation data, hydrological information and relevant literature (complete listing is found under References for this report) were reviewed.

USGS 7.5' Topographic Quadrangle- Corona South: The 270—acre survey area is to the southwest of the City of Corona, Riverside County. The survey area is at an elevation between 1,160 and 1,420 above mean sea level (MSL).

Recent Aerial Photography: Aerial photography is from Google 2013 and Riverside County GIS Land Information System 2013.

Soil Survey: The Soils consist of Cieneba sandy loam, Soboba gravelly loamy sand, Yorba gravelly sandy loam and Yorba cobbly sandy loam (NRCS, 1971). The survey area is composed of Friant-Cieneba-Exchequer association.

Hydric Soils List for California: The National Resource Conservation Service Hydric Soils List for California (2013) was consulted to determine if onsite soils are considered hydric. The soils in the survey area are not hydric.

4.0) RESULTS

4.1) Soils and Topography

Soils data for the survey area were obtained from the U.S. Department of Agriculture, Natural Resource Conservation Service, and Soil Survey Geographic (SSURGO) Database. The survey area is a mixture of Cieneba sandy loam (30-75% slopes, eroded), Soboba gravelly loamy sand (0-5% slopes), Yorba gravelly sandy loam (9-15% slopes) and Yorba cobbly sandy loam (30-50% slopes) (Figure 6). The overwhelming majority of the survey area is characterized as Cieneba sandy loam.

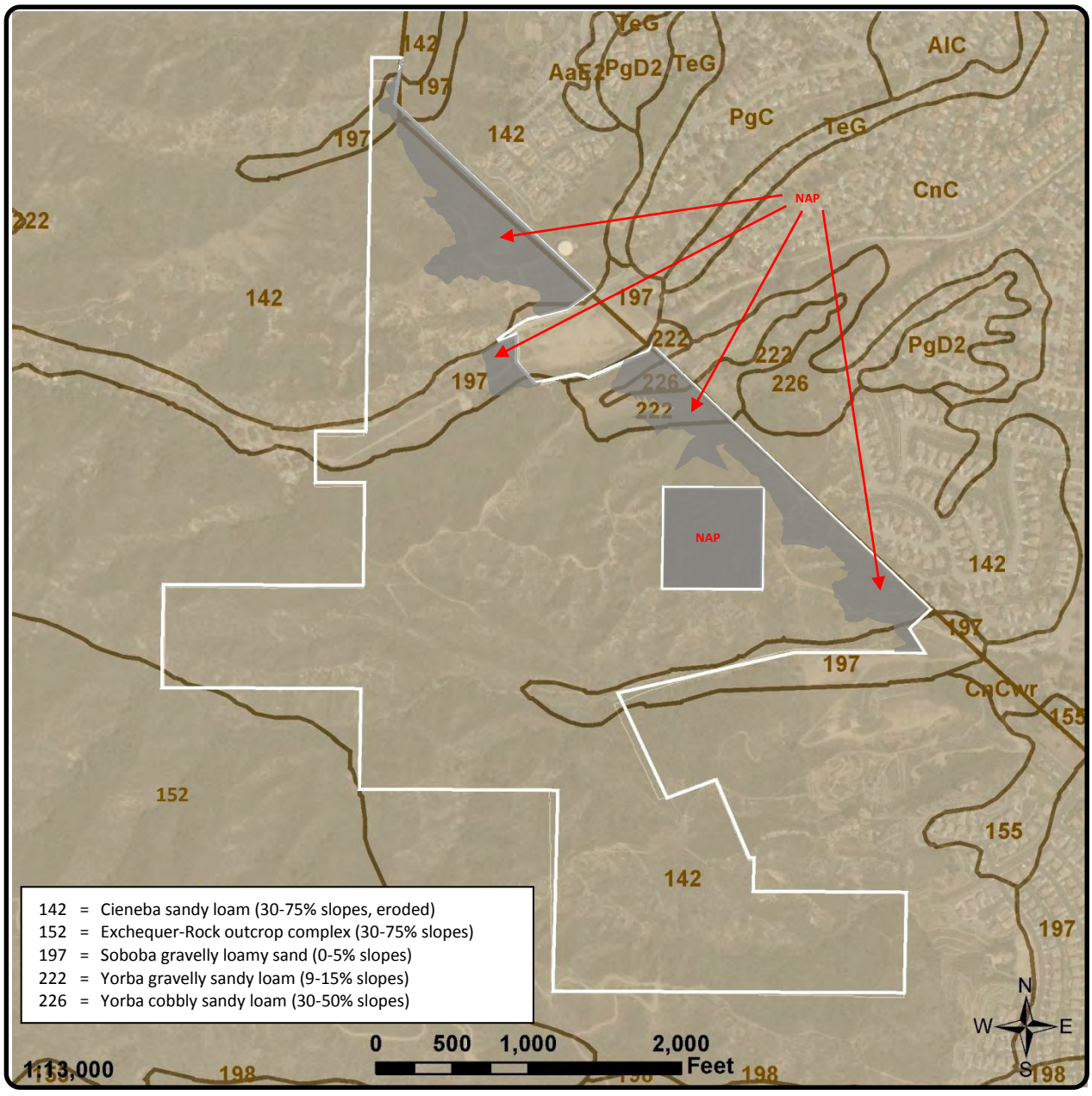
The soils found are similar in texture and color to those mapped. The soils were compacted and unstratified over the majority of the survey area. The soils at soil pit locations did not meet the National Technical Committee for Hydric Soils criteria for hydric soils within project boundaries.

Located at the base of the Santa Ana Mountains, the survey area consists of relatively gentle to moderately sloping terrain that drops downward to the north and east, depending on the location in the landscape. The areas that are hilly to steep are generally rocky. The survey area has rolling hills and valleys traversed by various small tributaries to Wardlow Wash, Mabey Wash, an unnamed blue-line stream and existing residential storm drain systems. The very northern tip of the survey area intersects with Wardlow Wash (blue-line stream). Most of the northern portion of the survey area drains towards Mabey Canyon Wash (blue-line stream). Portions of Mabey Canyon Wash were confined by a previous land owner. Near the eastern survey border, the Wash enters into a large flood control basin. In the middle of the survey area, the unnamed blue-line stream (D-1) traverses from west to east. D-1 becomes a trapezoidal channel near Mangular Avenue and Chase Drive. It flows into Oak Hills flood control basin, which is outside of the survey limits.

The survey area has a combined vertical relief of roughly 260 feet, with elevations ranging from approximately 955 feet AMSL in the northernmost point of the site, within Wardlow Canyon Wash, to 1700 feet AMSL at the western most boundary, in the northwest corner of parcel 275-040-006.

4.2) Vegetation

Three general vegetation types currently exist in the immediate vicinity of the survey area; riparian, upland and unvegetated/altered. These vegetation types include several plant communities that make up the landscape of the project site (Table 2, Figure 7a). Adjacent to the urban areas, landscape species (Eucalyptus and Pepper trees) dominate. The majority of



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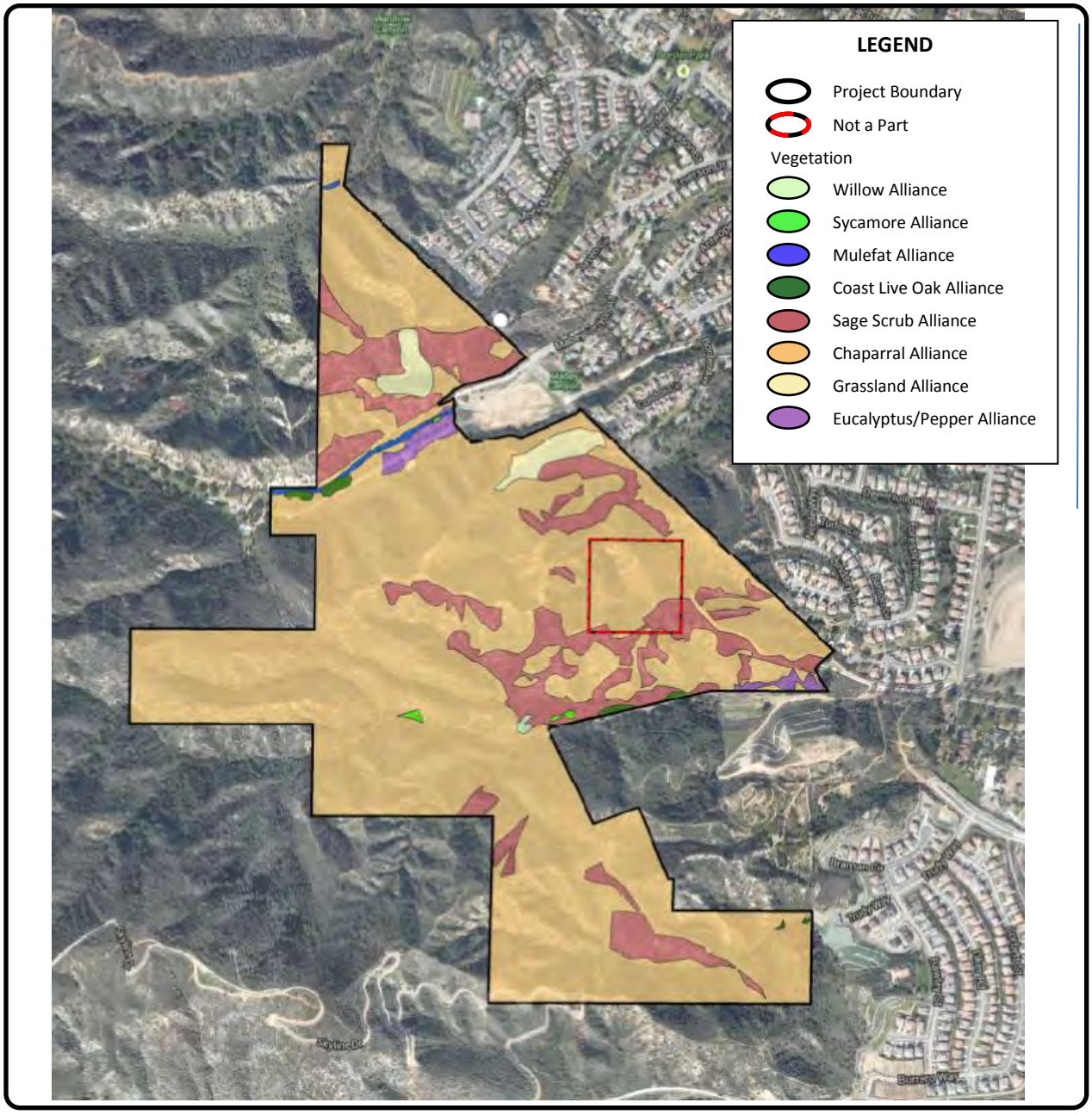
RLCC-14-458
March 2015

Figure 6

Soils Map

(Photo obtained from Google Earth, 4-23-2014, USDA Nat. Res. Cons. Serv. SSURGO Data)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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SAA-13-363
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Figure 7a

Habitat Map
(Photo obtained from Google, 2013; Map from GEC, 2014)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

the survey area is undisturbed and habitat consists of dense chaparral (*Rhus ovata, Adenostoma fasciculatum, Frangula californica*) on the northern slopes and sage scrub (*Artemisia californica, Salvia mellifera, Salvia leucophylla*) on the dry south facing slopes. Scattered areas of sage scrub including California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), brittlebush (*Encelia farinosa*) and white sage (*Salvia apiana*) occur on the slopes and in the washes. Grasslands composed primarily of non-native species bromes (*Bromus* spp.), short-podded mustard (*Hirschfeldia incana*), filaree (*Erodium* spp.), Russian thistle (*Salsola tragus*), doveweed (*Croton setigerus*), and deerweed (*Acmispon glaber*) occur throughout the survey area, with two concentrations northwest and south of the offsite flood control basin at the eastern end of Mabey Canyon Wash.

Riparian habitats including coast live oak woodland (*Quercus agrifolia*), California sycamore woodland (*Platanus racemosa*), arroyo willow thickets (*Salix lasiolepsis)* and mulefat thickets (*Baccharis salicifolia*), are located in and adjacent to the drainage features in the survey area.

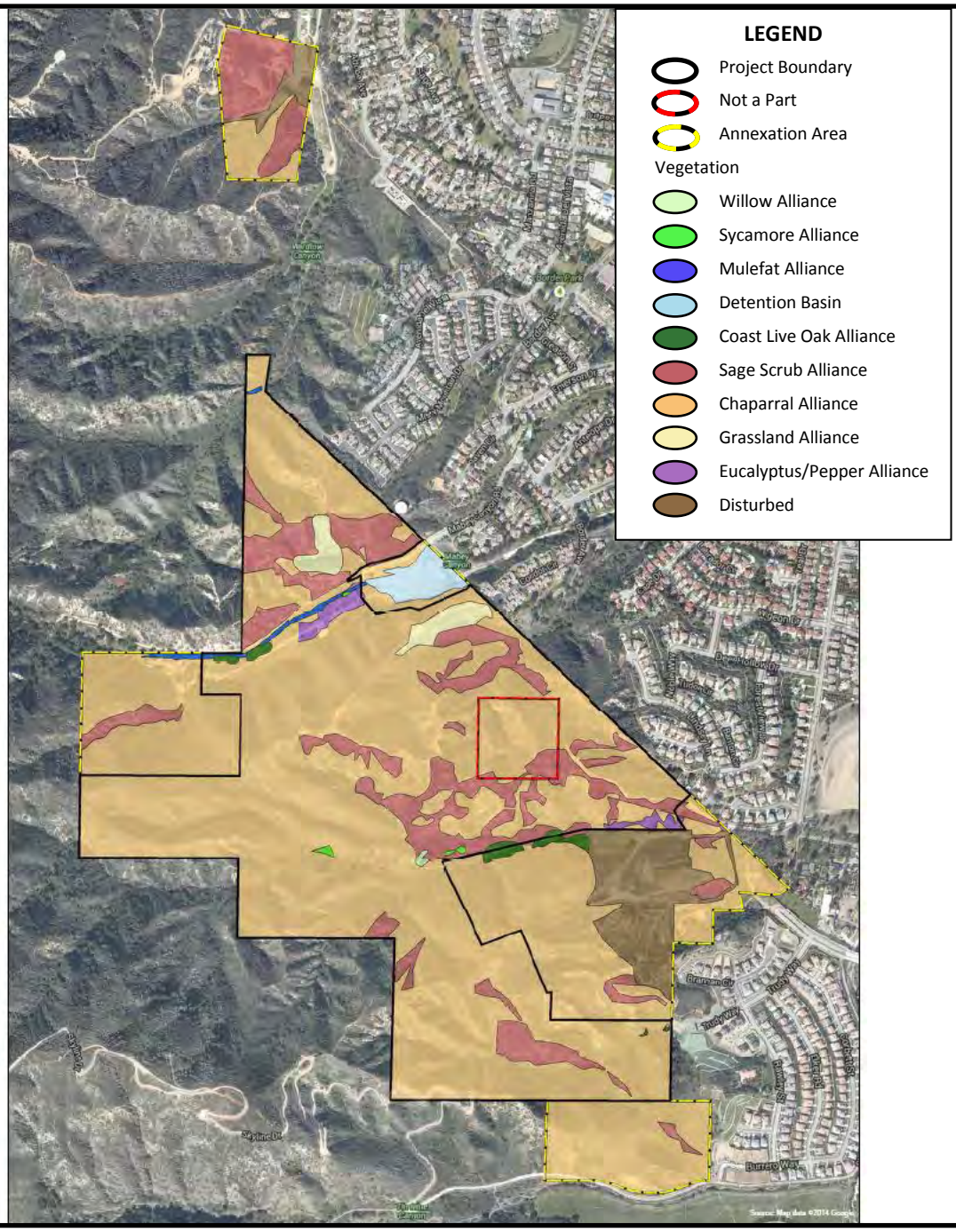
The survey area has been minimally impacted by off-road vehicles, bicycles and hikers. Dirt roads and trails crisscross the project area, providing access for illegal trash disposal and off-road usage.

Table 2. Habitat in the Survey Area

Habitat	In the Survey Area (acres)
Chaparral Alliance	218.05
Coast Live Oak Alliance	1.17
Disturbed	0
Eucalyptus/Pepper Alliance	2.82
Grassland Alliance	5.54
Mulefat Alliance	1.14
Sage Scrub Alliance	41.59
Sycamore Alliance	0.37
Willow Alliance	0.21
TOTAL	**270.89**

Annexation Area

Annexation properties contain a similar mix of habitats to those of the survey area (Table 3, Figure 7b). Noted during preliminary surveys were disturbed (graded, landscaped, and developed), chaparral, coast live oak, eucalyptus/pepper, mulefat and sage scrub alliances.



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Figure 7b

Habitat Map Including Annexation Area

(Photo obtained from Google, 2013; Map from GEC, 2014)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Table 3. Habitat in the Annexation Area

Habitat	Annex Areas (acres)
Chaparral Alliance	94.10
Coast Live Oak Alliance	1.27
Detention Basin	4.46
Disturbed	23.44
Eucalyptus/Pepper Alliance	0.18
Grassland Alliance	0
Mulefat Alliance	0.46
Sage Scrub Alliance	16.79
Sycamore Alliance	0
Willow Alliance	0
TOTAL	**140.7**

*Does not include Skyline Heights acreage

4.2.1) Riparian and Woodland Habitat

Woodland describes a vegetation type dominated by woody trees and tall scrub species, forming a continuous canopy over a variety of low shrubs and a variable grassy ground layer. Some woodlands may not consist of any shrub canopy, and may only form a canopy over annual or perennial grasslands. The understory of woodlands is directly related to the density of the woodland and the cover of its canopy. Typically, if a woodland is dense, then the understory species are few, and this is a result of shading by the woodland canopy. The woodland plant communities observed in the survey area are *Quercus agrifolia* Alliance (Coast Live Oak Woodland) and *Platanus racemosa* Alliance (California sycamore woodlands), which are discussed below.

Riparian areas include those transitional areas adjacent to rivers, streams, estuaries, lakes, and depressional wetlands that characteristically have a high water table and are subject to periodic flooding and influence from these adjacent water bodies. Riparian habitats are ecologically diverse and may be home to a wide range of plants, insects and amphibians that make them ideal for different species of birds. The riparian plant communities observed on the survey area are: *Baccharis salicifolia* Alliance (Mulefat Scrub), *Salix lasiolepsis* Alliance (Arroyo Willow thickets), and *Platanus racemosa* Alliance (California sycamore woodlands), which is considered both a woodland and riparian community. These habitats are discussed below. All of these communities, with the exception of *Baccharis salicifolia* Alliance, are found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These features rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees (Klein and Evens 2006).

Features containing riparian species include:

Feature 1 is a drainage (not a blue-line) that runs west to east along the southern most portion of the survey area and supports upland habitats with the exception of two small areas of coast live oak alliance near its eastern terminus at Trudy Way.

Feature 3 in the middle of the project, the unnamed blue-line stream (southernmost blue-line) traverses from west to east. This drainage supports mostly upland habits with small islands of Sycamore, willow and coast live oak alliance.

Feature 6, Mabey Canyon Wash (central blue-line), supports a similar narrow band of mulefat alliance along the entire length of the drainage. In addition to the mulefat, there is a small area of sycamore alliance on the eastern edge of the drainage before it empties into a large flood control basin and Mabey Canyon supports two areas of coast live oak alliance adjacent to the western half of the wash.

Feature 7, Wardlow Wash (northernmost blue-line), supports a narrow band of mulefat alliance.

Features 2, 4 and 5 and all of the tributaries support upland habitats.

Table 4. Habitats Also Considered Riparian

Habitat	Acreages on Project Site (acres)	Riparian
Chaparral Alliance	218.05	
Coast Live Oak Alliance	1.17	1.17
Disturbed	0	
Eucalyptus/Pepper Alliance	2.82	
Grassland Alliance	5.54	
Mulefat Alliance	1.14	1.14
Sage Scrub Alliance	41.59	
Sycamore Alliance	0.37	0.37
Willow Alliance	0.21	0.21
TOTAL	**270.89**	**2.89**

Quercus agrifolia Alliance (Coast live oak woodland) 71.060.02

Coast live oak occurs as the dominant tree in the canopy. Poison oak is the dominant shrub in the understory. *Quercus agrifolia* (Riparian) Alliance occurs in the valley between the steep hills in the survey area [D-1, D-3 and Mabey Canyon (D-6)]. *Quercus agrifolia* is growing along and contributing to the riparian corridor as an intermittent canopy with a sparse ecotonal understory of riparian and Coastal Sage Scrub plant species: poison oak (*Toxicodendron diversilobum*), California Fuchsia (*Epilobium canum*), Douglas' Nightshade (*Solanum douglasii*), and California Buckwheat (*Eriogonum fasciculatum*). This community is very limited in the survey area.

Platanus racemosa Alliance (California sycamore woodland) 61.310.00

In the survey area, this riparian community is composed primarily of sycamore (*Platanus racemosa*) and California Sagebrush (*Artemisia californica*). This plant alliance has a global and state ranking of G3S3 (Global and State Vulnerable (rare; typically having 21 to 100 occurrences, or 3,001 to 10,000 individuals). Sycamores have well developed vegetative reproduction, giving the woodland a clumped appearance (Klein and Evens 2006). This community is very limited in the survey area, existing only in three small areas in D-3 and Mabey Canyon Wash (D-6).

Salix lasiolepis Alliance (Arroyo Willow thickets) 61.201.01

In the survey area this riparian community is composed primarily of arroyo willow (*Salix lasiolepis*). This plant alliance has a global and state ranking of G4 S4 (Global and State Vulnerable (Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals). Willows have well developed vegetative reproduction, giving the islands of habitat a clumped appearance (Klein and Evens 2006). This community is very limited in the survey area, existing only in limited areas of D-3.

Baccharis salicifolia Alliance (Mulefat thickets) 63.510.00

A tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This plant alliance has a global and state ranking of G5 S4 (Global Vulnerable (Secure (common, widespread, abundant, and lacking major threats or long-term concerns) and State Vulnerable (Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals). This early serial community is maintained by frequent flooding. Found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland, especially under heavy grazing. Mulefat scrub often occurs in pure stands. Secondary species vary regionally (Klein and Evens 2006). This community is very limited in the survey area, existing only in a narrow band along Mabey Canyon Wash (D-6) and Wardlow Canyon Wash (D-7) and occurs sporadically in D-3 but was not mapped because it occurs in areas of less than 0.1.

4.2.2) Upland Habitats

Grassland Alliances

Bromus Semi-natural Stands (California Annual Grassland) 42.026.00

California Annual Grassland consists of low herbaceous vegetation that is dominated by introduced annual grasses and is often associated with several native wildflower species, as well as introduced forbs. California Annual Grassland is typically dominated by annual grasses of various genera that are primarily of Mediterranean origin, including: *Avena* spp. (wild oats), *Bromus* spp. (bromes), and *Hordeum* spp. (barleys).

Species composition varies among stands, as the associate species may consist of several native herbs (or wildflowers). These wildflowers are important contributors to the ground layer, while emergent trees and shrubs may be present. Grasslands composed primarily of non-native species bromes (*Bromus* spp.), short-podded mustard, filaree, Russian thistle, doveweed, and deerweed occur throughout the survey area. Showy annuals and perennials observed include: common fiddleneck (*Amsinckia intermedia*), small-flowered fiddleneck (*Amsinckia menziesii*), cryptantha (*Cryptantha intermedia*), and Fremont's star lily (*Toxicoscordion fremontii*). No sensitive native grassland alliances were observed in the survey area. Native grasses were sparsely intermixed with dominate non-native species. Grasslands observed on site are dominated by non-native grass species: Slender Wild Oat (*Avena barbata*), Common Wild Oats (*Avena fatua*), Ripgut Grass (*Bromus diandrus*), Soft Chess (*Bromus hordeaceus*), and Foxtail Chess (*Bromus madritensis ssp. Rubens*).

California Annual Grassland also typically includes scattered nonnative forbs. Although California Annual Grassland is predominated by introduced annual grass species, this plant community has a significant component of native herbs and may provide some functional habitat for many wildlife species. Only when annual grassland is significantly influenced by invasive species (generally a result of a significant disturbance) is the plant community classified as Ruderal Grassland.

Sage Scrub Alliances

Sage Scrub is a shrubland dominated by facultative drought-deciduous, low-growing, soft-leaved, and grayish-green (malacophyllus) shrubs and subshrubs. Sage Scrub plant series typically exhibit a patchy distribution, often in close association with areas inhabited by chaparral habitats. Due to stand variations, Sage Scrub is often considered part of a collection of species specific plant series (Sawyer, Keeler-Wolf, and Evens 2009). The four most common sage and sagebrush scrub series described for the area include: *Eriogonum fasciculatum* Alliance (California Buckwheat Scrub), *Salvia mellifera* (Black sage scrub) Alliance, *Salvia*

leucophylla (Purple sage scrub) Alliance and *Encelia californica* (California brittle bush scrub) Alliance (Klein and Evens 2006).

Sage Scrub generally occurs on rolling hills at lower elevations in the survey area and outside the scour area of D-3. It then transitions into chaparral where hills become steep. Sage Scrub intermixes with chaparral throughout the survey area. These plant communities are described in the following paragraphs.

Eriogonum fasciculatum Alliance (California Buckwheat Scrub) 32.040.00

Eriogonum fasciculatum Alliance (California Buckwheat Scrub) is dominated by *Eriogonum fasciculatum* var. *fasciculatum*, which is a perennial shrub with fasciculed tomentose (lower surface) leaves and small clustered white to pinkish flowers. *E. fasciculatum* commonly occurs on dry slopes, washes, and canyons that are scattered throughout foothills and mountains, and this shrub is likely to be seral to other plant communities. It is most often found on slopes that have been disturbed within the last ten years. *Eriogonum fasciculatum* Alliance forms a shrub canopy less than one meter tall, and forms an intermittent canopy over a variable or grassy ground layer. This scrub type prefers shallow and rocky soils at elevations between sea level and 1,200 meters (Sawyer, Keeler-Wolf, and Evens 2009). One patch of *Eriogonum fasciculatum* Alliance, along the ridge top adjacent to a dirt road is a monotypic stand of *Eriogonum fasciculatum* var. *fasciculatum*. This particular patch of *Eriogonum fasciculatum* Alliance most likely originated following construction of the fire road in the area. Some associate species to this plant community include Our Lord's Candle (*Hesperoyucca whipplei*) and Ripgut Grass.

Salvia leucophylla Alliance (Purple Sage Scrub) 32.090.00

Salvia leucophylla Alliance (Purple Sage Scrub) is dominated by Purple Sage (*Salvia leucophylla*). *Salvia leucophylla* is often an important shrub with California Sagebrush. *Salvia leucophylla* typically forms a continuous to intermittent canopy over available ground layer. *Salvia leucophylla* Alliance grows on steeper north-facing slopes in colluvial-derived, rocky soils. It is considered part of the Sage Scrub series collection, and *Salvia leucophylla* stands typically create mosaics with *Quercus agrifolia* Alliance.

Salvia leucophylla Alliance was observed as an important component of Sage Scrub within the survey area. Several associate native species contribute to the canopy of *Salvia leucophylla* Alliance onsite, including: California sagebrush, Coyote Bush (*Baccharis pilularis*), California Bush Sunflower (*Encelia californica*), California Buckwheat, Slender Wild Oat, and Black sage (*Salvia mellifera*).

Salvia apiana Alliance (White Sage Scrub) 32.030.00

Salvia apiana Alliance (White Sage Scrub) is dominated by white sage (*Salvia apiana*), which is a drought-deciduous, very aromatic shrub, with white-gray leaves and whitish flowers in a long tomentose panicle extending well above the leaves (Hickman 1993). *Salvia apiana* Alliance exists when *S. apiana* is the sole, dominant, or important shrub growing with *Artemisia californica* in the canopy. This alliance forms a continuous or intermittent canopy over a variable ground layer. *Salvia apiana* Alliance grows on dry slopes, or in rarely flooded, low gradient deposits along streams. It requires shallow soils, and occurs at elevations between sea level and 1,600 meters (Sawyer and Keeler-Wolf 1995). Important shrub canopy contributors observed in the survey area include *Artemisia californica* and Laurel Sumac (*Malosma laurina*). Other herbaceous associate species observed growing below the low shrub canopy include Slender Wild Oat, and Short-pod mustard.

Salvia mellifera Alliance (Black Sage Scrub) 32.020.00

In the *Salvia mellifera* Alliance, *Salvia mellifera* is usually the dominant shrub in the overstory. *Eriogonum fasciculatum* is consistently present, usually as a sub-dominant shrub. A variety of other coastal sage and chaparral species frequently intermix in the shrub layer as sub-dominants. Some of these species include *Artemisia californica*, *Ceanothus crassifolius*, *Adenostoma fasciculatum*, *Keckiella antirrhinoides*, and *Encelia farinose* (Klein and Evens 2006). *Salvia mellifera* Alliance was observed as an important component of Sage Scrub within the survey area. Several associate native species contribute to the canopy of *Salvia mellifera* Alliance in the survey area, including: *Artemisia californica*, California Bush Sunflower, California Buckwheat, Slender Wild Oat, and Purple sage.

Chaparral Alliances

Chaparral is a type of shrubland that is dominated by evergreen shrubs with small, thick, leathery, dark green, sclerophyllous leaves. The shrubs of chaparral are relatively tall and dense, and are adapted to periodic wildfires by stump sprouting or by germination from a dormant seed bank. These evergreen shrubs are also adapted to drought by deep extensive root systems, while their small thick leaf structure prevents permanent damage from moisture loss (Zedler et al.1997). Many typical Coastal Sage Scrub species also grow intermixed as associates with chaparral species. Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils, becoming more abundant with higher elevations where temperatures are lower and moisture supplies are more ample. The Chaparral plant community observed in the survey area is *Adenostoma fasciculatum* Alliance, or Chamise Chaparral, which is discussed below.

Adenostoma fasciculatum Alliance (Chamise Chaparral) 37.101.00

Adenostoma fasciculatum Alliance is dominated by the evergreen shrub, *Adenostoma fasciculatum* (Chamise), which is the most abundant species in the non-desert shrublands of California. This species is a burled and many-branched shrub that has gray-brown trunk bark, clustered small linear leaves, and tiny white flowers. *Adenostoma fasciculatum* Alliance forms an intermittent to continuous canopy less than three meters tall, growing over a sparse herbaceous layer, especially in older stands. *Adenostoma fasciculatum* is usually associated with all slope aspects, but is commonly found on the drier south- and west-facing slopes and ridges, growing in very shallow soils (mafic-derived). To be classified as *Adenostoma fasciculatum* Alliance, the stand must have at least 60% cover by *A. fasciculatum* (Sawyer and Keeler-Wolf 1995).

The shrub canopy associate species observed as important contributors to *Adenostoma fasciculatum* Alliance include: Thickleaf Yerba Santa (*Eriodictyon crassifolium*), California buckwheat, *Hesperoyucca whipplei*, Toyon (*Heteromeles arbutifolia*), Deerweed, Laurel Sumac and Sugarbush (*Rhus ovata*). Several understory herbs listed above for Sage Scrub are expected as associates in Chaparral plant communities in the survey area.

In addition to the *Adenostoma fasciculatum* Alliance*, Adenostoma fasciculatum-Eriogonum fasciculatum* Alliance (Chamise-Buckwheat-Chaparral) 37.101.14 is also found in the survey area.

In the *Adenostoma fasciculatum-Eriogonum fasciculatum* Association**,** both species are consistently present in an open to intermittent shrub overstory, where *Adenostoma fasciculatum* is dominant or codominant with *Eriogonum fasciculatum*. Other species (e.g., *Salvia mellifera*, *Arctostaphylos glauca*, *Encelia farinosa* and *Rhus ovata*) often intermix in the shrub layer at low cover (Klein and Evens 2006).

4.2.3) Unvegetated /Altered

Riverine Habitat (streambed channel)

As discussed above in Section 3.2.1, a streambed channel, either unvegetated or vegetated with upland species, generally qualifies as MSHCP riverine habitat. A channel is defined as a conduit that periodically or continuously contains moving water, or that forms a connecting link between two bodies of water. An Intermittent subsystem of the riverine system exists where the channel contains nontidal flowing water for only part of the year. When flows are absent, surface water may be absent or water may remain in isolated pools (Cowardin et al. 1979).

Riverine habitat occurs in a narrow band along the drainage features in the survey area where riparian habitats are absent. The riverine habitat onsite is largely unvegetated and contains recent fluvially deposited sediments.

Road/Disturbed

Disturbed describes land or habitat that has been negatively altered, either by human activities (for building and road development purposes) or by natural causes (fires). As a result, this altered land is generally initially bare ground until either development occurs or natural succession begins. Habitat succession is a slow process of reestablishing original plant communities, but successional habitats are readily invaded by ruderal grass and forb species. Disturbed areas in the survey area are primarily existing dirt roads. Limited vegetation occurs in this land cover type and the species that are present tend to be weedy and invasive including species such as *Centaurea melitensis, Sisymbrium irio*, and *Hirschfeldia incana*.

Ornamental

Ornamental vegetation occurs around Mabey Canyon Wash (D-6) near where an abandoned air strip is located, and along D-3 near Mangular Avenue. This vegetation type includes landscaped areas with planted species such as *Eucalyptus* spp., *Schinus* spp. (Pepper tree) and *Pinus* spp. (Pines).

Eucalyptus Semi-natural Stands (Eucalyptus groves) 79.100.00

Non-native landscape species (*Eucalyptus*) are located immediately adjacent to D-3 and Mabey Canyon Wash (D-6). In the survey area, this community is an intergrade with *Schinus* spp. Semi-natural Stands (below).

Schinus spp. Semi-natural Stands (Pepper tree) 79.200.00

Non-native landscape species (Pepper) are located immediately adjacent to D-3 and Mabey Canyon Wash (D-6). In the survey area, this community is an intergrade with *Eucalyptus* Semi-natural Stands (above).

4.2.4) Sensitive Vegetation Communities

Of the special status habitats listed for the area based on published literature, literature readily available on the internet and CNDDB records searches two special status habitats were found on the project site: Southern Riparian Scrub and Southern Willow Scrub. Southern riparian scrub can include coast live oak, sycamore, willow, mulefat and other species, but is considered

to be at a younger successional stage than the mature stands identified in this report (RCIP, 2003).

Four NatureServe conservation status system natural communities with high priority for inventory were found on the project site.

Table 5. Natural Communities On The Project Site With High Priority For Inventory

Natural Community	Natural Community #	Global and State Rank
Platanus racemosa (California sycamore woodlands) Alliance	61.310.00	G3 S3
Salix lasiolepis (Arroyo Willow thickets) Alliance	61.201.01	G4 S4
Salvia apiana Alliance (White Sage Scrub)	32.030.00	G4 S3

Legend:
Global, national, and state levels
G - Ranks designated at the global (or range-wide) level (G-rank),
N - Ranks designated at a national level (N-rank) for a particular nation, and
S - Ranks designated at state level.
Numbers
1 - Critically imperiled (typically having 5 or fewer occurrences or 1,000 or fewer individuals).
2 - Imperiled (typically having 6 to 20 occurrences or 1,001 to 3,000 individuals).
3 - Vulnerable (rare; typically having 21 to 100 occurrences, or 3,001 to 10,000 individuals).
4 - Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals).
5 - Secure (common, widespread, abundant, and lacking major threats or long-term concerns).

A list of sensitive habitats was created based on publications by United States Department of Agriculture, Forest Service for the northern Santa Ana Mountains area of the Cleveland National Forest. None of the twelve rare ecological communities (Valley oak woodlands, Engelmann oak woodlands, black walnut woodlands, Cuyamaca cypress groves, gabbro outcrops, montane meadows, pebble plains, limestone/carbonate outcrops, serpentine outcrops, Sargent cypress groves, and Santa Lucia fir forests) were identified in the survey area.

4.3) Botanical

A total of 111 botanical species were observed on or adjacent to the survey areas during the 2005, 2006, 2008 and 2013 biological surveys, including a 2013 focused botanical survey. Portions of the site are undisturbed and support healthy, native habitats. A list of all observed botanical species is included in Table 9, Appendix A.

4.4) Wildlife

A total of 98 wildlife species were observed on or adjacent to the survey areas during the 2005, 2006, 2008 and 2013 biological surveys. Wildlife species observed or detected in the survey area were characteristic of those that would be expected to occupy habitats in the region. Wildlife is generally diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single

vegetative community, the entire mosaic of all the vegetation communities within the site and adjoining areas constitutes a functional ecosystem for a variety of wildlife species. The scrubland and chaparral habitats in the survey area provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the survey area encompasses raptor foraging and perching habitat. The combination of these resources, as well as the mosaic of many community types, provide for a diversity of bird species.

A list of observed wildlife is included in Table 10, Appendix A. Dogs, cats, horse-back riders, off-road vehicles, mountain bikers and hikers were observed roaming freely throughout the area. The presence of free-ranging pets suppresses populations of ground-dwelling organisms.

4.5) Special Status Botanical Species

4.5.1) Endangered, Threatened, Proposed and Candidate Botanical Species

Eight botanical species listed as threatened, endangered, proposed or candidates (TEPC) for listing as endangered or threatened were evaluated as a part of this assessment. They are briefly described and occurrence probability is determined in Table 11, Appendix A. These species were either documented by the CNDDB as occurring within the project quadrangle or adjacent quadrangles, addressed in previous reports or were identified by the USFWS, U.S. Forest Service or other agency as potentially occurring in the area.

None of the species listed as threatened or endangered were observed in the survey area, despite multiple years of general surveys and a focused botanical survey in 2013. Four species, Braunton's milk-vetch (*Astragalus brauntonii*), Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*) and thread-leaved brodiaea (*Brodiaea filifolia*), have potentially suitable habitat in the survey area and are discussed below. Munz's onion and San Diego ambrosia are considered Narrow Endemic Species under the MSHCP and thread-leaved brodiaea is a Criteria Area plant species. Braunton's milkvetch is not a covered species under the MSHCP. However, no surveys for narrow endemic species were required for the survey area. After completion of the focused botanical survey all of these species were determined to have a low potential of occurrence in the survey area.

Braunton's milk-vetch: Braunton's milk-vetch is a federal endangered and a CNPS 1B.1 species (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California). It appears to be mainly restricted to calcium carbonate soils in brushy places, chaparral, firebreaks, below 1500 feet. Braunton's milk-vetch is known from ten locations in Ventura, Los Angeles and Orange Counties. The species has been recorded on the west and north sides of the Santa Ana Mountains with the closest occurrence approximately two miles west of the survey area recorded in 1933. The closest current record (2009) is four miles west

in Coal Canyon. This species was not observed in the survey area during current or previous focused botanical field surveys. There is **low** potential for this species to be present in the survey area.

Munz's onion: Munz's onion is a federally endangered species, state threatened species, and a California CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). This species occurs in grassy openings in coastal sage scrub, chaparral, juniper woodland, valley and foothill grasslands in clay soils. It is found on mesic exposures or seasonally moist microsites. Munz's onion is associated with a special "clay soil flora" found in southwestern Riverside County that includes herbs such as chocolate lily (*Fritillaria biflora*), Palmer's grappling hook (*Harpagonella palmeri*), knot-weed spine flower (*Chorizanthe polygonoides ssp. longispina*), snakeroot (*Sanicula bipinnatifida, S. arguta*), lomatium (*Lomatium utriculatum*, *L. dasycarpum*), shooting stars (*Dodecatheon clevelandii*), bloomeria (*Bloomeria crocea*), soaproot (*Chlorogalum parviflorum*), many-stemmed dudleya (*Dudleya multicaulis*) and red-skinned onion (*Allium haematochiton*). At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay (RCIP, 2003). Only marginally appropriate habitat was present in the survey area and no Munz's onion was located during focused surveys for the species; therefore, it was determined to have **no** potential of being present.

San Diego ambrosia: San Diego ambrosia is a federal endangered and CNPS 1B.1 plant (Rare or Endangered in California and Elsewhere; Seriously endangered in California). It is known to occur in Riverside and San Diego Counties. San Diego ambrosia is known to occur in chaparral, coastal sage scrub, valley and foothill grassland and vernal pools. It persists where disturbance is minimal. Although there is appropriate habitat present, no San Diego ambrosia was located during surveys for the species; therefore, it has **low** potential of being present.

Thread-leaved brodiaea: Thread-leaved brodiaea is endemic to California alone, is a federal threatened species, a California endangered species, and a CNPS 1B.1 plant (Rare, threatened, or endangered in California and elsewhere; seriously endangered in California). It is found in Valley Grassland, Foothill Woodland, Coastal Sage Scrub, and Freshwater Wetland plant communities in vernal-pools habitat. It is equally likely to occur in wetlands or non-wetlands (CalFlora, 2013). Although there is appropriate habitat present, no Thread leaved brodiaea was located during surveys for the species; therefore, it has **low** potential of being present.

4.5.2) Sensitive Botanical Species

Fifty (50) sensitive botanical species were evaluated as a part of this assessment because they are known from or expected to occur within the project vicinity. They are briefly described and

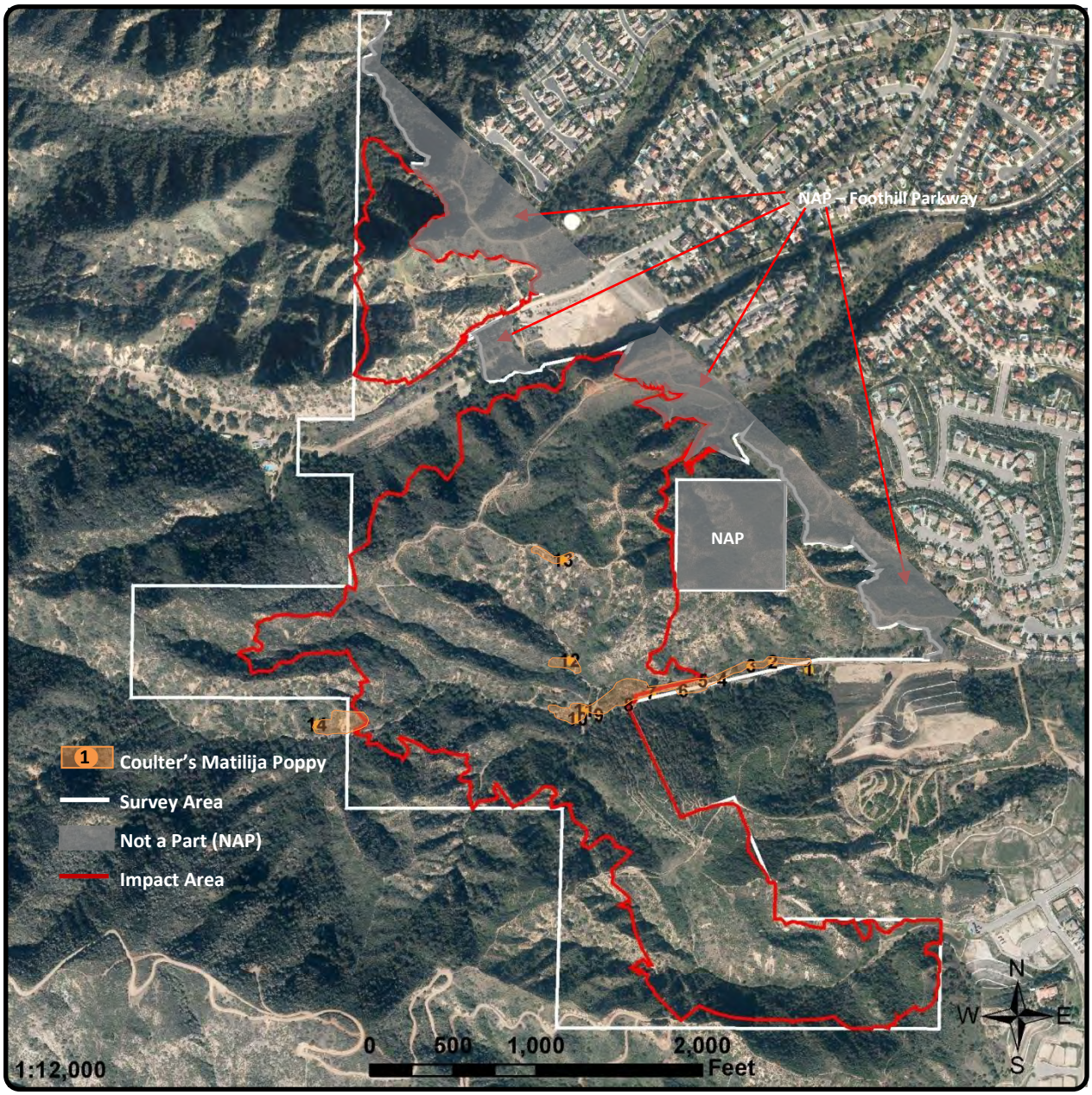
their potential to occur in the survey area is detailed in Table 11, Appendix A. These species were either documented by the CNDDB as occurring within the project quadrangle or adjacent quadrangles, addressed in previous reports of the sites or were identified by the USFWS, U.S. Forest Service or other agency as potentially occurring in the area.

One sensitive botanical species was observed during the biological surveys; Coulter's matilija poppy (*Romneya coulteri*).

Coulter's matilija poppy: Coulter's matilija poppy is a CDFW S4 (Apparently secure in California, but with some concern) and CNPS List 4.2 (watch list). The distinctive perennial plant is found in sage scrub and chaparral. Blooming period is March-July. Fourteen populations, with numerous subpopulations, of Coulter's matilija poppy were identified in 2008 and again in 2013 in the survey area. Results of the surveys in 2008 found 526 individuals. In 2013, only 236± plants were relocated. No new populations were identified. The survey year 2008 was considered a low-normal rainfall year, while 2013 was considered a low rainfall year. The type of microhabitats found for *R. coulteri* have sandy to coarse sandy substrates. The distribution of the plants was found in the high flow level of the active Feature 3, unnamed drainage, and on the fire (dirt) road in the middle of the survey area (Figure 8). GPS locations are listed in Tables 13 and 14, Appendix A.

Five other sensitive botanical species were determined to have a high or moderate potential to occur in the survey area based on the presence of suitable habitat, species range and proximity to known occurrences. These species are; Catalina mariposa lily (*Calochortus catalinae*), Fish's milkwort (*Polygala cornuta var. fishiae*), intermediate mariposa lily (*Calochortus weedii var. intermedius*), intermediate monardella (*Monardella hypoleuca ssp. intermedia*) and white rabbit tobacco (*Pseudognaphalium leucocephalum*).

Catalina mariposa lily: Catalina mariposa lily is a CDFW S4 (Apparently secure in California) and CNPS 4.2 plant (Plants of Limited Distribution, moderately threatened in California).It is usually found in heavy soil within open grassland, shrubland or woodland. It is distributed from the southern central coast to the southern coast of California below 700m. The survey area is in the easternmost range of the species. The majority of sites in the survey area are on the west facing slopes of the Santa Ana Mountains and north in the Chino Hills. It also occurs on the Channel Islands. Calflora records show an observation due west of the survey area 2.5 miles from 1949. No, more recent observations are located close to the survey area. The CNDDB does not show a closer observation. Suitable habitat for this species occurs on-site. Although the soils in the survey area are mapped as loamy, there can be inclusions of heavier clay soils. This species was not observed during field surveys.



*NOTE: Numbers on the map correspond with Tables 11 and 12, CMP GPS Locations

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BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 8

Coulter's Matilija Poppy
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Fish's milkwort: Fish's milkwort is a CDFW S4 (Apparently secure in California) and CNPS 4.3 plant (Plants of Limited Distribution, not very threatened in California). It is found in foothill chaparral, cismontane and riparian woodlands, including oak woodland, usually in wetlands, but occasionally it is found in non-wetland environments. Fish's milkwort is a shrub that forms thickets less than two meters in diameter. It is distributed from the outer South Coast Ranges, Western Transverse Ranges, San Gabriel Mountains and Peninsular Ranges into northern Baja California below 3000 ft. AMSL. Calflora records show an observation just south of the survey area and south of Skyline Drive, 0.37 miles southwest of the survey area, in 2008.The CNDDB does not show a closer observation. There are numerous other records in the project area scattered mostly on the western slopes of the Santa Ana Mountains and north of the Santa Ana River in the Chino Hills State Park. Suitable habitat for this species occurs on-site. Although no wetlands occur, there is chaparral and riparian woodlands with associated drainages that could support the species. Fish's milkwort was not observed during field surveys. Impacts to Fish's milkwort will be considered "Adequately Conserved" when conservation requirements have been met.

Intermediate mariposa lily: Intermediate mariposa lily is a CDFW S2 (Imperiled) and a CNPS 1B.2 species (Rare, threatened, or endangered in California and elsewhere; moderately threatened in California). It grows in chaparral, coastal sage scrub, and valley grassland communities. It is found on sandy or clay soils, below about 6200 feet in elevation, in coastal southern and central California. Intermediate mariposa lily was recorded on-site in 2008, and as reported in the August 2008 Foothill Parkway Westerly Extension DEIR. BonTerra found approximately 303 intermediate mariposa lily individuals on-site in 30 locations during surveys conducted in May 2008. Intermediate mariposa lily was not relocated in 2013 or observed elsewhere on the site, but rainfall levels were low in 2013.Intermediate mariposa lily is considered by the MSHCP as a "Covered Species Adequately Conserved."

Intermediate monardella: Intermediate monardella is a CDFW S2S3 (between Imperiled and Vulnerable) and a CNPS 1B.3 species (Rare, threatened, or endangered in California and elsewhere; not very threatened in California). It is found in chaparral, cismontane woodland and sometimes in lower montane coniferous forest, usually in the understory. Intermediate monardella is known only from the Santa Ana and Palomar Mountains between 400 and 1250 meters AMSL. The survey area is near the northern limits of the range of this species. The CNDDB records show an observation 1.3 miles southwest of the survey area near the intersection of Skyline Drive and Leonard Road. Suitable habitat for intermediate monardella occurs on-site, but this species was not observed during field surveys.

White rabbit tobacco: White rabbit tobacco is a CDFW S2 (Imperiled) and a CNPS 2B.2 species (Plants rare, threatened or endangered in California, but more common elsewhere; moderately threatened in California). It is found in dry, sandy creek bottoms in chaparral,

cismontane woodland, coastal scrub and riparian woodland. White rabbit tobacco is located in Los Angeles, Orange, Riverside and San Diego Counties in California as well as Arizona and Mexico (CNPS). Calflora also notes locations in San Bernardino and Santa Barbara Counties. It is typically found below 2100 meters AMSL. CNDDB and Calflora records show the closest observation as 5 miles northwest of the survey area in the Santa Ana River basin from 1928. Suitable habitat for white rabbit tobacco occurs on-site mainly in the dry drainages. This species was not observed during field surveys.

Chaparral nolina: A separate species, chaparral nolina (*Nolina cismontane*) is a CDFW S2 (Imperiled), a CNPS 1B.2 species (Rare, threatened, or endangered in California and elsewhere; moderately threatened in California) and a Forest Service sensitive species. It is found in dry chaparral or coastal scrub of the coastal mountains on sandstone or gabbro soils. It is a perennial evergreen. Chaparral nolina can be found at an elevation of 426-4166 ft. AMSL. in Los Angeles, Ventura, Orange, Riverside and San Diego Counties in California. It was recorded in the CNDDB as occurring within the northern end of the survey area. The recorded area is a large circle (a more general area) from 1990, with only a small portion crossing into the project area. No chaparral nolina was observed during previous or current surveys. GEC determined there was only a low potential for this species to occur in the survey area.

Forest Service Sensitive Botanical Species

A review of U.S. Forest Service, Cleveland National Forest, Santa Ana Mountain Area identified nineteen sensitive species within this Forest Service District (Table 12, Appendix A). Of these, all were included in the CNDDB search (Table 11) with the exception of Orcutt's Brodiaea (*Brodiaea orcuttii*), Orcutt's linanthus (*Linanthus orcuttii*), felt-leaved monardella (*Monardella hypoleuca ssp. lanata*), southern mountains skullcap (*Scutellaria bolanderi ssp. Austromontana*), Hammitt's clay-cress (*Sibaropsis hammittii*), southern jewel-flower (*Streptanthus campestris*) and Parry's tetracoccus (*Tetracoccus dioicus*). None of the nineteen species were observed and following previous and current focused botanical surveys only intermediate mariposa-lily was determined to have a moderate or high potential of occurring within the survey area. As stated above, intermediate mariposa-lily was recorded within the survey area in 2008, but was not relocated in 2013.

4.6) Special Status Wildlife Species

4.6.1) Endangered, Threatened, Candidate and Fully Protected Wildlife Species

Twenty-four wildlife species, listed as endangered or threatened or candidates for listing as endangered or threatened and fully protected species, were evaluated as a part of this

assessment. They are briefly described and occurrence probability is determined in Table 11. These species were either documented by the CNDDB as occurring within the project quadrangle or adjacent quadrangles, addressed in previous reports or were identified by the USFWS, U.S. Forest Service or other agency as potentially occurring in the area.

None of the species listed as threatened, endangered, candidate or fully protected were observed in the survey area. Two species, coastal California gnatcatcher (*Polioptila californica californica*) and golden eagle (*Aquila chrysaetos*), have potentially suitable habitat in the survey area, were determined to have a high or moderate potential of occurrence within the survey area and are discussed below. Due to the presence of riparian habitat, despite the general lack of suitability, and the requirements for evaluation of Riparian/Riverine habitats with regard to special status species, the least Bell's vireo (*Vireo bellii pusillus*) is also discussed in more detail below.

Coastal California gnatcatcher: There are three subspecies of California gnatcatchers. The coastal California gnatcatcher subspecies is listed as Threatened under the Federal Endangered Species Act and state species of special concern. This small, insectivorous song bird occurs almost exclusively in several distinctive sub-associations of the coastal sage scrub plant community (USFWS 1993). The survey area does provide suitable habitat for this species. The coastal California gnatcatcher was determined to have a **moderate** potential of being present in the survey area. Focused surveys were conducted in 2013 by GEC and the species was not observed during surveys. Following focused surveys it was determined this species does not currently occupy the survey area. The coastal California gnatcatcher is considered a "Covered Species Adequately Conserved" in the MSHCP.

Golden eagle: The golden eagle is a California Department of Fish and Wildlife fully protected species, a California watch list species and a U.S. Fish and Wildlife Service Bird of Conservation Concern. These agencies are concerned with the year-long (i.e., breeding and wintering) conservation of the species. Typical habitat of the golden eagles includes rolling foothills, mountain areas, sage-juniper flats, and deserts. Golden eagles nest on cliffs and in large trees in open areas (Zeiner et al. 1990). The site provides suitable foraging habitat for the species. It has a **moderate** potential of being present in the survey area. The golden eagle is considered a "Covered Species Adequately Conserved" in the MSHCP.

Least Bell's vireo: The least Bell's vireo (LBV) is a federal and state endangered species. Least Bell's vireo is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows (*Salix* spp.), cottonwoods (*Populus* spp.) or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). Riparian habitat provides both breeding and foraging habitat for the species. Early to mid-successional riparian habitat is typically used for nesting by the Least Bell's Vireo because it supports the dense shrub cover required for nest concealment

as well as a structurally diverse canopy for foraging. Vegetation characteristics of riparian stands between five to ten years of age are most suitable for nesting Least Bell's Vireo (Goldwasser 1981, Kus 1998, RECON 1989, Fish & Wildlife Service 1998).

The survey area is not located within critical habitat for this species. Records for the least Bell's vireo within the project vicinity are from 2012 and were recorded approximately 3 miles north of the survey area on the Wardlow Wash (CNDDB). The resident or migrant status of the bird was unknown, but it was detected as singing in late June when migrant vireos are typically no longer moving through the area.

Vegetation in the survey area does not appear to provide suitable territorial or breeding habitat for the least Bell's vireo. Although willow and cottonwood species are present adjacent to saturated/open water the diversity and density may not be adequate to support the species. No least Bell's vireo were observed in the survey area and it is unlikely that LBV would be expected to territorialize or breed in the survey area or in immediately adjacent areas.

4.6.2) Sensitive Species

Seventy-two (72) sensitive wildlife species were evaluated as a part of this assessment because they are known from or expected to occur within the project vicinity. They are briefly described and their potential to occur in the survey area is detailed in Table 11, Appendix A. These species were either documented by the CNDDB as occurring within the project quadrangle or adjacent quadrangles, addressed in previous reports of the survey area or were identified by the USFWS, U.S. Forest Service or other agency as potentially occurring in the area.

Five sensitive wildlife species were observed during the biological surveys; northern red-diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), Lawrence's goldfinch (*Spinus lawrencei*) and the San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

Seventeen other sensitive wildlife species were determined to have a high or moderate potential to occur in the survey area based on the presence of suitable habitat, species range and proximity to known occurrences. These species are; California silvery legless lizard (*Anniella pulchra pulchra*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), rosy boa (*Charina trivirgata*), San Bernardino/San Diego ringneck snake (*Diadophis punctatus ssp. modestus and similis*), California mountain kingsnake (*Lampropeltis zonata pulchra)* San Diego population, coast horned lizard (*Phrynosoma blainvillii*), Coronado island skink (*Plestiodon skiltonianus interparietalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), burrowing owl (*Athene cunicularia*), black-chinned sparrow (*Spizella*

atrogularis), pallid bat (*Antrozous pallidus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), hoary bat (*Lasiurus cinereus*), San Diego desert woodrat (*Neotoma lepida intermedia*) and monarch butterfly (*Danaus plexippus*). Of these species the MSHCP considers the following species "Covered Species Adequately Conserved:" orange throated whiptail, coastal whiptail, northern red-diamond rattlesnake, coast horned lizard, California horned lark, Cooper's hawk, southern California rufous-crowned sparrow, San Diego desert woodrat and San Diego black-tailed jackrabbit. The California mountain kingsnake (San Diego population) will be considered "Adequately Conserved" once a Memorandum of Understanding is executed with the USFS that addresses management for this species on Forest Service Land.

Sensitive Species Descriptions

California silvery legless lizard: California silvery legless lizards is a CDFW California Species of Special Concern, a CNDDBS3 species (Vulnerable) and a USFS Sensitive Species. This species is a snake-like limbless burrowing lizard that occurs from central California to northern Baja California, Mexico. Habitat for this lizard includes sparsely vegetated washes, beaches, chaparral, and certain woodlands. According to Stebbins (1985) presence of bush lupine is often an indicator of suitable habitat for this species. Legless lizards require loose soil (such as sand, loam, or leaf litter) for burrowing and are most commonly found in washes, beach sand dunes, and loose alluvium near streams. CNDDB records do not show any records within 10 miles of the survey area. Suitable habitat for the species occurs in the survey area mainly within and adjacent to portions of the dry drainage where soils are loose.

Coastal rosy boa: The coastal rosy boa is a CNDDB S3S4 species (between Vulnerable and Imperiled) and a USFS Sensitive Species. This species is a heavy-bodied snake that inhabits rocky chaparral-covered hillsides. This species is attracted to permanent and intermittent streams. Although it may be active at dusk, this boa is mainly a nocturnal species. The range of the rosy boa is from Los Angeles County through northwestern Baja California. Suitable habitat for the species occurs in the project area especially around existing drainages.

San Bernardino/San Diego ringneck snake: The San Bernardino/San Diego ringneck snake are CNDDB S2? species (more than Vulnerable, but not Imperiled with certainty) and a USFS Sensitive Species. They occur in relatively rocky areas within valley, foothill, mixed chaparral, and grassland habitats. The species ranges from west San Diego County through to Riverside, southwestern San Bernardino, Ventura, and Los Angeles counties to Baja, California. No CNDDB records for these species falls within 10 miles of the survey area, but suitable habitat for the species occurs in the project area.

Coronado island skink: The Coronado island skink is a CDFW California Species of Special Concern and a CNDDB S1S2 species (between Critically Imperiled and Imperiled). This

species occurs in open areas of grasslands, woodlands, pine forests and chaparral, but prefers rocky areas near streams with lots of vegetation. The species is found in coastal southern California, mainly in San Diego, County. The project area is near the northern edge of the range for this subspecies. No CNDDB records for these species falls within 10 miles of the survey area, but suitable habitat for the species occurs in the project area near the riparian habitats.

Coast patch-nosed snake: The coast patch-nosed snake is a CDFW California Species of Special Concern and a CNDDB S2S3 species (between Vulnerable and Imperiled). This snake is an active diurnal resident of shrublands exhibiting open sandy areas. The coast patch-nosed snake can be found from Santa Barbara County through southwestern California to Baja California. The nearest CNDDB record for the coast patch-nosed snake is 6.4 miles west of the survey area. Suitable habitat for the species occurs in the project area in open areas of the chaparral and sage scrub habitats.

Burrowing owl: The burrowing owl is a federal and state listed Species of Special Concern, a U.S. Fish and Wildlife Service Migratory Nongame Bird of Management Concern and a CNDDB S3 species (Vulnerable). The MSHCP identified the burrowing owl as an "Additional Needs Species" for the survey area, requiring a habitat assessment and if warranted focused surveys for the species. Burrowing owls historically occurred throughout much of California; however, many former populations have vanished.

The burrowing owl occurs as a resident in the open areas of the lowlands over much of the southern California region (Garrett and Dunn 1981). They may also occur in forb and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner, et al. 1990). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrow in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. One burrow is typically selected for use as the nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. Open habitats and small rodent burrows were identified in the study area.

Immediately after the habitat assessment, a burrow survey was conducted in the survey area to determine if any of the debris piles or rodent burrows contained evidence of burrowing owl. Surveys were conducted by Teresa Gonzales and Paul Gonzales. Surveys consisted of slowly walking the survey area and the 150-meter buffer zone that was previously delineated for the habitat assessment. All existing fossorial mammal burrows were thoroughly examined for evidence of burrowing owl, including molting feathers, prey remains, cast pellets, eggshell

fragments, and excrement. No signs of burrowing owls were observed at the burrows or adjacent to them. Surveys did not locate any burrowing owls in the survey area.

Lawrence's goldfinch: Lawrence's goldfinch is a CNDDB S3 species (Vulnerable). This species typically nests in arid, open woodlands near chaparral, weed fields, and small bodies of water (Davis, 1999). The species feeds mostly on seeds of annual plants, with a strong preference for fiddlenecks (*Amsinckia* spp.) in its breeding range; in winter, its diet varies by region. These birds generally travel in pairs or flocks. The breeding range of the species is confined to the Central Valley and coastal foothills of California, as well as the northern portion of Baja California. No CNDDB records for these species falls within 10 miles of the survey area. Suitable habitat for the species occurs in the chaparral, sage scrub and woodland habitats in the project area.

Black-chinned sparrow: The black-chinned sparrow is a CNDDB S3 species (Vulnerable). They occur in the southwestern U.S., typically in dry, brushy chaparral in rocky, rugged landscapes in habitats characterized by sagebrush, greasewood, chamise, mesquite, cactus, and other arid scrub plants. They prefer tall brush on slopes and can be found between – and 8200 ft in elevation. No CNDDB records for these species falls within 10 miles of the survey area. Suitable habitat for the species occurs in the chaparral and sage scrub habitats in the project area.

Pallid bat: The pallid bat is a CDFW California Species of Special Concern, a CNDDB S3 species (Vulnerable) and a USFS Sensitive Species. This species roosts in cliff faces and rock outcrops, but can also be found in man-made structures or trees. Roosting and foraging locations are commonly in dry, open shrubland habitat, typically near water and below 6,000 feet in elevation. This species occurs in much of California, excepting the high mountains. The pallid bat will break into smaller groups to hibernate in winter. The CNDDB records identify the closest observation of this species approximately 5 miles southwest of the survey area, north of Lake Irvine. Potentially suitable roosting habitat occurs in the few onsite oak trees (although trees are not preferred), but mainly roosting habitat lies outside the project area. Suitable foraging habitat occurs adjacent to the project area. This site does not have a consistent water source, but runoff basins adjacent to the site might have enough water to support this species.

Dulzura pocket mouse: The Dulzura pocket mouse is a CDFW California Species of Special Concern and a CNDDB S3 species (Vulnerable). It is usually found along the border of grass/chaparral edges and also in coastal sage, chaparral and grassland. Distribution is mostly in San Diego County, so the project area is at the northern limits to the range of this species. No CNDDB records for the Dulzura pocket mouse falls within 10 miles of the survey area. Suitable habitat for the species occurs in the chaparral and sage scrub habitats in the project area.

Hoary bat: The hoary bat is a CNDDB S4 species (Apparently Secure). This species roosts beneath clusters of leaves in trees. It is tolerant of colder temperatures and often migrates southward. It forages mainly on flying insects. This species is one of the most widespread of all American bats. It is found throughout the western United States including most of California with the exception of the Mojave and Colorado Desert regions. Optimal habitats are woodlands, mainly coniferous forests, for roosting with open areas or lakes for foraging. No CNDDB records for the hoary bat falls within 10 miles of the survey area. Suitable roosting habitat in the form of open canopy oak woodlands occurs in the survey area. Suitable foraging habitat occurs on and adjacent to the project area.

Monarch butterfly: The monarch butterfly is a CNDDB S4 species (Apparently Secure) and a USFS Sensitive Species. This species is found in open fields and meadows with milkweed. Milkweed plants are the host plant and food source for monarch larvae almost exclusively. After emerging as a butterfly the monarch uses a wide variety of nectar sources. This species is known for the long migratory journey they embark on each fall to Mexico. Prior to leaving the butterfly will store fat in their abdomen. While in Mexico they roost in clusters in trees and remain mostly inactive. In February the butterflies will gather nectar, reproduce and their offspring will make the return trip north. The monarch butterfly can be found throughout much of North and Central America. No CNDDB records for the monarch butterfly falls within 10 miles of the survey area. Suitable habitat in the form of narrow-leaf milkweed and a wide variety of nectar sources are present in the project area.

Forest Service Sensitive Species

A review of U.S. Forest Service, Cleveland National Forest, Santa Ana Mountain Area identified fifteen sensitive wildlife species within this Forest Service District (Table 12, Appendix A). Of these, all were included in the CNDDB search (Table 11) with the exception of fringed myotis (*Myotis thysanodes*). One of the fifteen species, northern red-diamond rattlesnake, was observed during surveys. Seven other species, California silvery legless lizard, orange-throated whiptail, rosy boa, San Bernardino/San Diego ringneck snake, California mountain kingsnake (San Diego population), Pallid bat and monarch butterfly, were determined to have a moderate or high potential of occurring within the survey area.

4.7) Jurisdictional Delineation and Riparian/Riverine

The nearest Traditional Navigable Water (TNW) is the Pacific Ocean, which is located 18.31 miles away. The nearest Relatively Permanent Water (RPW) is the Santa Ana River, which is located 2.25miles away.

A riparian corridor in the form of Coastal Live Oak Alliance and patches of Sycamore and Willow Alliance are located within Features 1 and 3. Several debris basins are present at the lower end of the hillside and these areas are capable of slowing and containing large amounts of water resulting is reduction of energy and reduced erosion and increased water quality in hillside runoff.

L&L found seven (7) main jurisdictional features with fifty six (56) tributaries, for a total of 63 features of which 3 are USGS mapped blue-line streams (Table 15 in Appendix A). Water flow that occurs is not permanent or present seasonally for long periods. Soon after rainfall ends flow ceases (ephemeral) and is absorbed into the sandy soils.

Figure 9a shows all 63 Non-Relatively Permanent Water (Non-RPW) features (i.e., ephemeral carriers of periodic rainfall). In order to make all of the drainages visible on the map the drainages are not shown to scale for the drainage width. Figure 9b more accurately depicts the feature widths, but many of the tributaries are not visible at this scale. A more detailed, large scale map is located in the L&L Jurisdictional Delineation (Appendix G).

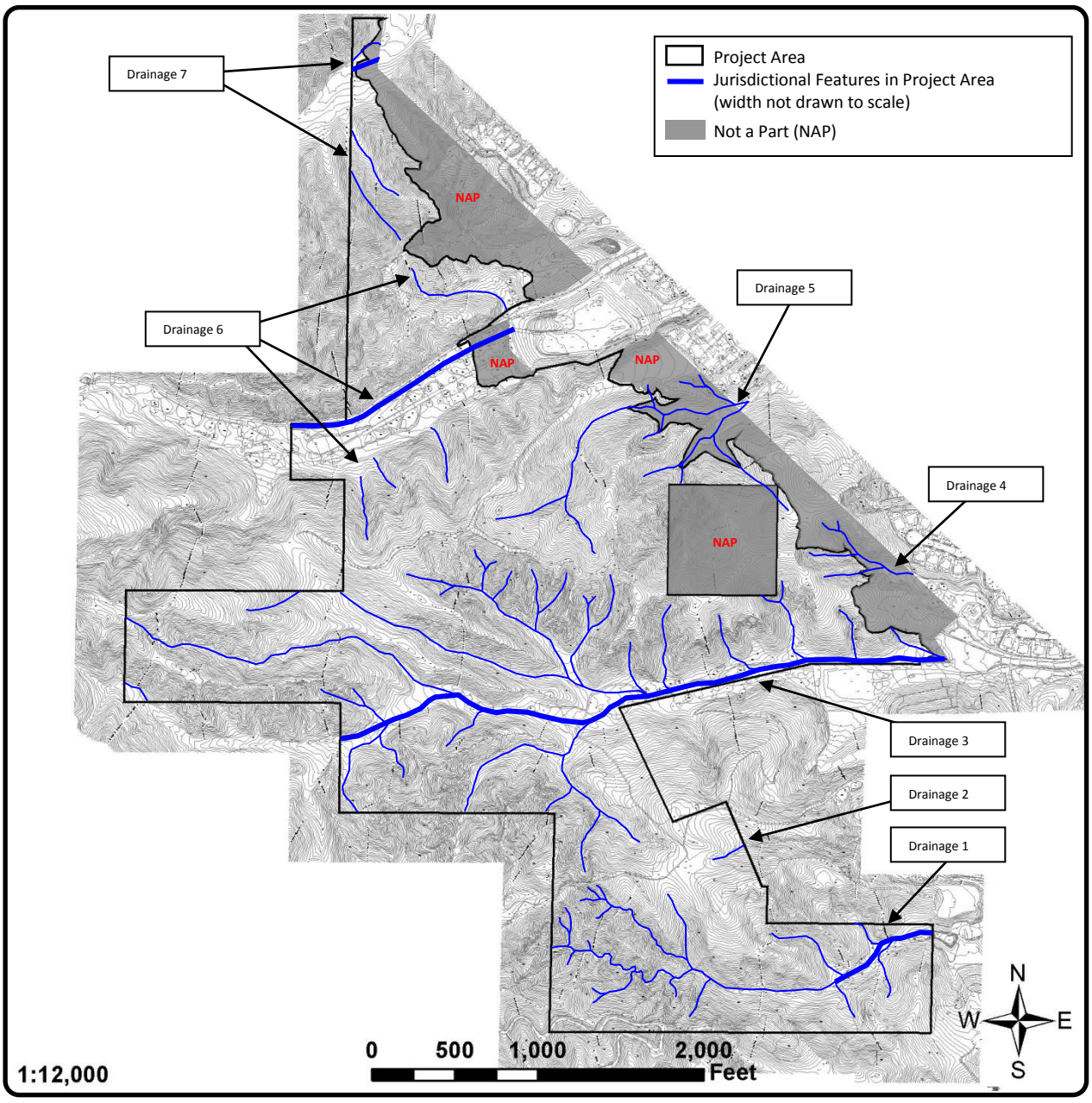
Vegetation in and adjacent to jurisdictional features includes *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Where riparian habitats fell within or adjacent to drainages that habitat was considered part of the State jurisdiction.

Within the seven features L&L identified 10.2 acres of State of California Streambeds Jurisdiction. Of this, 2.16 acres is non wetland “waters” of the U.S. Federal Wetlands were not found on the site.

Since the area identified as California Streambeds incorporates riparian habitat into the jurisdiction, this area was also determined to fulfill the requirements of MSHCP Riparian/Riverine habitat. Therefore, 10.2 acres of Riparian/Riverine habitat was determined to be present in the survey area.

4.8) Wildlife Corridors

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



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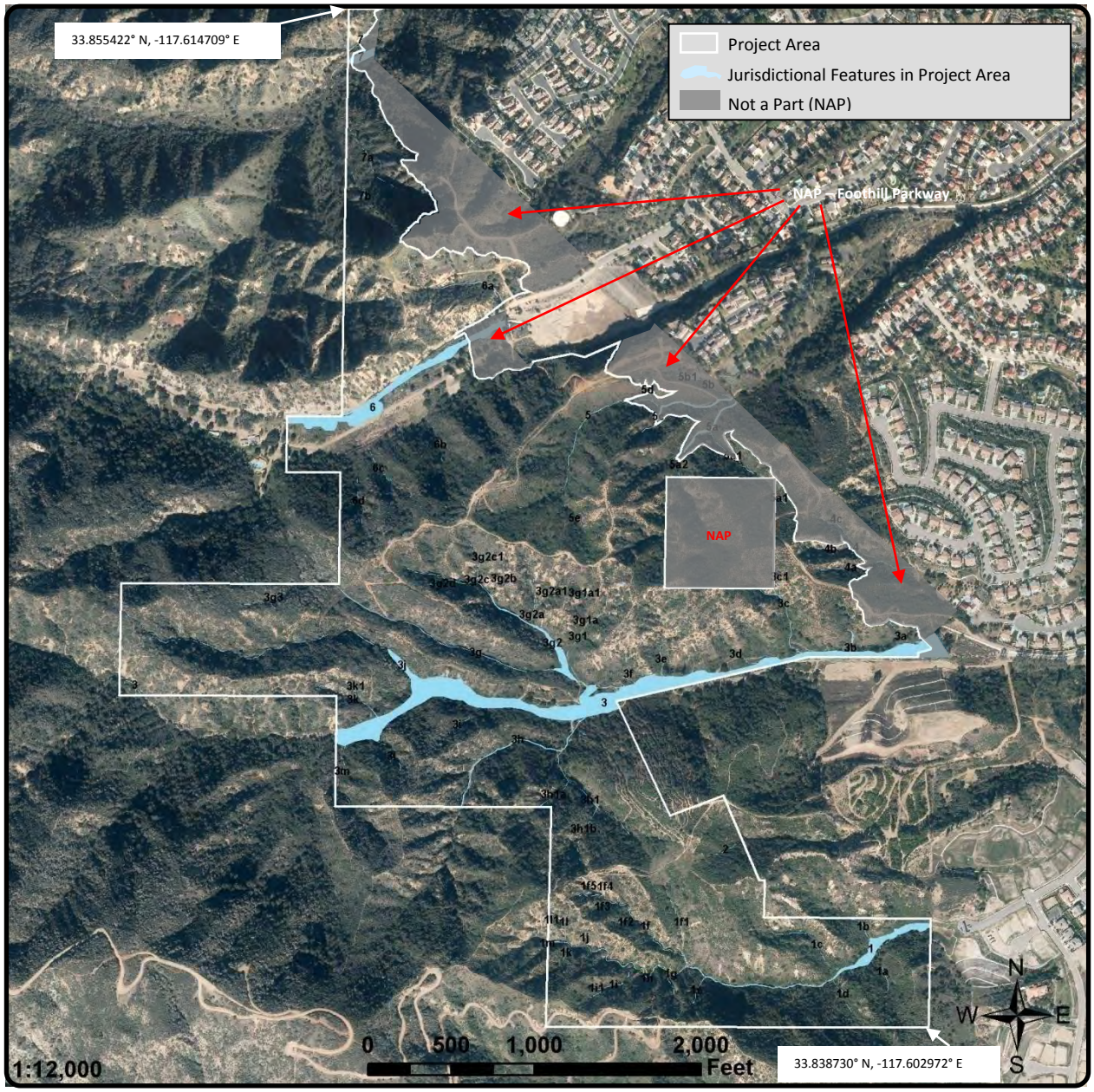
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

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Figure 9a

Jurisdictional Features Topo
(Topography received from KWC Engineers) (NTS)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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Figure 9b

Jurisdictional Features to Scale

(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information.

Corridors mitigate the effects of this fragmentation by:

- Allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange;
- Providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (fire, disease, etc.), will result in population or local species extinction; and
- Serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources.

Wildlife movement activities usually fall into one of three movement categories: dispersal (e.g. juvenile animals from natal areas or individuals extending range distributions); seasonal migration; and movements related to home range activities (e.g. foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this analysis, these terms are defined as follows:

Travel Route – A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and to provide access to necessary resources (e.g. water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another. It contains adequate food, water, and/or cover for species while they move between habitat areas and it provides a relatively direct link between target habitat areas.

Wildlife Corridor – A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors, often referred to as "habitat or landscape linkages," can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing – A small, narrow area, relatively short in length and generally constricted in nature that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These often represent "choke points" along a movement corridor,

which may impede wildlife movement and increase the risk of predation. It is important to note that in a large open space area in which there are few or no man-made or naturally occurring physical constraints to wildlife movement, wildlife corridors as defined above may not yet exist. Given an open space area that is both large enough to maintain viable populations of species and provide a variety of travel routes (e.g. canyons, ridgelines, trails, riverbeds, and others), wildlife will use these "local" routes while searching for food, water, shelter, and mates and will not need to cross into other large, open space areas. Based on their size, location, vegetative composition, and availability of food, some of these movement areas (e.g. large drainages and canyons) are used for longer lengths of time and serve as source areas for food, water, and cover, particularly for small- and medium-sized animals. This is especially true if the travel route is within a larger open space area. However, once open space areas become constrained and/or fragmented as a result of urban development or construction of physical obstacles such as roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can "become" corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g. man-made noise, lighting) that would generally hinder wildlife movement. When these wildlife movement corridors provide connections between protected open space areas that have no other linkage, then the wildlife movement corridors become locally or even regionally important.

Small tracts of land or larger relatively undisturbed land masses play an increasingly critical role in connecting fragmented populations of plant and animal species. The basic framework of corridor analysis consists of identifying areas of habitat which are suitable for the wildlife species in question. Habitat suitability depends upon the needs of a given species. It can be approximated by overlaying layers such as current vegetation, topography (aspect, slope, elevation), distance to water, and perhaps climatic variables such as average temperature and precipitation. Because different wildlife species vary in their sensitivity to human disturbance, habitat suitability is constrained by disturbance variables such as distance to roads, distance to towns, traffic volumes, hunting status, etc. Generally, coverage of known distribution of a species (sightings, radio-telemetry locations, hunter-kill and road-kill sites) is also developed. A probability contour is finally developed from the convergence of these coverage's to indicate the likelihood of a given area being suitable for a given species. Where this probable habitat connects areas of known population centers, it is often termed a corridor.

4.8.1) Survey Area

The survey area is bordered by dense urban development to the north and east, a few parcels of low density residential development and open space to the west; and open space to the south. The survey area is north and east of MSHCP Core B (Cleveland National Forest).

The project site includes native habitat that supports a variety of wildlife species and likely contributes generally to the Corona-Temecula Foothills linkage. However, it does not constitute a wildlife corridor (i.e., a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another), as movement on a regional scale is not confined within a specific corridor in this area. Rather, it is comprised of open space at the interface with urban development and is contiguous to a large expanse of open space within Core B and the Cleveland National Forest. Thus, wildlife currently move freely throughout the project site and surrounding areas via existing travel routes,[1] such as drainages, ridgelines, and existing dirt roads. It should be noted that Wardlow Wash, which crosses the northernmost tip of the project site, was identified by BonTerra Consulting as a regional wildlife corridor that facilitates movement between the Cleveland National Forest and Prado Basin, as referenced by the Foothill Parkway Westerly Extension DEIR (RBF Consulting 2008). However, Wardlow Wash is relatively constrained by development on either side, road crossings at three locations (Paseo Grande, Serfas Club Drive, and Palisades Drive), and State Route 91 is a significant barrier to wildlife movement. Wardlow Wash will not be impacted by the proposed development. A recognized connection between the Santa Ana Mountains and Chino Hills area is farther to the west via Coal Canyon (Penrod et al. 2001, Beier 1993). The MSHCP also proposes a connection between Existing Core A (Prado Basin/Santa Ana River) with Existing Core B (Cleveland National Forest) via Constrained Linkages 1 and 2, which are also farther to the west (but east of Coal Canyon). The project site also currently provides for movement on a smaller, local scale for species that live within the project site.

[1] A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is frequently used by wildlife to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas, and provides a relatively direct link between target habitat areas.

5.0) MITIGATION MEASURES

The following Mitigation Measures (MM) have been developed for the Skyline Heights Project to minimize and mitigate potential impacts to the natural resources onsite.

Vegetation

MM1. The Project impact areas and avoidance areas should be flagged or fenced prior to clearing to prevent incursion into unsurveyed or avoided areas.

MM2. Impacts to Coulter's matilija poppy should be avoided, to the extent practical. Any impacts to Coulter's matilija poppy would be considered adverse, but not significant under CEQA due to the large distribution and number of locations of this species.

MM3. Preservation of 10 acres of natural habitat, biologically equivalent or superior to the PQP land the survey area surrounds, adjacent to Forest Service land and the placement of a deed restriction on the 10 acres to prevent future development.

City of Corona General Plan Oak Tree Avoidance

MM4. Replacement of oak trees impacted by the Project, at no less than a 1:1 ratio, in the landscape areas.

Riparian/Riverine, MSHCP Section 6.1.2

MM5. Mitigation will be provided for the 6.17 acre of Riparian/Riverine impacts at no less than a 1:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values analysis. The proponent proposes mitigation at a ratio of 2:1 for riparian habitat and 1:1 for riverine habitat in the form of off-site mitigation with the Riverside-Corona Resource Conservation District (RCRCD). In the event mitigation with the RCRCD is not finalized for any reason, equal or greater value mitigation will be provided in the form of one or more of the following: off-site acquisition and preservation, participation in an approved mitigation bank, on-site creation, off-site creation, enhancement or reestablishment. If off-site mitigation is incorporated, the preferred choice will be to find mitigation within or adjacent to the Santa Ana Watershed and in or adjacent to Corona if possible. In addition, some avoided resources maybe preserved in an open space area and deed restricted.

If onsite mitigation is proposed as an alternative mitigation a Habitat Mitigation and Monitoring Plan will be developed and provided for review and approval by the local and regulatory agencies and including the following:

- Quantitative success criteria (vegetation cover and species richness)
- Recommendations for soil preparation

- A plant palette to include native species occurring on the Site, such as coast live oak and Coulter's matilija poppy
- Planting methods
- Irrigation and maintenance requirements
- A long-term mitigation maintenance and monitoring plan with remedial measures

MM6. The project proponent shall employ all standard best management practices (BMPs) to prevent discharges from entering waters of the U.S. during construction. BMPs, such as:

- the use erosion control or sedimentation prevention methods; such as fiber rolls, sand bags, rice mats, straw wattles or similar measures, where appropriate,
- proper use and disposal of oil, gasoline, diesel fuel, antifreeze and other toxic substances will be enforced.

Permits/Agreements

MM7. To mitigate for the loss of 1.57 acres of non-wetland WoUS due to project construction, Project Applicant will enter into an agreement with the U.S. Army Corps of Engineers (via issuance and implementation of a Nationwide permit or Individual permit) to replace affected WoUS and wetlands at a ratio specified by the U.S. Army Corps of Engineers at no less than a 1:1 basis, through off-site acquisition and preservation, participation in an approved mitigation bank, and/or on- or off-site creation, enhancement or reestablishment of WoUS or a combination of these options. The exact ratio will be based on a functions and values assessment.

MM8. To mitigate for the loss of 1.57 acres of non-wetland WoUS due to project construction, Project Applicant will enter into an agreement with the California Regional Water Quality Control Board (via issuance and implementation of a Clean Water Act Section 401 Certification) to replace affected WoUS at no less than a 1:1 basis, as specified by the California Regional Water Quality Control Board, through a combination of off-site acquisition and preservation, participation in an approved mitigation bank, and/or on- or off-site creation, enhancement or reestablishment of WoUS. The exact ratio will be based on a functions and values assessment.

MM9. To mitigate for the loss of 6.17 acres of streambed and wetlands due to project construction, Project Applicant will enter into an agreement with the California Department of Fish and Wildlife (via issuance and implementation of a Streambed Alteration Agreement, Section 1600) to replace affected streambed at no less than a 1:1 basis, as specified by the California Department of Fish and Wildlife, through a combination of off-site acquisition and preservation, participation in an approved mitigation bank, and/or on- or off-site creation, enhancement or reestablishment of the streambed. The exact ratio will be based on a functions and values assessment.

Wildlife

MM10. To prevent impacts to sensitive, migratory and nesting birds, including raptors, clearing, or other work in native habitats, should be avoided during the critical nesting period of January 1 – September 1. If work cannot be avoided during this timeframe, a nesting bird survey will be conducted within three days prior to clearing and/or grading, by a qualified biologist. If present, a nesting bird plan will be developed and implemented to include appropriate measures to mitigate the potential impacts, including maintaining a buffer area until fledging has occurred. Active bird nests should be mapped utilizing a hand-held global positioning system (GPS) (getting as close as possible without disturbing the nest) and a buffer will be flagged around the nest (typically 300' for most species, 500' buffer for raptor nests, as determined appropriate by the biologist). Construction should not be permitted within the buffer areas while the nest continues to be active (eggs, chicks, etc.). Once fledging has occurred no further avoidance is required.

MM11. A pre-construction burrowing owl clearance survey shall be conducted no more than 30 days before earth disturbance (construction). The surveys will be conducted as close to the actual construction initiation date as possible. If present, the project biologist will consult with local and state agencies, as appropriate, and develop a mitigation plan.

Invasive Vegetation Control

MM12. Design guidelines for the proposed Project will provide the homeowners with a list of native landscaping materials permitted within the development area. These materials have been selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the area. None of the plants listed in Section 6.1.4 of the MSHCP will be utilized in the development and their use by future homeowners will be prohibited. The MSHCP has identified invasive plants that should be removed from open space areas. This list is included in Table 6-2 of the MSHCP and here in Appendix D.

MM13. To mitigate for exposure of areas to additional invasive vegetation, City of Corona approved barriers will be placed around the development (See Measure 24 below).

MM14. All heavy equipment that will be used will be washed, particularly the wheels and under carriage, prior to bringing it onto the Project site from other construction sites to prevent the spread of weedy species.

MM15. Staging areas shall be placed in areas that have been previously disturbed or have degraded habitat within the project footprint, but do not show an infestation of non-native species. Staging areas will be maintained in a weed/noxious weed-free condition.

Construction Site

MM16. All refuse created or brought on site by clearing personnel or contractors must be placed in covered containers, removed from the site daily and disposed of properly.

MM17. Field crews should maintain the speed limit on posted roads and limit vehicle/truck speeds on unpaved surfaces to 15 miles per hour.

MSHCP Urban/Wildlands Interface

MM18. The proposed Project will incorporate measures, to meet MSHCP Urban/Wildlands Interface guidelines and requirements. These measures will address Drainage, Toxics, Lighting, Noise, Barriers, Access, Pets and Grading/Land Development (See Section 9.5).

6.0) ANALYSIS OF POTENTIAL EFFECTS

6.1) Proposed Project

Direct impacts of the proposed Project are those that result from any ground-disturbing activities (i.e., vegetation removal, grading, paving, building of structures, installing landscaping, creating the fuel modification zone, etc.) associated with the Skyline Heights Project designs. An additional ten (10) foot buffer was added around portions of the project design and into the impact calculations to allow for temporary impacts associated with development, but outside the Project footprint (i.e. haul or access roads. Impacts were calculated based on Project designs by KWC Engineering (January 14, 2015) (Figure 10).

Direct impacts were evaluated with respect to general biological impacts, state and federal listed endangered or threatened species, species of Special Concern and sensitive habitats. Direct impacts to jurisdictional features, including drainages and wetlands, and issues of local concern such as the Riverside County MSHCP and City of Corona General Plan were also evaluated. Indirect impacts can result from artificial lighting introduced by the proposed Project into native habitats, increased noise, dust, trash and vibrations, introduction of invasive plants, and intrusion into native vegetation during construction and following development.

6.1.1) Vegetation Impacts

This section includes impacts to habitats present in the project area. Long-term effects result mainly from permanent removal of habitat and direct and indirect impacts by construction and personal vehicles associated with the development.

- ***Direct Effects:***

  General Vegetation Impacts: Implementation of the proposed project would result in the estimated direct permanent loss of approximately 153.5 acres of habitat (Figure 11). Foothill Parkway is not included in the impact calculations, although it is a part of the overall survey area.

  The 153.5 acres of impacted habitat adds to the reduction in the availability of nest/den sites and foraging habitats for species that utilize woodlands, shrublands, grasslands, riparian and disturbed habitats. Approximately 117.39 acres of avoided habitats will remain and continue to provide habitat to local species that utilize the site.

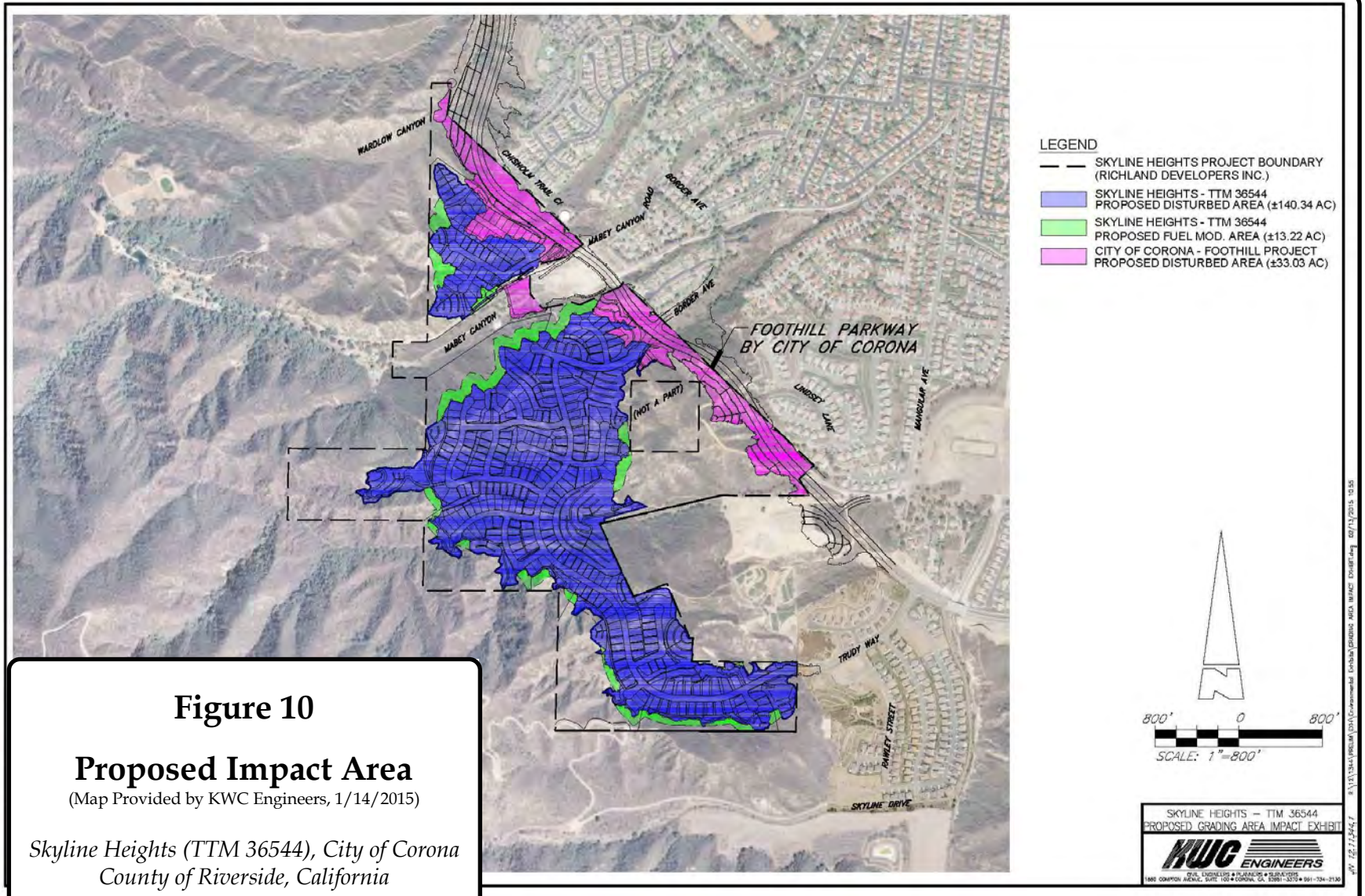


Figure 10

Proposed Impact Area
(Map Provided by KWC Engineers, 1/14/2015)

Skyline Heights (TTM 36544), City of Corona
County of Riverside, California

Table 6. Direct Impacts To Habitat By The Proposed Project

Habitat	In the Survey Area(acres)	Avoided (acres)	Project Impacts (acres)	Riparian Impacts (acres)
Chaparral Alliance	218.05	93.66	124.39	0
Coast Live Oak Alliance	1.17	1.07	0.1	0.1
Disturbed	0	0	0	0
Eucalyptus/Pepper Alliance	2.82	2.82	0	0
Grassland Alliance	5.54	2.12	3.42	0
Mulefat Alliance	1.14	1.05	0.09	0.09
Sage Scrub Alliance	41.59	16.62	24.97	0
Sycamore Alliance	0.37	0.05	0.32	0.32
Willow Alliance	0.21	0	0.21	0.21
TOTAL	**270.89**	**117.39**	**153.5**	**0.72**

Riparian/Riverine Impacts: Included in the habitat impacts are unavoidable impacts to 6.17 acres of MSHCP Riparian/Riverine areas. Unavoidable Project impacts to 6.17 acres of Riparian/Riverine area, including Sycamore Alliance (0.32 acre), Mulefat Alliance (0.09 acre), Willow Alliance (0.21 acre), Oak Alliance (0.1 acre) and streambeds within upland habitats (5.4 acres), will be limited to pad development, drainage improvements and primary ingress/egress into the project site. The proposed project has been designed to avoid almost all of the coast live oak (1.07 ac) and mulefat habitat (1.05 ac) within the survey area.

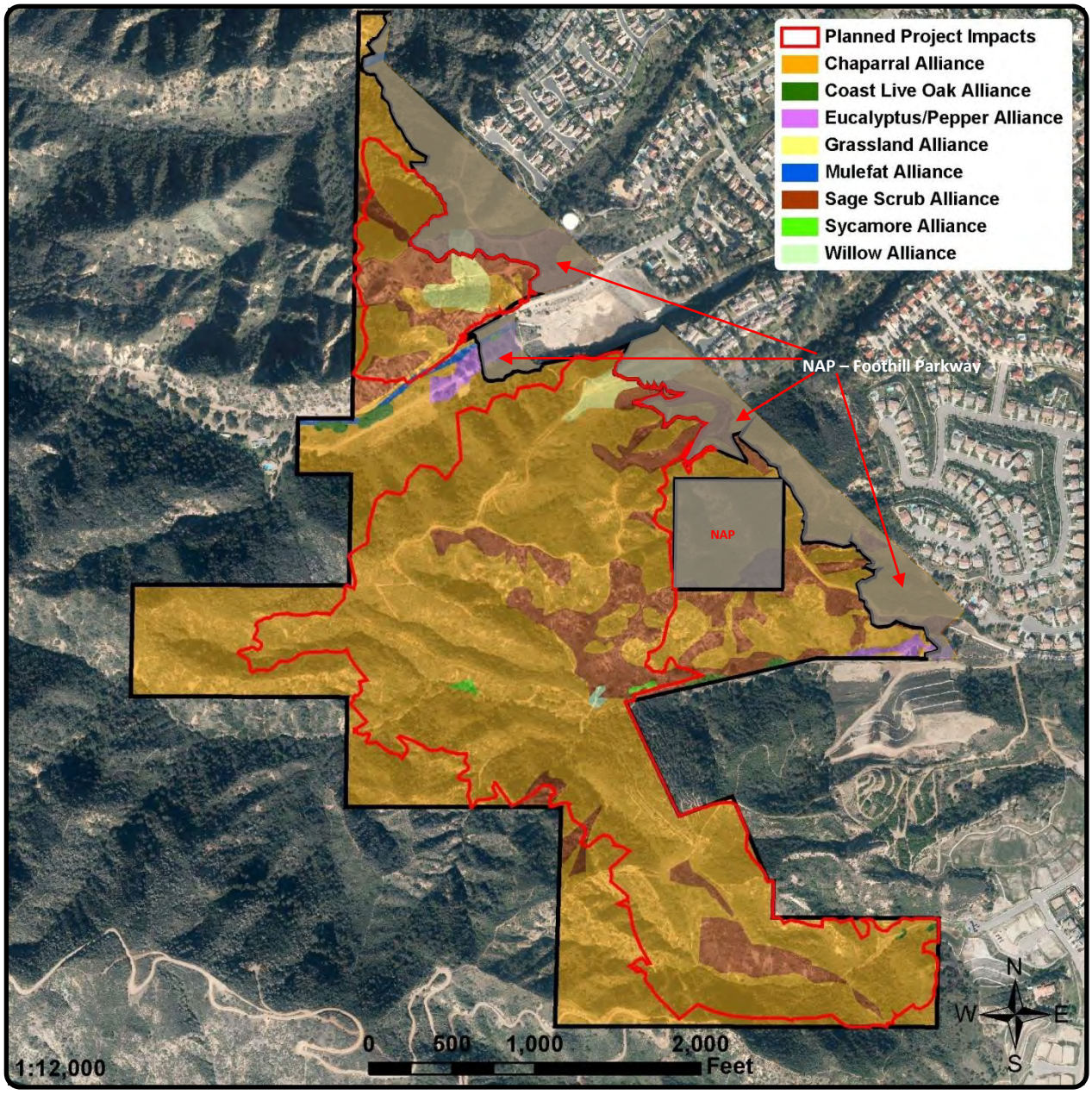
Coast Live Oak Impacts: Oak trees will be avoided to the maximum extent feasible. Over 1 acre of the onsite coast live oak habitat will be avoided under the current design. Included in the habitat impacts are unavoidable impacts to 0.1 acres of coast live oaks.

The following mitigation measures are proposed for impacts to habitat and vegetation. Each mitigation measure refers back to the corresponding measure number detailed in Section 5.0.

MM3) On a 1:1 basis, ten (10) acres of natural habitat, biologically equivalent or superior to the PQP (NAP) land that the survey area surrounds, adjacent to Forest Service land will be preserved and a deed restriction placed on the land to prevent future development.

MM4) Replacement of coast live oaks at no less than a 1:1 basis within landscaped areas.

MM5) Mitigation will be provided for the 6.17 acre of Riparian/Riverine impacts at no less than a 1:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values analysis. The proponent proposes mitigation at a ratio of 2:1 for riparian habitat and 1:1 for riverine habitat in the form of off-site mitigation with the Riverside-Corona Resource Conservation District (RCRCD). In the event mitigation with the RCRCD is not



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Figure 11

Habitat Map
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

finalized for any reason, equal or greater value mitigation will be provided in the form of one or more of the following: off-site acquisition and preservation, participation in an approved mitigation bank, on-site creation, off-site creation, enhancement or reestablishment.

MM12, 13, 14, 15) minimizing the introduction of non-native species into cleared areas.

- ***Indirect Effects*:** Indirect impacts to habitat in the immediate project vicinity could potentially occur as a result of fugitive dust and invasive species.

  Use of heavy equipment, exposing soils and accessing the sites on dirt roads will all result in higher than usual fugitive dust and emission levels during clearing, which can affect the health of local wildlife and plants. Dust particles settling directly on vegetation can affect vegetation by physical shading, therefore reducing photosynthesis, blocking leaf stomata, and/or uptake into leaf tissues (Farmer 1993). These impacts can most notably reduce vegetation growth rates. Long-term impacts are expected to be similar to current levels. Normal BMPs require watering when necessary to reduce fugitive dust. Mitigation Measure 16 recommends limiting vehicle/truck speeds within the active construction site and on unpaved roads.

  A potential increase in non-native species, which could impact native plant species, could occur along the Project margins where newly exposed soils, not developed or landscaped, could provide fertile ground. Invasive species occur within the impact area and could, therefore, disperse seed to newly turned soil. Invasive and noxious weed species seed could be spread or introduced into the area by vehicles or machinery. Mitigation Measures 12-15 reduce the potential to spread of noxious and non-native species by not utilizing any prohibited species within the Project design, placing barriers between development and open space, washing equipment prior to arriving onsite, and limiting staging of equipment to areas not occupied by noxious weeds.

  Human and pet encroachment will be reduced by the incorporation of barriers between the avoided areas and development in the Project design, signage and Homeowner education (See Section 9.5, Urban/Wildlands Interface).

6.1.2) Botanical Species

The site was evaluated for potential presence or absence of suitable habitat to support TEPC botanical resources. Only Braunton's milk-vetch, Munz's onion, San Diego ambrosia and thread-leaved brodiaea were determined to have potentially suitable habitat in the survey area. These species were not observed during surveys and following focused surveys were determined to have a low probability of occurring in the survey area.

One sensitive species, Coulter's matilija poppy, was observed in the survey area during the current survey effort. Two species, intermediate mariposa lily and chaparral nolina, were previously recorded in the CNDDB in the survey area, but were not relocated. Intermediate mariposa lily is also considered a USFS sensitive species. Four other sensitive species have suitable or potentially suitable habitat in the survey area and the species were determined to have a moderate or high potential of occurring; Catalina mariposa lily, Fish's milkwort, intermediate monardella and white rabbit tobacco. No occurrences of these four additional plants are documented within the survey area, nor were they observed during surveys.

- ***Direct Effects*:** No TEPC species were observed in the survey area during surveys. There are no recorded occurrences of TEPC species nor does any designated or proposed critical habitat occur in the survey area. No impacts are expected to TEPC botanical species as a result of this proposed Project.

  The proposed Project may directly impact the above listed sensitive species. Coulter's matilija poppy's status as a California S4 (Apparently secure in California, but with some concern) and CNPS List 4.2 (watch list) identifies the species as sensitive, but not endangered or threatened. Based on this level of sensitivity impacts to Coulter's matilija poppy would be considered adverse, but not significant under CEQA due to the large distribution and number of locations of this species. Under the MSHCP the Coulter's matilija poppy will be considered a "Covered Species Adequately Conserved" once preservation levels within the Conservation Areas are met. This site is not within an MSHCP Conservation Area. Coulter's matilija poppy is also considered a species to be protected in association with Riparian/Riverine resources.

  The proposed Project design will avoid 117.39 acres of natural habitat and will limit potential impacts to sensitive species in the survey area, specifically to Coulter's matilija poppy. Approximately 60% of the identified Coulter's matilija poppy population (Figure 8), based on the number of individuals recorded in Tables 13 and 14 (Appendix A), will be avoided. Although the plants are spread out over a wide area within the impact zone, locations 1 –6 have a high concentration of plants. Locations 8-13 cover a larger area, but supported fewer individuals in both the 2008 and 2013 surveys.

  The intermediate mariposa lily population previously recorded in the survey area was not relocated, but will be impacted by the current Project design. This species is considered by the MSHCP as a "Covered Species Adequately Conserved."

  Chaparral nolina was recorded in the CNDDB as occurring over a large area that crossed a small portion of the project area. Coulter's matilija poppy's status as a California S2 (Imperiled) and CNPS List 1B.2 (Plants rare, threatened or endangered in California and

elsewhere, Moderately threatened in California) identifies the species as sensitive, but not endangered or threatened. This species is not a "Covered Species" under the MSHCP. No chaparral nolina was observed during previous or current surveys. Impacts to this species are not generally regulated and would be considered less than significant.

No other sensitive species were observed within the survey area. Of the other four species with the potential to occur in the survey area (Catalina mariposa lily, Fish's milkwort, intermediate monardella and white rabbit tobacco) only Fish's milkwort is a species covered under the MSHCP. Fish's milkwort will be considered a "Covered Species Adequately Conserved" once preservation levels within the Conservation Areas are met. Impacts to the remaining species are not generally regulated and as the species were not observed over several years; if impacts occur they are expected to be limited. Impacts to these species are considered less than significant.

It is possible that unobserved or new growth of sensitive species identified as having a moderate or high potential of occurring in the survey area, but not previously observed, could be impacted by the proposed Project. Mitigation Measure 1, fencing or flagging the impact area prior to clearing to prevent unauthorized impacts to vegetation, and (MM2) avoiding impacts to Coulter's matilija poppy, to the extent practical, are measures that reduce potential impacts to sensitive species.

- ***Indirect Effects*:** Indirect impacts to sensitive botanical species in the immediate project vicinity could potentially occur as a result of chemical emissions, fugitive dust, human presence, and invasive species.

Increases of chemical emissions and fugitive dust during clearing would be temporary. Release of chemical emissions from vehicles and machinery would increase during clearing; however, due to the remote location and open area, emissions should disperse. Impacts of chemical emissions after clearing are not expected to increase substantially over current levels.

Fugitive dust rates could increase during clearing as a result of vehicle and machinery use and the exposure of soils. Mitigation Measures for reducing impacts include (MM17) limiting truck speeds on unpaved surfaces. In addition, typical BMPs require the limiting of fugitive dust rates in several ways, including, use of water trucks where needed.

A potential increase in non-native species, which could impact native plant species, could occur along the proposed Project margins where newly exposed soils, not developed or landscaped, could provide fertile ground. Invasive species occur within the impact area and could, therefore, disperse seed to newly turned soil. Invasive and noxious weed species

seed could be spread or introduced into the area by vehicles or machinery. Mitigation Measures 12-15 reduce the potential to spread of noxious and non-native species by not utilizing any prohibited species within the Project design, placing barriers between development and open space, washing equipment prior to arriving onsite, and limiting staging of equipment to areas not occupied by noxious weeds.

Human and pet encroachment will be reduced by the incorporation of barriers between the avoided areas and development in the Project design, signage and Homeowner education (See Section 9.5, Urban/Wildlands Interface).

6.1.3) Wildlife Species

No occurrences of listed TEPC wildlife were recorded or observed in the survey area. One listed TEPC wildlife species, golden eagle (FP), has been determined to have a moderate potential to occur in the survey area. The coastal California gnatcatcher, was determined to have a moderate potential of occurrence in the survey area, based on habitat and proximity to known populations, but following focused surveys it was determined the species is not currently utilizing the survey area. No habitat suitable to support the Stephen's kangaroo rat (SKR) is present in the survey area and the survey area is not located within the Riverside County SKR Habitat Conservation Plan Area or SKR Fee area.

Due to the number of sensitive wildlife species that have potential habitat in the survey area they were analyzed for impacts in groups based upon type of species. Five sensitive wildlife species were observed during the biological surveys; northern red-diamond rattlesnake, Cooper's hawk, California horned lark, Lawrence's goldfinch and the San Diego black-tailed jackrabbit. The northern red-diamond rattlesnake is also considered a USFS sensitive species.

Seventeen other sensitive wildlife species, which include seven USFS sensitive species, were determined to have a high or moderate potential to occur in the survey area; California silvery legless lizard, orange-throated whiptail, coastal whiptail, rosy boa, San Bernardino/San Diego ringneck snake, California mountain kingsnake (San Diego population), coast horned lizard, Coronado island skink, coast patch-nosed snake, southern California rufous-crowned sparrow, burrowing owl, black-chinned sparrow, pallid bat, Dulzura pocket mouse, hoary bat, San Diego desert woodrat and monarch butterfly.

- ***Direct Impacts*:** The project was designed to avoid 117.39 acres of natural habitat, which will limit potential impacts to sensitive species in the survey area. The coastal California gnatcatcher and golden eagle were not observed during general and focused surveys. The species did not occupy the survey area at the time of the surveys, but potentially suitable habitat is present. The species have not been previously recorded in the survey area.

However these species are considered "Covered Species Adequately Conserved" in the MSHCP and the survey area is not in a Conservation Area. Mitigation Measure 10 (MM10) avoiding clearing and grubbing between January 1 and September 1 or conducting nesting bird clearance will reduce the impacts to these birds if present at the time of construction.

Of the sensitive species with the potential to occur in the impact area the orange-throated whiptail, coastal whiptail, coast horned lizard, southern California rufous crowned sparrow and San Diego desert woodrat are considered "Covered Species Adequately Conserved" in the MSHCP. The San Diego mountain kingsnake will be considered a "Covered Species Adequately Conserved" once a Memorandum of Understanding is executed with the U.S. Forest Service addressing management for this species.

The burrowing owl is considered a species requiring "Additional Survey Needs". These species do not have enough existing available data to make findings necessary to determine if it is adequately conserved under the MSHCP. Once enough data is collected to determine it is a "Covered Species Adequately Conserved" in the MSHCP, survey requirements may be modified or waived. The project site is located in the required survey area and surveys were performed. No burrowing owl or sign of the burrowing owl was observed in the survey area. The site is currently unoccupied, but this species is migratory and has the potential to relocate to the site. MM11 requires a preconstruction survey for burrowing owls be conducted to prevent impacts to this species. With this mitigation measure impacts are considered less than significant.

The remaining species; California silvery legless lizard, rosy boa, San Bernardino/San Diego ringneck snake, Coronado island skink, coast patch-nosed snake, black-chinned sparrow, pallid bat, Dulzura pocket mouse, hoary bat and monarch butterfly are not 'Adequately Conserved' under the MSHCP.

Each of the sensitive species above are known to occur or have a high to moderate potential to occur in the habitat on or immediately adjacent to the proposed impact area. It is possible that if these species are present at the time of construction there may be some direct impacts to individuals. The noise, activity, and presence of humans on the worksite will likely discourage many species of wildlife from the site during working hours, depending on the mobility of the species. More mobile species will move away from active construction zones into adjacent habitats. Wildlife may take refuge around the equipment in off hours and, if present, could be injured or killed by construction vehicles or passenger vehicles when vehicles are first started/moved, when species are moving through the construction zones, or when hiding within the impact area.

The larger mammal and bat species are not expected to be directly impacted and were considered to have a low potential of impacts, based on their high mobility levels and lack of roosting habitat observed. It is possible, though, that potential roosting or denning habitat does occur in the Project impact area or that burrows went unobserved. In addition, the possibility cannot be completely eliminated that these species could be hit by construction vehicles or trapped in a roost/den location. Take of these species is possible; however, the wide territories of these species, vast open habitat in the area, no existing access restrictions around Project area preventing escape and the nocturnal habits of some species reduce the potential for impacts.

Avian species have a low-moderate potential of being directly impacted based on their mobility and the relatively slow moving construction equipment, but if active nests are present within the Project area, eggs and juveniles have a high potential of being impacted.

Small mammal and reptile species have a higher potential to be impacted by construction activities. Small mammals and reptiles can be very mobile, but often hide or rest in subsurface burrows or in debris piles and could be impacted during clearing, grubbing, dirt moving or construction. During construction the noise, activity, and presence of humans on the worksite will likely discourage mammals from the site during working hours, but these species may take refuge around the equipment or in subsurface burrows and debris piles in off hours.

Sensitive reptile and small mammal species that have moderate or high potential for occurring within the habitat in the survey area are considered to have a moderate potential of being directly impacted.

Mitigation Measures have been incorporated to minimize direct impacts to sensitive wildlife species. (MM1) flagging or fencing the impact area to prevent unintended impacts, (MM10) avoiding clearing and grubbing between January 1 and September 1 or conducting a nesting bird clearance will reduce the impacts to nesting birds, eggs or dependent juveniles during construction, although intended to minimize impacts to nesting birds avoidance of this period (if possible) would also reduce impacts to other breeding species, (MM11) preconstruction survey for burrowing owls, (MM16) all refuse will be placed in covered containers and removed daily so as to reduce the potential for attracting wildlife to an unsafe construction zone where they may be trapped or injured. This will also reduce opportunistic predatory wildlife such as crows, ravens, coyotes, dogs etc. which might otherwise be expected to increase in numbers and impact pray species.

The species that are not ‘Adequately Conserved’ under the MSHCP, California silvery legless lizard, rosy boa, San Bernardino/San Diego ringneck snake, Coronado island skink,

coast patch-nosed snake, black-chinned sparrow, pallid bat, Dulzura pocket mouse, hoary bat and monarch butterfly are considered sensitive by the CDFW and/or USFS and are being monitored for changes in their level of rarity. At this time impacts to these species are generally not regulated and with the mitigation measures outlined, impacts are considered to be less than significant.

- ***Indirect Effects*:** Habitat fragmentation will consist of the loss of 153.5 acres of native habitats and isolation of native habitats to the east of the Project from the larger Core B habitat area. The Project will incorporate barriers to prevent both common and sensitive wildlife species from entering the residential development and increasing their potential for impact by humans, vehicles, pets or other urban hazards. The barriers would also prevent human and pet encroachment and the potential for direct impacts by those means. These preventative measures, while incorporated for the safety of the wildlife and adjacent habitat, also restricts wildlife movement and adds to habitat fragmentation.

  Amphibian, reptile, avian, mammal and insect species may experience indirect impacts from construction including, increases in noise, chemical emissions, and vibration impacts resulting in avoidance and abandonment of the area. Movement of species could concentrate populations, increase competition for resources in adjacent habitats and leave displaced individuals vulnerable to predation. Those species that may use the Project area for foraging will still have access to large expanses of relatively undisturbed habitat in the project vicinity, including the Cleveland National Forest lands to the west. Due to the remote location and open area emissions should disperse.

  Although the species will be displaced and may alter behavior, Mitigation Measure (10) which recommends clearing and grubbing be conducted outside the nesting bird season, or, if work cannot be avoided, nesting bird surveys be conducted prior to impacts, will prevent impacts to eggs and juveniles. If avoidance is possible it will also reduce impacts to all wildlife during typical reproduction periods. With the presence of substantial habitat of equal quality nearby, the project vicinity can provide sufficient foraging and nesting habitat. In addition, the MSHCP considers the development throughout the County and balances development with conservation of the highest quality and largest possible areas of native habitats. The MSHCP determined the survey area is not a Conservation Area.

  Increases in invasive plant species could affect the diet of small herbivorous mammal species by displacing their primary food sources and out-compete native vegetation that may be needed by specific wildlife species (i.e. quino host plant). A potential increase in invasive species would likely occur along the perimeter of the impact area, where newly exposed soils could provide fertile ground. Invasive species that may occur along the current roadway and within the impact area could disperse seed to newly turned soil. Large

areas of undisturbed vegetation occur in the project vicinity and would be available food sources for these species. Mitigation Measures 12-15 are incorporated to minimize increases in invasive vegetation.

After completion of construction, noise levels adjacent to the site will be increased over current conditions at those locations, but are not expected to exceed residential noise standards. In addition, barriers are proposed between residential development and conservation areas, which will reduce the amount of noise, chemical emissions and fugitive dust from the development crossing into or affecting wildlife in the conservation areas after completion of construction.

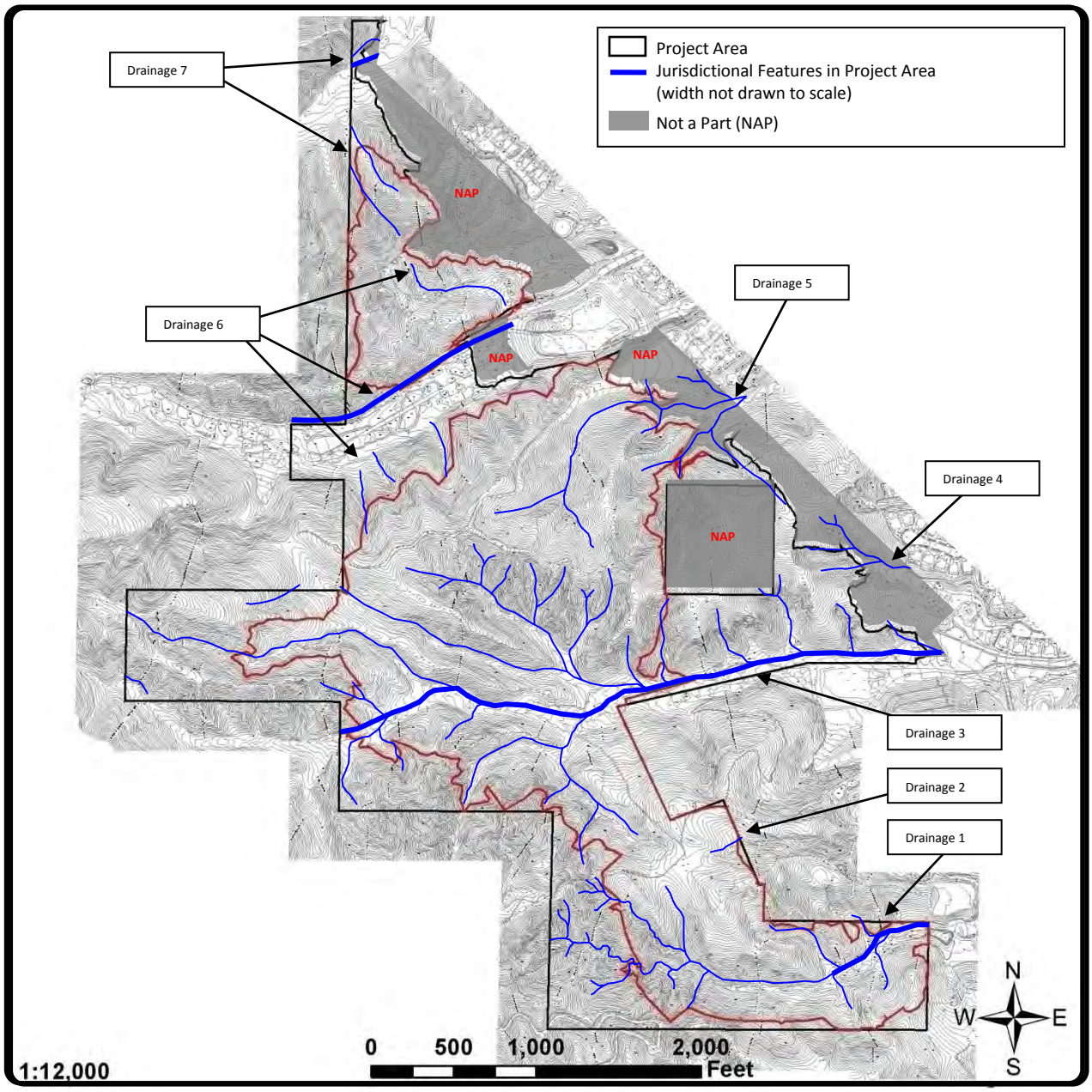
6.1.4) Jurisdictional Drainage/Hydrology

No aquatic or vernal pool habitats were observed within the survey area. Seven (7) main jurisdictional features occur within the survey area, containing fifty six (56) tributaries, for a total of 63 Non-Relatively Permanent Water (Non-RPW) features (i.e., ephemeral carrier of periodic rainfall). Each tributary was given an identifier that includes the main feature number (1-7) followed by a letter, which were given in order from a-z. Therefore all of the tributaries that lead into feature 1 begin with the number 1.

- ***Direct Effects:*** The proposed project will impact that 22,240 linear feet, 6.17 acres of State of California, Department of Fish and Wildlife Jurisdiction (Figure 12) and 20,232 linear feet, 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS) (Figure 13). No direct effects will occur to Federal wetlands. Impacts to the individual features are summarized in Table 7, below. The feature detail, including the length, average width and impacts to each drainage and tributary is included in Table 15, Appendix A.

Table 7. Drainage Impact Summary

Feature	**Impacts to State Streambeds**			**Impacts to Federal Features**			**Impacts to MSHCP Rip/Riv Habitat**	
(including tributaries)	Sq. ft.	Acres	Length	Sq. ft.	Acres	Length	Sq. ft.	Acres
F-1	42,594	0.98	6,052	38252	0.88	5232	42,594	0.98
F-2	191	0.004	191	56	0.001	70	191	0.004
F-3	219,064	5.03	13,776	28,825	0.66	13,232	219,064	5.03
F-4	0	0	0	0	0	0	0	0
F-5	3298	0.08	1986	1427	0.03	1317	3298	0.08
F-6	3694	0.08	244	0	0	0	3694	0.08
F-7	0	0	0	0	0	0	0	0
	268,841	6.17ac	22,249	68,560	1.57 ac	19,851	268,841	6.17 ac



L&L Environmental, Inc.

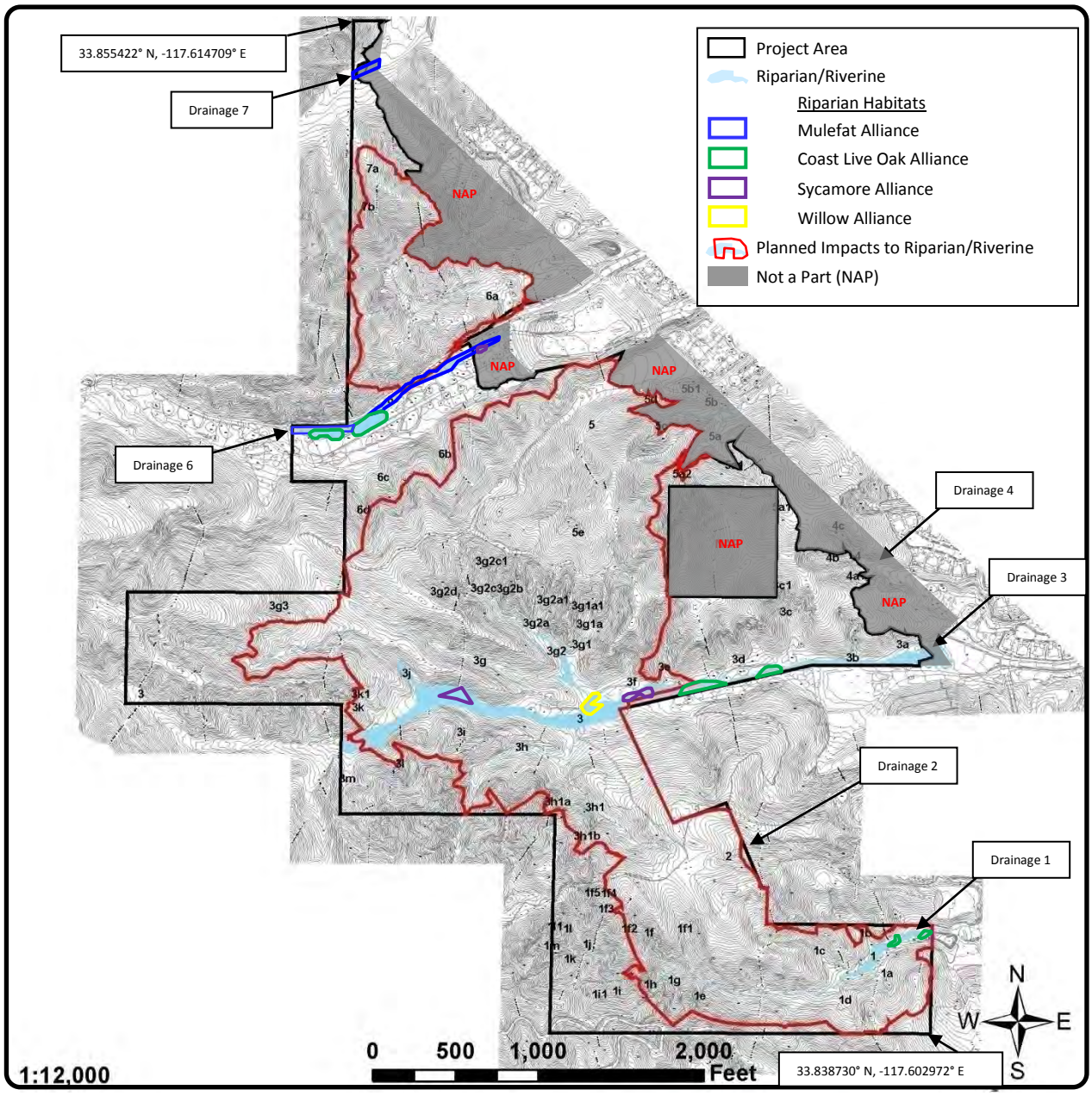
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 12

Impacts to Features
(width not to scale)
(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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Figure 13

Feature and Riparian Impacts
(to scale-small tributaries not visible)
(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Where feasible the project will incorporate a 100 foot buffer from the outer limits of the dripline of the avoided riparian habitat, where applicable.

The proposed project has been designed to avoid approximately 4 acres of State streambeds and MSHCP Riparian/Riverine habitat and 0.6 acres of federal jurisdiction. The majority of avoidance will occur in F-3 (the unnamed blue-line) (2.47acres) and F-6 (Mabey Wash) (1.14acres). Although only a small portion of F-7 (Wardlow Wash) crosses the survey area, the entire feature is avoided.

Mitigation Measures have been incorporated to minimize direct impacts to jurisdictional features. MM5 is for the mitigation of Riparian/Riverine impacts at no less than a 1:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values analysis. The proponent proposes mitigation at a ratio of 2:1 for riparian habitat and 1:1 for riverine habitat in the form of off-site mitigation with the Riverside-Corona Resource Conservation District (RCRCD). MM7-9 are for the Project Applicant to enter into agreements with the appropriate agencies for impacts to jurisdictional waters. In these agreements mitigation will be at no less than a 1:1 basis.

- ***Indirect Effects*:** Impacts from earthmoving or other construction activities in a drainage or sheet-flow area could result in discharge of toxic materials, silt, debris, or excessive erosion into waters of the U.S. during project construction. Since OHWM are identified downstream from the Project and there are drainage features in the Project area, it will be important to prevent any discharge that may reach those streambeds. Use of BMPs, (MM6) including erosion control measures, restrictions on vehicle maintenance and the disposal of toxic materials are incorporated to minimize impacts to drainage features to the extent possible. This will also minimize impacts downstream. With the Mitigation Measures implemented it is likely that sedimentation may be reduced over the long-term and erosion and toxic material discharge reduced or prevented.

6.1.5) Migratory Birds

Migratory birds include common, sensitive and listed species. They can utilize the riparian, scrub, grassland, woodland and ornamental habitats in the survey area. Impacts to migratory birds (other than those species specifically addressed elsewhere in this document) under this rule are limited to nesting.

- ***Direct Effects (to nesting)*:** Approximately 153.5 acres of native habitat would be permanently impacted by clearing. If active nests are present in the impact area at the time of construction there could be direct impacts to eggs and juveniles. With Mitigation Measure

10, avoiding clearing and grubbing between January 1 and September 1 or conducting a nesting bird clearance will prevent impacts to nesting birds, eggs or dependent juveniles.

- ***Indirect Effects (to nesting)*:** Human presence, noise, chemical emissions, predation and vibration impacts could result from clearing and avoidance and abandonment of the area is likely. With Mitigation Measure 10, avoiding clearing between January 1 and September 1 or conducting a nesting bird clearance impacts to nesting birds and their young should be prevented.

6.1.6) Wildlife Corridors

The project site does not contain any movement corridors for native resident migratory fish or wildlife species beyond local movement.

- ***Direct Effects*:** Wildlife currently move freely throughout the project site and surrounding areas, and upon build-out of the proposed project, are anticipated continue to use open space areas adjacent to the project site to the west and south. Thus, potential impacts to regional movement are considered less than significant and mitigation is not required. It should be noted that Wardlow Wash, which crosses the northernmost tip of the project site, was identified by BonTerra Consulting as a regional wildlife corridor that facilitates movement between the Cleveland National Forest and Prado Basin, as referenced by the Foothill Parkway Westerly Extension DEIR (RBF Consulting 2008). However, Wardlow Wash is relatively constrained by development on either side, road crossings at three locations (Paseo Grande, Serfas Club Drive, and Palisades Drive), and State Route 91 is a significant barrier to wildlife movement. Regardless, Wardlow Wash will be avoided and the proposed project would not inhibit wildlife movement along the drainage; thus, impacts to regional wildlife movement are less than significant.

- ***Indirect Effects*:** Human presence, noise, lighting and predation could generally hinder wildlife movement and could result in avoidance and abandonment of the area. With Urban/Wildlands Interface measures in place indirect impacts should be minimized.

7.0) Cumulative Impacts

Cumulative impacts to the biological resources considered development within the City of Corona and within the western Riverside County as it is evaluated within the MSHCP

7.1) Development Considered for Cumulative Impacts

7.1.1) City of Corona

According to the 2004 General Plan the City limits cover 37.6 square miles. The Project survey area addressed in this report identifies the potential future annexation of lands adjacent to and including the proposed project area. The Corona General Plan states that in 2002, "approximately 30 percent of the City was developed in housing; 4 percent for commercial and office uses; 12 percent for industrial uses; 37 percent for public, parks, and open spaces; and 17 percent as undeveloped or not committed as permanent open space. Less than 1 percent of the lands continue to be used for agricultural purposes." The General Plan designated 40.3 percent of overall Land Use to Residential development of which, the proposed project area is already designated in the Land Use Plan as, future Rural Residential I, if the land is annexed. By 2030, the population of Corona is projected to increase 37.2 percent to over 170,000 people. The survey area is located adjacent to low density residential uses.

The Corona General Plan attempts to balance development with conservation of environmental resources. The city of Corona is a participating jurisdiction in the MSHCP

7.1.2) Western Riverside County MSHCP (MSHCP)

The project area occurs within the boundaries of the MSHCP. The MSHCP is a regional Habitat Conservation Plan intended to enhance and maintain biological and ecological diversity while allowing for development and economic growth within the County. By addressing environmental resources on a regional scale rather than individually, the MSHCP is able to preserve large areas of native habitat, corridors between habitats and areas of unique habitats while streamlining the regulatory process.

The MSHCP plan was reviewed in Section 2.8 above, but the following information is intended to supplement that data for the purposes of examining cumulative impacts. "The MSHCP plan area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet and San Jacinto. The MSHCP will be used to allow the participating

jurisdictions to authorize 'Take' of plant and wildlife species identified within the Plan Area… in exchange for the assembly and management of a coordinated MSHCP Conservation Area."

The MSHCP is a habitat-based approach to the protection of covered species that focuses on conservation and management of lands essential for their long-term conservation. The MSHCP considered projects already planned and other reasonably foreseeable projects to determine the minimization and mitigation levels required and additional needs surveys. The MSHCP provides a process to mitigate for cumulative impacts in the region to covered species and their habitats. Project consistency with Section 6.0 (MSHCP Implementation Structure) of the MSHCP ensures cumulative impacts to those species are mitigated.

7.2) Cumulative Impacts to Resources

The proposed Project will contribute to regional cumulative impacts as it pertains to the loss of native vegetation, habitat for special status botanical and wildlife species, Coulter's matilija poppy, nesting bird habitat, foraging habitat, Riparian/Riverine habitat and jurisdictional features. However, with the Project's participation in the MSHCP, the Project's location outside of Conservation Areas and Criteria Areas, and with additional mitigation measures to be implemented (those listed here and those that will be required by state and federal permits for impacts to jurisdictional waters), the cumulative impacts attributed to the Project would be reduced to below a level of significance.

7.2.1) General Vegetation

- ***Cumulative Effects*:** The proposed project could result in an additional decrease of 124.39 acres of chaparral Alliance, 0.1 acre of open coast live oak woodland, 3.42 acres of grassland Alliance, 0.09 acre of mulefat Alliance, 24.97 acres of sage scrub Alliance, 0.32 acre of sycamore Alliance and 0.21 acre of willow Alliance that falls within the maximum impact area and would add to habitat fragmentation.

  Impacts to additional habitat in the Project vicinity are likely in the future and would add to cumulative impacts; however, the Project's proximity to widespread National Forest lands and the MSHCP Core B will ensure that extensive natural open space is maintained in the project vicinity and that development is limited with minimized impacts.

  Cumulative development in the greater region has been considered and impacts minimized and mitigated for under the MSHCP. By meeting the MSHCP requirements the project's contribution to the regional impact would not be cumulatively considerable. Future projects in the vicinity would also be subject to MSHCP requirements and mitigation.

7.2.2) Threatened, Endangered, Proposed and Candidate (TEPC) Species

Botanical Species

- ***Cumulative Impacts*:** As there are no direct or indirect impacts to federally listed botanical species or to designated or proposed critical habitat. Potentially suitable habitat for species occurs within the proposed Project area, but no species were identified during multiple years of focused surveys. Implementation of this project would not add to any cumulative effects.

Wildlife Species

- ***Cumulative Impacts*:** As there are no direct or indirect impacts to federally listed wildlife species or to designated or proposed critical habitat. Suitable habitat for the coastal California gnatcatcher occurs within the proposed Project area, but the species was not observed during focused surveys. Implementation of this project would not add to any cumulative effects.

7.2.3) Sensitive Species

- ***Cumulative Effects*:** Cumulative habitat loss in the area will affect sensitive species, as loss and degradation of habitat affect the distribution and abundance of species and can indirectly affect survival of remaining populations through fragmentation and isolation into small populations.

  Impacts to Sensitive species are likely in the future; however, the creation and implementation of the MSHCP, which focuses conservation in areas of sensitive communities or concentrations of sensitive species and proximity to National Forest lands, will ensure that extensive natural open space is maintained for sensitive species in the project vicinity and that development in the vicinity is limited.

  Impacts are estimated at 216 Coulter's matilija poppy. Based on the lack of rainfall in 2014, impacts are estimated by the greater 2008 population as it is likely many did not germinate during the 2014 season. Impacts to northern red-diamond rattlesnake may also occur, but the impacts are difficult to quantify.

  These impacts will add to the cumulative impacts to the species, but will not substantially lower the overall population. Although there is some potential for the proposed Project to impact the other sensitive species identified as having a moderate or high probability of occurring in the impact area, and isolated impacts cannot be ruled out, no additional measurable cumulative impacts to these species are expected.

Cumulative development in the greater region has been considered and impacts minimized and mitigated for under the MSHCP. By meeting the MSHCP requirements the project's contribution to the regional impact would not be cumulatively considerable.

7.2.4) Migratory Birds

- ***Cumulative Effects*:** With the mitigation measures incorporated, the proposed project would not add to the cumulative effects to nesting migratory birds. The project is designed to protect migratory birds during the nesting season. Nesting habitat will be preserved in the Project vicinity as a part of the Forest Service lands and the MSHCP Conservation Area Core B.

7.2.5) Jurisdictional Features: Wetlands and Drainages

- ***Cumulative Impacts*:** Current designs show impacts to 22,240 linear feet, 6.17 acres of State of California, Department of Fish and Wildlife Jurisdiction and 20,232 linear feet, 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS). These totals would be added to the cumulative impacts to jurisdictional features in the region.

  With implementation of mitigation measures included in this document and those that will be required by state and federal permits, the proposed project's direct impacts would be reduced to a level below significant and the project's contribution to the regional impact would not be cumulatively considerable.

7.2.6) Riparian/Riverine Habitat

- ***Cumulative Impacts*:** Current designs show impacts to.6.17 acres of Riparian/Riverine habitat. Impacts include dry streambed drainage and riparian habitats including Sycamore Alliance, Mulefat Alliance, Willow Alliance and Oak Alliance. These totals would be added to the cumulative impacts to Riparian/Riverine in the region. With implementation of mitigation measures including no less than a 1:1 mitigation impacts would be reduced to a level below significant and the project's contribution to the regional impact would not be cumulatively considerable. The full analysis will be detailed in the DBESP.

7.2.7) Wildlife Corridors

- ***Cumulative Impacts*:** Current designs will isolate a 10 acre PQP parcel, additional avoided habitat within the survey area to the east of development and existing undeveloped land to the east from Forest Service lands and MSHCP Core B to the west. This would add to habitat fragmentation and species isolation.

- With Mitigation Measures 3 and 5, preserved in open space will increase the size of natural land associated with Core B of the MSHCP Conservation Areas and will provide a larger area to be utilized by a wide variety of species for dispersal, seasonal migration and home range connectivity. There would be no loss to the overall PQP lands. Impacts would be reduced to a level below significant and the project's contribution to the regional impact would not be cumulatively considerable.

8.0) ALTERNATIVES

8.1) No Action Alternative

Under the No Action Alternative no residential development would occur. The current condition of vegetation, habitats, individual botanical or wildlife species, State and Federal jurisdictional features, Riparian/Riverine habitat and wildlife corridors would remain the same. However, the project purpose would not be achieved in that no additional residential housing would be developed to support the growing Corona population. The No Action Alternative would have no direct, indirect or cumulative impacts.

8.2) Project Alternatives

8.2.1) The Reduced Lot Count Alternative

The **Reduced Lot Alternative** was designed to avoid impacts to the main drainage of Feature-1. The only way to avoid impacts to F-1 is with the construction of a bridge or complete removal of the secondary access point. Construction of a bridge would be extremely expensive. Without constructing a bridge the project would have fire access and road circulation issues due to the lack of a secondary access point. Without a contiguous access, providing an efficient looped water system within the project would not be possible creating a risk in a fire situation.

By removing the ability to fill the un-named stream the site will need to export 3 to 4 million cubic yards of material or radically adjust the development footprint to drastically reduce the cut. Being that this site is a hillside grading project, export of that much material is too expensive and redesigning the site and streets to reduce the cut, while maintaining a comparable lot count is not attainable. In addition, the alternative land plans required additional water, sewer, roadway facilities to be constructed that are less efficient and therefore substantially increase the cost to development. The last factor is the lot count and site efficiencies. The inability to fill the un-named stream reduced the developable footprint and would reduce the lot count significantly from the 292 lots shown on TTM 36544. This alternative would be financially infeasible due to increased costs and reduced lot yield.

8.2.2) The Increased Lot Count Alternative

The **Increased Lot Alternative** was the initial project design considered. This Alternative will have the same impacts as the Preferred Alternative (Proposed Project) plus it will also impact Feature-6 (Mabey Wash) and more of Feature-3 (the un-named blue-line stream). This alternative does not incorporate avoidance of Riparian/Riverine resources. It allows for fire and traffic circulation elements required, which allow for public safety in high fire hazard areas, and

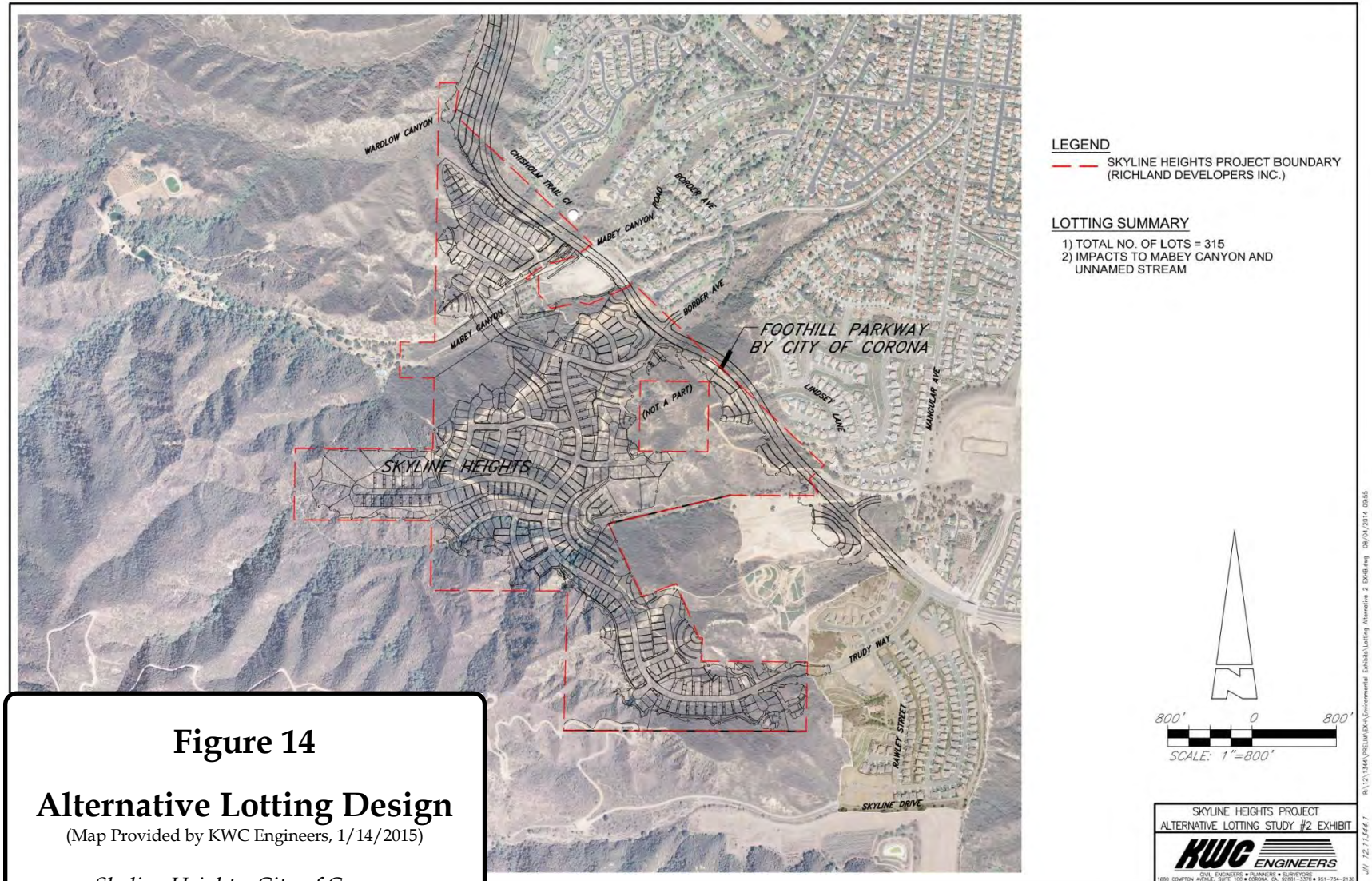


Figure 14

Alternative Lotting Design
(Map Provided by KWC Engineers, 1/14/2015)

Skyline Heights, City of Corona
County of Riverside, California

an efficient and cost effective looped water system, sewer and roadway pattern. It also allows for balanced earthwork quantities and would not require export of excess fill from the site. The Preferred Alternative would allow for the maximum lot development. This alternative accomplishes the project objective and goal and is considered to be economically feasible, but does not minimize environmental impacts.

Vegetation Impacts

- ***Direct Effects:***

  Implementation of the proposed Alternative would result in the estimated direct permanent loss of approximately 170.6 acres of habitat. Habitat that would be impacted in the added western portion of the survey area is exclusively chaparral Alliance. Habitat south of the 10 acre PQP is a mix of chaparral and sage scrub Alliance. Habitat in and adjacent to Feature 6 (Mabey Canyon) that would be impacted is chaparral Alliance, Eucalyptus/Pepper Alliance and mulefat Alliance.

Table 8. Additional Impacts To Habitat By The Alternative Project

Habitat	Proposed Project Impacts (acres)	Alternative Additional Impacts (est. acres)	
		Habitat	Riparian/Riverine
Chaparral Alliance	124.39	14.7	
Coast Live Oak Alliance	0.1		
Disturbed	0		
Eucalyptus/Pepper Alliance	0	0.75	
Grassland Alliance	3.42		
Mulefat Alliance	0.09	0.25	0.25
Sage Scrub Alliance	24.97	1.4	
Sycamore Alliance	0.32		
Willow Alliance	0.21		
TOTAL	**153.5**	**17.1**	**0.25**

The parcel, under the Project, currently proposed as compensation for isolation of the existing PQP land is in the westernmost portion of the survey area. It is surrounded on three sides by Forest Service land and would create a larger, contiguous block of native habitat if approved as mitigation and restricted from development. Under this Alternative, that parcel of land would be developed and an alternate parcel, likely further from the PQP parcel affected, would have to be selected.

Botanical and Wildlife Species

- ***Direct and Indirect Effects***: Impacts to TEPC or sensitive botanical and wildlife resources would only have a greater probability in the fact that additional habitat would be impacted. The probability the species occurs in the area does not increase. The only exception might be Coulter's matilija poppy, which is located in close proximity to the Alternative's additional impacts, immediately south of the PQP parcel. Although the Alternative design does not impact additional recorded Coulter's matilija poppy locations, it is possible that additional plants occur in this area and were not observed or did not germinate this season.

Jurisdictional Features: Drainage/Hydrology

- ***Direct Effects:*** The Alternative studied would have an additional impact to approximately 0.36 acres of State streambeds and State wetlands and of that 0.21 acres are also considered federal waters of the U.S. No federal wetlands would be impacted.

- ***Indirect Effects*****:** No additional indirect impacts to jurisdictional WoUS are anticipated from the proposed Alternative.

9.0) MSHCP CONSISTENCY ANALYSIS

9.1) Conservation Areas/ Reserve Assembly

This section of the report is intended to analyze the proposed Project's relationship to Cores and Linkages and MSHCP Cell Criteria. The overall goal of this section is to determine if the proposed project is consistent with the Reserve Assembly objectives for the MSHCP.

1) **Cores and Linkages:** The Project is not located within a MSHCP designated Core or Linkage and will not impact overall Reserve Assembly goals. The Project will minimally affect MSHCP Core B, as the survey area is immediately adjacent to the east; however, in most areas the Core is separated from the proposed impact area by undeveloped land and topographic changes.

2) **Biological Objectives of Temescal Canyon Area Plan Subunit:** Species surveys for Burrowing owl are required if appropriate habitat is present. None of the identified Planning Species have been located as part of the habitat assessment and survey for this Project.

3) **Cell Criteria:** There is no cell criteria established for the Project site.

The Project site is within the Temescal Canyon Area Plan. The preservation of the affected acreage would not contribute to the conservation, habitat, or species protection objectives of the MSHCP. The development of the property for other appropriate uses will not impact the overall Reserve Assembly goals.

9.2) Impacts to Riparian/Riverine or Vernal Pools (MSHCP Section 6.1.2)

Streambed/wetland delineation studies identified 10.2 acres of state jurisdictional and Riparian/Riverine area [Sycamore Alliance (0.32 acre), Mulefat Alliance (0.09 acre), Willow Alliance (0.21 acre), Oak Alliance (0.1 acre) and streambeds within upland habitats (5.4 acres)] in the Project impact area. All of the habitat and drainage beds identified as Riparian/Riverine were also considered a part of the state jurisdictional area. No vernal pool habitat was identified in the survey area.

State and MSHCP Section 6.1.2 jurisdictional impacts are 6.17 acres. On- and/or off-Site mitigation will be provided for mitigation of the 6.17 acre of impacts to Riparian/Riverine habitat.

9.3) Public Quasi-Public (PQP) Lands

The proposed Project is outside of PQP lands. The survey area adjoins PQP (public quasi-public) properties to the north, west and south. With the implementation of the Project a single

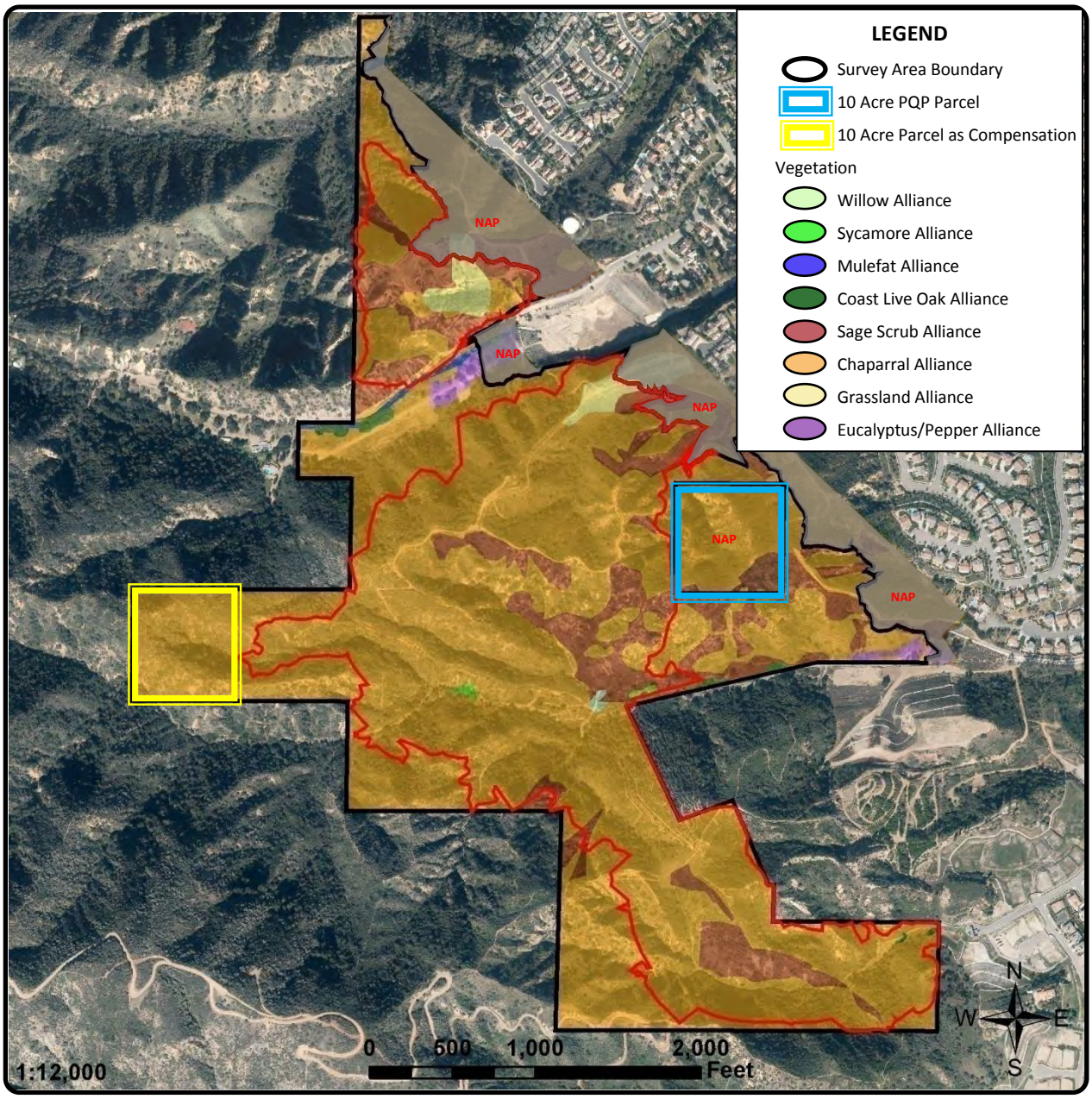
10 acre PQP parcel is surrounded by the survey area and is bordered to the west, north and east by the proposed development and the Foothill Parkway. Although not all of the land surrounding the 10 acre parcel is proposed for development, this parcel and adjacent habitat avoided by the proposed Project will be isolated from the larger MSHCP Core B area to the west by the proposed Project.

The MSHCP (Section 3.2.1) requires that if an MSHCP permittee alters PQP land in such a way that it no longer contributes to the reserve assembly, the permittee will replace the land at a ratio no less than 1:1 and the replacement must be biologically equivalent or superior. Ten acres of habitat adjacent to Forest Service land (Figure 15) will be avoided as compensation for the isolation of the 10 acre PQP parcel and will be deed restricted to prevent future impacts.

The existing PQP parcel is 10 acres in the foothills east of the proposed project. The parcel supports two jurisdictional features and approximately 10 acres of dry scrub habitat; 9 acres of chaparral Alliance, 1 acre of sage scrub Alliance. The parcel is crossed on the east side by a dirt access road and is a part of the general area being used for recreational purposes. The site is on the edge of development, approximately 525 feet from agricultural development to the southeast, 650 feet from medium density residential development to the east and is immediately adjacent to the proposed Foothill Parkway impact area. The parcel is a part of the general area being used for recreational purposes.

The 10 acre parcel proposed for compensation is in the far west portion of the survey area, very close to the isolated parcel; in the same area of the Santa Ana foothills. The compensation parcel supports 10 acres of chaparral Alliance and two jurisdictional features. There are no access roads on the property. The proposed development is adjacent to the compensation parcel, but only a narrow east/west band comes close to the parcel. Another seven acres of natural land will be avoided by the development, and will remain undeveloped. The proposed parcel is immediately adjacent to PQP land, MSHCP Core B, and would add to the total acreage of contiguous land within the Core.

Mitigation Measures 3, preserving a 10 acre block of natural land adjacent to the Forest Service land and Core B, and Measure 5, to the extent feasible, avoided resources within the survey area will be preserved in open space and deed restricted to prevent future impacts, will increase the size of natural land associated with Core B of the MSHCP Conservation Areas and will provide a larger area to be utilized by a wide variety of species for dispersal, seasonal migration and home range connectivity. There would be no loss to the overall acreage or quality of PQP lands.



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 15

Compensation Parcel
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

9.4) MSHCP Habitat Assessment Requirements

9.4.1) Burrowing owl

Of the MSHCP Additional Needs Species and the Narrow Endemic species, only a habitat assessment for the burrowing owl was required for the survey area. A habitat assessment determined that the burrowing owl could occur (but are unlikely) in disturbed ruderal habitats in the survey area, and possibly in other open fields in the area. A focused burrow and burrowing owl survey was conducted following the habitat assessment. Breeding burrowing owl surveys were completed in May, June and July 2013. No burrowing owl or signs of burrowing owls were observed on the project site.

9.5) Urban/Wildlands Interface

Core B (Cleveland National Forest) lies immediately west and south of the project site. Indirect impacts that result from development, including lighting, urban runoff, toxics, and domestic predators, will be minimized in the project design. This section is intended to identify actions that will minimize effects to the MSHCP Core Conservation area that could adversely affect biological resources.

9.5.1) Drainage

The project incorporates project streets, open channels and natural drainage courses as well as a comprehensive system of underground storm drains to handle storm runoff from the project site. Storm water from the project site and off-site areas will be directed to storm drains. The design and operation of the drainage channel shall be adequate to preclude discharge of water into open space areas that are of lower quality or higher quality than current conditions. The proposed development shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the open space area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into open space areas. Storm water systems shall be designed to prevent the release of toxins, chemicals, petroleum products, invasive plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within open space areas. This will be accomplished using a variety of methods including natural detention basins, grass swales, or mechanical trapping devices. Regular maintenance shall occur to ensure effective operations of runoff control systems.

9.5.2) Toxics

The proposed project is designed to utilize natural drainage patterns for the flow of surface water. Water Quality Best Management Practices (BMPs) include education, storm drain stenciling, and street sweeping in compliance with the City of Corona requirements. The earthen channel shall be signed to filter potential toxics in the storm water prior to its discharge into open space areas. These BMPs will be implemented as part of the storm water pollution prevention measures for the project, in accordance with all appropriate NPDES requirements.

The project would result in the additional use of hazardous materials in limited quantities associated with normal residential use such as cleaning products, solvents, herbicides, and insecticides. However, compliance with regulations will reduce the potential risk of hazardous material exposure to a level that is less than significant. An information pamphlet will be prepared for each homeowner regarding the use of toxics.

9.5.3) Lighting

Outdoor lighting of residences will be designed so that all direct beams would be confined to dwelling sites. Project lighting will not intrude into the avoided or adjacent open space areas. Street lighting, parking lot lighting, and other project-related illumination sources will be positioned, directed, and shielded so as to avoid “light spill” into the conserved areas. The proposed project will avoid any night lighting adjacent to the open space areas. Night lighting will not be used during the course of construction unless absolutely necessary. If necessary, the lights will be directed and shielded to minimize lighting of the surrounding habitat. The level of of-site lighting and lighting fixtures would comply with the applicable requirements and policies of the City of Corona.

9.5.4) Noise

The proposed Project incorporates landscape elements including trees, shrubs, and groundcover, which will assist in noise reduction in native habitats adjacent to the Project. In addition, a noise analysis prepared for the project found that no proposed onsite or surrounding sensitive land uses would experience long-term noise levels in excess of 65 dBA during the daytime hours under build out of the Project. This daytime noise level would not result in exterior nighttime levels greater than 45 dBA. Therefore, no noise created on the Project site would exceed residential noise standards.

9.5.5) Barriers

The proposed Project will include theme walls along Project perimeter streets adjacent to public streets. The Project will include walls and fencing located where public view and/or important

interfaces are of concern. The Project will incorporate special edge treatments designed to separate development areas from open space areas. These areas of native landscaping and fencing will serve to minimize unauthorized public access, domestic animals predation, and illegal trespass and dumping. Access restrictions will be placed at key access points where development abuts avoided and adjacent open space areas. The exclusion fence will be a minimum of eight feet in height and will be installed and maintained for the purposed of controlling human and pet access (cats and dogs) into the open space area and be in compliance with MSHCP requirements. The fencing will be permanent and will be maintained in perpetuity. Approval of the fencing design will be required by the City of Corona prior to Project initiation.

9.5.6) Invasive Vegetation Control

Design guidelines for the Project will provide the homeowners with a list of native landscaping materials permitted within the Project area. These materials have been selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the project area. None of the plants listed in Section 6.1.4 will be utilized for the Project and their use by future homeowners will be prohibited. The MSHCP has identified invasive plants that should be removed from open space areas. This list is included in Table 6-2 of the MSHCP.

9.5.7) Access

Access points between native habitats and the Project development will be posted with signage asking residents to stay on the trails and not to disturb habitat. Yard fencing with no back gate will reduce access to native habitats adjacent to the Project.

9.5.8) Pets

Uncontrolled pets, feral dogs and cats can predate on native wildlife species. The following additional steps shall be taken to prevent the predation of native species by dogs and cats.

Appropriate signage will be posted requesting residents leash their pets. Homeowner Educational pamphlets will be used to inform them of the potential impacts by uncontrolled pets on native habitats and to request residents be good stewards of the land and prevent or limit their domestic cats from being allowed to openly hunt in the avoidance area.

9.5.9) Grading/Land Development

All manufactured slopes associated with site development will be within the Skyline Project and there will be no impact to the MSHCP Conservation Area. All manufactured slopes that abut

natural open space will be retained as open space buffer zones. All manufactured slopes and areas disturbed by construction of these slopes will be revegetated with buffer species during project construction.

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APPENDIX A

Tables

Table 9: Plants Observed (n=111)

Non-native(35)	SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status(ACOE, 2012)
	DIVISION ANTHOPHYTA	**FLOWERING PLANTS**			
	Class Dicotyledones	**Dicots**			
	FAMILYADOXACEAE	**ELDERBERRY FAMILY**			
	Sambucus nigra ssp. caerulea	Blue Elderberry	U/R	U/R	FACU
	FAMILY ANACARDIACEAE	**SUMAC FAMILY**			
	Malosma laurina	Laurel Sumac	U/R	U/R	
	Rhus integrifolia	Lemonadeberry	U	U	---
	Rhus ovata	Sugarbush	U/R	U/R	---
X	*Schinus molle*	Peruvian Pepper Tree	U	U	---
	Toxicodendron diversilobum	Poison Oak	U/R	U/R	---
	FAMILY PINACEAE	**PINE FAMILY**			
X**	*Pinus jeffreyi*	Jeffrey Pine	U	U	---
	FAMILYAMARANTHACEAE	**AMARANTH FAMILY**			
X	*Amaranthus albus*	Tumbleweed	U/R	U	FACU
	FAMILY APIACEAE	**CARROT FAMILY**			
X	*Foeniculum vulgare*	Sweet fennel			---
	FAMILY APOCYNACEAE	**MILKWEED FAMILY**			
	Asclepias fascicularis	Narrow-leaf Milkweed	U/R	---	FAC
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**			
	Ambrosia acanthicarpa	Annual Bur-sage	U/R	U/R	---
	Ambrosia confertiflora	Burrweed	U/R	U/R	---
	Ambrosia psilostachya	Western Ragweed	R	---	FACU
	Artemisia californica	California Sagebrush	U	U	---
	Baccharis pilularis	Chaparral Broom	R	R	---
	Baccharis salicifolia	Mulefat	R	R	FAC
X	*Centaurea melitensis*	Tocalote	U	U/R	---
X	*Cirsium vulgare*	Bull Thistle	U/R	U/R	FACU
	Corethrogyne filaginifolia	Common Sandaster	U	R	---
	Deinandra fasciculata	Clustered Moonshine-Daisy	U	U	FACU
	Encelia californica	California Brittlebush	U/R	U/R	---
X	*Erigeron bonariensis*	Flax-leaved Horseweed	R	---	---
	Erigeron canadensis	Horseweed	U/R	U/R	FAC
X	*Hedypnois cretica*	Hedyponois	U/R	U/R	---
	Helianthus annuus	Common Sunflower	U/R	U	FACU
	Heterotheca grandiflora	Telegraph Weed	U	U	---
	Solidago californica	Oreja de liebre	U	U	---
	FAMILY BORAGINACEAE	**BORAGE FAMILY**			
	Amsinckia intermedia	Common Fiddleneck	U	U	---
	Amsinckia menziesii	Small Flowered Fiddleneck	U	U	---
	Cryptantha intermedia	Cryptantha	U	U	---
	Eriodictyon crassifolium	Thick-leaved Yerba Santa	U	U	---
	Phacelia cicutaria	Caterpillar Phacelia	U	U	---
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**			
	Brassica nigra	Black Mustard	---	U	---
	Brassica rapa	Field Mustard	---	R	FACU
X	*Hirschfeldia incana*	Short-pod Mustard	U/R	U/R	---
X	*Sisymbrium irio*	London Rocket	U		---
	FAMILY CACTACEAE	**CACTUS FAMILY**			
	Cylindropuntia californica	California Cholla	U	U	---
	Opuntia littoralis	Western Prickly Pear	U	U	---
	FAMILY CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**			
	Lonicera subpicata	Southern Honeysuckle	U	U	---
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**			
X	*Atriplex semibaccata*	Australian Saltbush	U	---	FAC
X	*Chenopodium album*	Pigweed	U	U	FACU
X	*Salsola tragus*	Prickly Russian Thistle	U/R	U/R	FACU
	FAMILYCONVOLVULACEAE	**MORNING-GLORY FAMILY**			
X	*Convolvulus arvensis*	Bindweed	U/R	---	---
	Cuscuta californica	Chaparral Dodder	U	U	---

Non-native(35)	SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status(ACOE, 2012)
	FAMILY CRASSULACEAE	**STONECROP FAMILY**			
	Crassula connata	Sand Pygmyweed	U	U	FAC
	FAMILY CUCURBITACEAE	**SQUASHES, MELONS & GOURDS FAMILY**			
	Cucurbita palmata	Coyote Gourd	U	---	---
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**			
	Chamaesyce albomarginata	Rattlesnake Weed	U	U	---
X	*Chamaesyce maculata*	Spotted Spurge	U	U	UPL
	Croton setigerus	Dove Weed	U	---	---
X	*Ricinus communis*	Castor Bean	R	R	FACU
	FAMILY FABACEAE	**PEA FAMILY**			
	Acmispon glaber	Deerweed	U	U	---
	Lupinus truncatus	Collared Annual Lupine	U	U	---
	Lathyrus vestitus var. *alefeldii*	San Diego Pea	U	U	---
X	*Medicago sativa*	Alfalfa	---	U	---
X	*Melilotus albus*	White Sweetclover	U	U	---
X	*Melilotus indicus*	Annual Yellow Sweetclover	U	U	FACU
	FAMILY FAGACEAE	**OAK FAMILY**			
	Quercus agrifolia	Coast Live Oak	U/R	U/R	---
	FAMILY GERANIACEAE	**GERANIUM FAMILY**			
X	*Erodium botrys*	Long-beaked Filaree	U	U	---
X	*Erodium cicutarium*	Red-stemmed Filaree	U	U/R	---
	FAMILY GROSSULARIACEAE	**CURRANT FAMILY**	U/R	U/R	---
	Ribes speciosum	Fushia-flowered Gooseberry			
	FAMILY LAMIACEAE	**MINT FAMILY**			
X	*Marrubium vulgare*	Horehound	U	U/R	FACU
	Salvia apiana	White Sage	U/R	U/R	---
	Salvia columbariae	Chia Sage	U	U	---
	Salvia leucophylla	Purple Sage	U/R	U/R	---
	Salvia mellifera	Black Sage	U/R	U/R	---
	FAMILY MALVACEAE	**MALLOW FAMILY**			
X	*Malacothamnus densiflorus*	Yellow Bushmallow	U/R	U	---
	FAMILY MELANTHIACEAE	**PERENNIAL LILY FAMILY**			
	Toxicoscordion fremontii	Fremont's Star Lily	U	U	---
	FAMILYMONTIACEAE	**PURSLANEFAMILY**			
	Calandrinia ciliata	Red Maids	U	U	FACU
	Claytonia perfoliata	Miner's Lettuce	U	U	FAC
	FAMILY MYRTACEAE	**MYRTLE FAMILY**			
X	*Eucalyptus citriodora*	Lemon Scented Gum	R/U	R/U	---
X	*Eucalyptus polyanthemos*	Silver Dollar Gum	R	R	---
X	*Eucalyptus rudis*	Desert Gum	U	U	---
	FAMILY OLEACEAE	**OLIVE FAMILY**			
	Fraxinus velutina	Velvet Ash	R	R	FAC
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**			
	Epilobium canum	California Fuchsia	R	R	---
	FAMILY PAPAVERACEAE	**POPPY FAMILY**			
	Eschscholzia californica	California Poppy	U/R	U/R	---
	Romneya coulteri	Coulters Matilija Poppy***	U/R	U/R	---
	FAMILY PHRYMACEAE	**LOPSEED FAMILY**			
	Mimulus aurantiacus	Bush Monkeyflower	U	U	
	FAMILY PLATANACEAE	**SYCAMOREFAMILY**			
	Platanus racemosa	California Sycamore	R	R	FACW
	FAMILY POLEMONIACEAE	**PHLOX FAMILY**			
	Gilia angelensis	Angel Gilia	U	U	---
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**			
	Eriogonum fasciculatum	California Buckwheat	U	U	---
	FAMILY RANUNCULACEAE	**CLEMATIS FAMILY**			
	Clematis lasiantha	Chaparral clematis	U	U	---
	FAMILY RHAMNACEAE	**BUCKTHORN FAMILY**			
	Frangula californica	California Coffeeberry	U/R	U/R	---

Non-native(35)	SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status(ACOE, 2012)
	FAMILY ROSACEAE	**ROSE FAMILY**			
	Adenostoma fasciculatum	Chamise	U	U	---
	Heteromeles arbutifolia arbutifolia	Toyon	U	U	---
	FAMILY SALICACEAE	**WILLOW FAMILY**			
	Populus fremontii	Fremont Cottonwood	---	R	FAC
	Salix gooddingii	Goodding's Willow	---	R	FACW
	Salix lasiandra	Pacific Willow	R	R	FACW
	Salix lasiolepis	Arroyo Willow	R	R	FACW
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**			
	Datura wrightii	Jimson Weed	R	U/R	UPL
X	*Nicotiana glauca*	Tree Tobacco	R	R	FAC
	Solanum douglasii	Douglas' Nightshade	R	R	FAC
	FAMILY URTICACEAE	**NETTLE FAMILY**			
	Urticadioica ssp. *holosericea*	Hoary Nettle	R	R	FAC
	Class Monocotyledones	**Monocots**			
	FAMILY AGAVACEAE	**AGAVE FAMILY**			
	Hesperoyucca whipplei	Chaparral Yucca	U	U	---
	FAMILY LILIACEAE	**LILY FAMILY**			
	Calocortus splendens	Splendid Mariposa Lily	---	U	---
	FAMILY POACEAE	**GRASS FAMILY**			
X	*Avena barbata*	Slender Wild Oat	U	U	---
X	*Avena fatua*	Common Wild Oats	U/R	U/R	---
X	*Bromus diandrus*	Ripgut Grass	U	U	---
X	*Bromus hordeaceus*	Soft Chess	U	U	FACU
X	*Bromus madritensis*ssp.*rubens*	Foxtail Chess	U	U	---
X	*Echinochloa crus-galli*	Common Barnyard-grass	U	U	FAC
	Elymus condensatus	Giant Wild Rye	U	U	---
X	*Festuca myuros*	Rattail	U	U	---
X	*Hordeum murinum ssp. leporinum*	Hare Barley	U	U	FACU
	Leptochloa fusca	Mexican Sprangletop	R	R	FACW
	Melica imperfecta	Coast Range Melic	U	U	---
	Muhlenbergia microsperma	Annual Muhley	U	U	
	Muhlenbergia rigens	Deergrass	U	U	---
X	*Schismus barbatus*	Mediterranean Schismus	U	U	---
	Stipa coronata	Crested Needle grass	U	U	---
	Stipa lepida	Foothill Needle grass	U	U	---
	FAMILY THEMIDACEAE	**BRODIAEA FAMILY**			
	Dichelostemma capitatum	Wild Hyacinth	---	U/R	---

* = U-Upland habitats (chaparral, sage scrub, grasslands); R-Riparian Habitats (oak woodland, willow, sycamore, mulefat).
** = Surveys conducted by GEC in past years
*** = Rare plant
X** = Native used as landscape species

Wetland Indicator Status:
The following symbols are used to indicate the wetland indicator status of plant species identified onsite, if any.
OBL Obligate: under natural conditions, occurs almost always (estimated probability >99%) in wetlands.
FACW - Facultative Wetland: usually occurs in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.
FAC - Facultative: equally likely to occur (estimated probability 34-66%) in wetlands or non-wetlands.
FACU - Facultative Upland: usually occur in non-wetlands but occasionally (estimated probability 1-33%) found in wetlands.
UPL - Obligate Upland: occur in wetlands in another region, but occur almost always (estimated probability >99%) under natural conditions in non-wetlands in the region specified.
NI or--- No Indicator Status: was recorded for those species for which sufficient information was not available to determine an indicator status or that were not considered by the Regional Panel.

Table 10: Wildlife Observed (n=98)

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (3)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	---
FAMILY PHRYNOSOMATIDAE	**SPINY LIZARD FAMILY**			
Sceloporus occidentalis longipes	Great Basin fence lizard	X	X	---
FAMILY VIPERIDAE	**RATTLESNAKE FAMILY**			
Crotalus ruber	Red Diamond rattlesnake	X	X	CSC
CLASS AVES	**BIRDS (61)**			
FAMILY ODONTOPHORIDAE	**QUAIL**			
Callipepla californica	California Quail	X	X	
FAMILY ACCIPITRIDAE	**BUTEOS, KITES AND HAWKS**			
Accipiter cooperii	Cooper's Hawk	X	X	CSC
Buteo jamaicensis	Red-tailed Hawk	X	X	---
FAMILY COLUMBIDAE	**DOVES AND PIGEONS**			
Columba livia	*Rock Pigeon	X		---
Zenaida asiatica	White-winged Dove	X		---
Zenaida macroura	Mourning Dove	X	X	---
FAMILY TYTONIDAE	**BARN AND BAY OWLS**			
Tyto alba	Barn owl	X	X	---
FAMILY STRIGIDAE	**TRUE OWLS**			
Megascops kennicottii	Western Screech-Owl	X	X	---
Bubo virginianus	Great Horned Owl	X	X	---
FAMILY APODIDAE	**SWIFTS**			
Chaetura vauxi	Vaux's Swift	X	---	
Aeronautes saxatalis	White-throated Swift	X	---	
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	Black-chinned Hummingbird	X		---
Calypte anna	Anna's Hummingbird	X	X	--
Calypte costae	Costa's Hummingbird	X		Rare
FAMILY CUCULIDAE	**CUCKOOS, ANIS AND ROADRUNNERS**			
Geococcyx californianus	Greater roadrunner	X	X	
FAMILY PICIDAE	**WOODPECKERS AND FLICKERS**			
Picoides nuttallii	Nuttall's Woodpecker	X		Rare
Picoides pubescens	Downy Woodpecker	---	X	
Colaptes auratus	Northern Flicker	X	---	
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	X	X	
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific-slope Flycatcher	---	X	
Myiarchus cinerascens	Ash-throated Flycatcher	X	---	
Sayornis nigricans	Black Phoebe	X	X	
Sayornis saya	Say's Phoebe	X	X	
Tyrannus verticalis	Western Kingbird	X	---	
Tyrannus vociferans	Cassin's Kingbird	X	X	
FAMILY CORVIDAE	**CROWS AND RAVENS**			
Corvus brachyrhynchos	American Crow	---	X	
Corvus corax	Common Raven	X	---	
Aphelocoma californica	Western Scrub Jay	X	X	
FAMILY ALAUDIDAE	**LARKS**			
Eremophila alpestris	Horned Lark	X	---	WL
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Hirundo rustica	Barn Swallow	---	X	
Petrochelidon pyrrhonota	Cliff Swallow	---	X	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	X	---	
Tachycineta bicolor	Tree Swallow	---	X	
Tachycineta thalassina	Violet-green Swallow	---	X	

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY AEGITHALIDAE	**BUSHTITS AND LONG-TAILED TITS**			
Psaltriparus minimus	Bushtit	X	X	
FAMILY TROGLODYTIDAE	**WRENS**			
Salpinctes obsoletus	Rock Wren	X	X	
Thryomanes bewickii	Bewick's Wren	X	X	
FAMILY SYLVIIDAE	**OLD WORLD WARBLERS**			
Chamaea fasciata	Wrentit			
FAMILY TURDIDAE	**THRUSHS, SOLITAIRES AND BLUEBIRDS**			
Sialia mexicana	Western Bluebird	X	X	
FAMILY MIMIDAE	**MIMIC THRUSHES, OR MIMIDS**			
Mimus polyglottos	Northern Mockingbird	X	X	
Toxostoma redivivum	California Thrasher	X	X	
FAMILY STURNIDAE	**STARLINGS AND ALLIES**			
Sturnus vulgaris	*European Starling	X	X	
FAMILY PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens	Phainopepla	X	X	
FAMILY PARULIDAE	**WARBLERS**			
Geothlypis tolmiei	MacGillivray's Warbler	X	X	
Oreothlypis celata	Orange-crowned Warbler	---	X	
FAMILY EMBERIZIDAE	**SPARROWS AND TOWHEES**			
Aimophila ruficeps	Rufous-crowned Sparrow	---	X	
Chondestes grammacus	Lark Sparrow	---	X	
Melozone crissalis	California Towhee	X	X	
Melospiza melodia	Song Sparrow	X	X	
Pipilo maculatus	Spotted Towhee	---	X	
Spizella atrogularis	Black-chinned Sparrow	---	X	
Zonotrichia leucophrys	White-crowned Sparrow	X	X	
FAMILY CARDINALIDAE	**CARDINALS AND BUNTINGS**			
Passerina amoena	Lazuli Bunting	X	X	
Piranga ludoviciana	Western Tanager	X	X	
FAMILY ICTERIDAE	**BLACKBIRDS AND ALLIES**			
Agelaius phoeniceus	Red-winged Blackbird	---	X	
Icterus cucullatus	Hooded Oriole	---	X	
Molothrus ater	Brown-headed Cowbird	---	X	
FAMILY FRINGILLIDAE	**NEW WORLD SEEDEATERS**			
Haemorhous mexicanus	House Finch	X	X	
Spinus lawrencei	Lawrence's Goldfinch	X	X	Rare
Spinus tristis	American Goldfinch	X		
FAMILY PASSERIDAE	**OLD WORLD SPARROWS**			
Passer domesticus	*House Sparrow	X	X	
CLASS MAMMALIA	**MAMMALS (12)**			
FAMILYDIDELPHIDAE	**OPOSSUM**			
Didelphis virginiana	Virginia Opossum	X	---	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**			
Canis latrans	Coyote	X	X	
Canis lupus familiaris	Domestic Dog	X	X	
Urocyon cinereoargenteus	Gray Fox	X	---	
FAMILY PROCYONIDAE	**RACCOONS AND RINGTAILS**			
Procyon lotor	Raccoon	X	---	
FAMILY SCIURIDAE	**SQUIRRELS**			
Spermophilus beecheyi	California Ground Squirrel	X	X	
FAMILY GEOMYIDAE	**POCKET GOPHERS**			
Thomomys bottae	Southern Pocket Gopher	---	X	
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	---	X	CSC
Sylvilagus audubonii	Cottontail	X	X	
FAMILY FELIDAE	**CATS**			
Felis catus	Domestic cat	X	---	
Lynx rufus	Bobcat	X	---	
Puma concolor	Mountain Lion	X	---	

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
INVERTEBRATES				
CLASS INSECTA	**INSECTS (21)**			
FAMILY CERCOPOIDEA	**SPITTLE BUGS**			
Prosapia bicincta	Two-Lined Spittle Bug	X	X	
FAMILY APIDAE	**HONEY BEES**			
Apis mellifera	Honey Bee	---	X	
FAMILY RIODININAE	**METALMARKS**			
Apodemia virgulti	Mormon Metalmark	X	X	
FAMILY POLYOMMATINAE	**BLUE GOSSAMER-WINGED BUTTERFLIES**			
Brephidium exilis	Pygmy Blue Butterfly	---	X	
FAMILY PENTATOMIDAE	**STINK BUGS**			
Chlorochroa sayi	Say's Stinking Bug	---	X	
FAMILY COLIADINAE	**SULPHER BUTTERFLIES**			
Colias eurytheme	Orange Sulpher	---	X	
FAMILY SCARABAEIDAE	**SCARAB BEETLE**			
Cotinus mutabilis	Green Fruit Beetle	X	X	
FAMILY TENEBRIONIDAE	**DARKLING BEETLES**			
Eleodes acutus	Stink beetle	X	X	
FAMILY APHIDIDAE	**APHIDS**			
Toxoptera aurantii	Aphids	---	X	
FAMILY CULICIDAE	**MOSQUITOES**			
Culex quinquefasciatus	Mosquito	---	X	
FAMILY FORFICULIDAE	**EARWIGS**			
Forficula auricularia	European Earwigs	---	X	
FAMILY BOMBYLIIDAE	**ROBBER FLIES**			
Mallophora fautrix	Robber fly	X	X	
FAMILY MUSCIDAE	**HOUSE FLY**			
Musca domestica	Common House Fly	X	X	
FAMILY PAPILIONIDAE	**SWALLOWTAIL**			
Papilio rutulus	Western Tiger Swallowtail Butterfly	---	X	
FAMILY POMPILIDAE	**SPIDER WASPS**			
Pepsis chrysothymus	Tarantula Hawk	X	X	
FAMILY PIERIDAE	**CABBAGE BUTTERFLIES**			
Pieris protodice	Common White Butterfly	X	X	
Pieris rapae	Cabbage White		X	
FAMILY FORMICIDAE	**HARVESTER ANT**			
Pogonomyrmex californicus	California Harvester Ant	X	X	
FAMILY VESPIDAE	**SOCIAL WASP**			
Polistes excaimans	Paper wasp	---	X	
FAMILY ACRIDIDAE	**COMMON GRASSHOPPER**			
Trimerotropis pallidipennis	Pallid Band-wing	---	X	
FAMILY NYMPHALIDAE	**PAINTED LADY'S**			
Vanessa cardui	Painted Lady	X	X	
CLASS ARACHNIDA	**SPIDERS, MITES, TICKS AND SCORPIONS (1)**			
FAMILY CTENIZIDAE	**TRAP DOOR SPIDER**			
Bothriocyrtum californicum	California Trapdoor Spider	X	X	

Table 11: Sensitive Species Probability Table

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
	PLANTS (n=58)			
Abronia villosa var. *aurita* **Chaparral sand verbena**	Sand, mostly broad alluvial fans and benches, 80-1600 m elev (CNPS), 0-1600m (CalFlora), "Inland Empire" and adj. Colorado Des. And interior San Diego Co.	Feb. – July	Fed: None Calif: S2 CNPS: List 1B.1 USFS: S	Suitable habitat; Low potential
Allium munzii **Munz's onion**	Upland clay soils, gen. in shrublands and woodlands; endemic to W Riverside Co., about 1000 - 3500 ft. el	March - May	Fed: **END** Calif: S1, **THR** CNPS: List 1B.1	Marginal habitat; No potential
Ambrosia pumila **San Diego ambrosia**	Vernal pools, roadside pools, grasslands; SW Riv Co (Murrieta and Lake Elsinore areas), SD Co., Baja Ca.	June - Sept.	Fed: **END** Calif: S1 CNPS: List 1B.1	Habitat present; Low potential
Asplenium vespertinum **Western spleenwort**	Moist, shady, rocky places, such as the shadows beneath cliff overhangs	Feb - June	Fed: None Calif: S4 CNPS: List 4.2	No habitat; No potential
Astragalus brauntonii **Braunton's milk vetch**	Scattered in S Cal. Foothills, usually in chaparral. Also coastal scrub, valley and foothill grassland, recent burns or disturbed areas; Ventura, LA, Orange Co.; restricted to calcium carbonate soils. Elev. Range below 2100	Jan - August.	Fed: **END** Cal: S2 CNPS: List 1B.1	Suitable habitat; Low potential
Atriplex coulteri **Coulter's saltbush**	Coastal dunes, grasslands, and shrublands, desert shrublands, generally in alkaline or clay soils; southern California and Baja Calif.	March - October	Fed: None Calif: S2 CNPS: List 1B.2	No habitat; No potential
Baccharis malibuensis **Malibu baccharis**	Chaparral, Cismontane woodland, Coastal scrub, and Riparian woodland	August	Fed: none Calif: S1 CNPS: List 1B.1	Suitable habitat; no potential
Brodiaea filifolia **Thread-leaved brodiaea**	Grasslands, vernal pools /alkali sink in inland valleys; often on upland heavy clay soils nearer coast; scattered in S Ca. foothills and valleys (LA Co to S Bern. &San Diego Cos.), ≤ ±2500 ft. el.	May - June	Fed: **THR** Calif: **END** CNPS: List 1B.1	Habitat present; Low potential
Calandrinia breweri **Brewer's calandrinia**	Sandy to loamy soil, disturbed sites, and burns at less than 1200 meters	March - June	Fed: none Calif: S34 CNPS: List 4.2	No habitat; No potential
California macrophylla **Round leaved filaree**	Clay soils, open places in shrubland or grassland, and foothill woodland. Elev. 36-3940 ft. (12-1200); Central Valley South to N Mexico and east to Utah.	March-May	Fed: none Calif: S2 CNPS: List 1B.1	No habitat; No potential
Calochortus catalinae **Catalina mariposa-lily**	Coastal Cal., Santa Cruz Co. to San Diego Co. and Channel Islands; shrubland, woodland, grassland, often in heavy soil, below about 2300' elevation	Spring	Fed: None Calif: S4 CNPS: List 4.2	Suitable habitat; **High** potential
Calochortus plummerae **Plummer's mariposa-lily**	Chaparral, coastal scrub, pine forest, valley and foothill grassland, 100-1700m el.; widespread but uncommon throughout S Ca. mtns., foothills, and valleys	May - July	Fed: None Calif: S4 CNPS: List 4.2	Habitat present; Low potential
Calochortus weedii var. *intermedius* **Intermediate mariposa-lily**	Chaparral, coastal sage scrub, valley grassland, sandy or clay soils, often on sandstone outcrops between 950-2800 ft. el.; coastal S and cent. Calif. Cos.	May - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; **High** potential
Calystegia sepium ssp. Binghamiae **Santa Barbara morning-glory**	Coastal marshes and riverbanks at an elevation less than 20 meters	August	Fed: None Cal: SX CNPS: List 1A	No habitat; No potential
Camissoniopsis lewisii **Lewis' evening-primrose**	Grassland, sandy or clay soils, coastal at an elevation less than 300 meters	March - June	Fed: None Cal: S1S3 CNPS: List 3	No habitat; No potential
Caulanthus simulans **Payson's jewel-flower**	Chaparral and coastal scrub, pinyon/ juniper woodland; frequently in burned or disturbed areas such as streambeds, also on rocky steep slopes; 300-7200 ft elev; known only from Riv. and SD Cos	Mar - June	Fed: None Cal: S4 CNPS: List 4.2 USFS: S	Habitat present; Low potential

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
Centromadia pungens ssp. *laevis* (*Hemizonia pungens* ssp. *laevis*) **Smooth tarplant**	Seasonally wet low elev. Grassland, also fallow fields, drainage ditches; primarily in SW Riv. Co. but a few sites in interior valleys of LA, San Bern., San Diego Cos. Elevational range from 0-640 m	April – Sept	Fed: None Calif: S2 CNPS: List 1B.1	No habitat; No potential
Chorizanthe leptotheca **Peninsular spineflower**	Sand or gravel, between 600–1600 meters	May - August	Fed: None Calif: S3 CNPS: List 4.2	No habitat; No potential
Chorizanthe parryi var. Fernandina **San Fernando Valley spineflower**	Sand, between 90–500 meters in Western Transverse Ranges	April - July	Fed: Candidate Calif: **END** CNPS: List 1B.1 USFS: S	No habitat; No potential
Chorizanthe parryi var. *parryi* **Parry's spineflower**	LA, San Bernardino, and Riverside Cos.; sandy places in alluvial washes, coastal or desert scrublands, valley and foothill grasslands," +/- 1000-4000 ft. elev.	April - June	Fed: None Calif: S3 CNPS: List 1B.1 USFS: S	Habitat present; Low potential
Chorizanthe polygonoides var. *longispina* **Long spined spineflower**	Chaparral, CSS and grasslands 328-5282 ft elev.; often on sand or clay soils or in vernal pools; W Riv. Co., SD Co., and N Baja Calif.	April – July	Fed: None Calif: S3 CNPS: List 1B.2	No habitat; No potential
Clinopodium chandleri **San Miguel savory**	Chaparral and oak woodland, and may be restricted to gabbroic or metavolcanic derived soils	March - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	No habitat; No potential
Convolvulus simulans **Small-flowered morning-glory**	Shrublands and grasslands, W cent. and SW Calif., seeps in clay or serpentine soils	March - June	Fed: None Calif: S4 CNPS: List 4.2	Habitat present; Low potential
Deinandra paniculata **Paniculate tarplant**	Open places in coastal sage scrub, roadsides, etc.; San Diego & Riv. Cos (where common ±throughout W Co.); below ±2000 ft.	May – Nov	Fed: None Calif: S4 CNPS: List 4.2	Habitat present; Low potential
Dodecahema leptocerus **Slender-horned spineflower**	Open, sandy alluvial benches in valleys and canyons. Shrubland and cismontane woodland; San Fernando Valley, Santa Ana River Valley, W Riverside Co. Range 650 – 2500 ft. El.	April - June	Fed: **END** Calif: **END** CNPS: List 1B.1	No habitat; No potential
Dudleya multicaulis **Many-stemmed dudleya**	Heavy soils, often clay, in grassland or shrubland, SW Calif., below about 2600 ft. elev.	April - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; low potential
Eriastrum densifoloium ssp. *sanctorum* **Santa Ana River woollystar**	Shrubland, alluvial fans and plains; endemic to Santa Ana River watershed, Orange Co. to San Bern. Co. (Zembel & Kramer 1984)	May - Sept.	Fed: **END** CA: **END** CNPS: List 1B.1	No habitat; No potential
Harpagonella palmeri **Palmer's grapplinghook**	Dry clay soils in chaparral, coastal sage scrub, valley grassland; southwestern CA through Baja Calif, AZ, and Sonora. Elev. 32-3969 ft.	March - May	Fed: none Calif: S3 CNPS: List 4.2	No habitat; No potential
Hesperocyparis forbesii **Tecate cypress**	Closed-cone coniferous forest, chaparral; known from a few locations in so. CA & in Baja CA; primarily north-facing slopes, groves often assoc. w/ chaparral; clay, gabbro & metavolcanic; 393-5118 ft elev.	Can be IDd all year	Fed: None Calif: S2 CNPS: List 1B.1 USFS: S	Suitable habitat; no soils; No potential
Hesperocyparis goveniana **Gowen cypress**	Closed-cone-pine/cypress forests, mixed-evergreen forest, maritime chaparral, coastal terraces from 50–160 meters	Can be IDd all year	Fed: **THR** Calif: S1 CNPS: List 1B.2	No habitat; No potential
Hordeum intercedens **Vernal barley**	Vernal pools, saline and alkaline flats, below about 3300 ft. elev.; San Joaquin Val, valleys in S Ca., Owens Val	March - June	Fed: None Calif: S3S4 CNPS: List 3.2	No habitat; No potential
Horkelia cuneata ssp *puberula* **Mesa horkelia**	Perennial herb found in chaparral, cismontane woodland and coastal scrub on sandy or gravely soils. Elevational range 229 – 2296 feet.	Feb – July (Sept rare)	Fed: None Calif: S1 CNPS: List 1B.1 USFS: S	No habitat; No potential

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
Juglans californica **S. California black walnut**	Walnut woodland, coastal sage scrub, chaparral, gen. < ±3000 ft. elev.; Ventura, LA, Orange, San Bernardino Cos.	Mar – Aug Can ID all year	Fed: None Calif: S3 CNPS: List 4.2	No habitat; No potential
Lasthenia glabrata ssp. *coulteri* **Coulter's goldfields**	Coastal salt marsh, inland saline playas, vernal pools; coastal sites Santa Barb. to Baja Ca, scattered inland sites incl. Kern Co., deserts, and W Riverside Co. 1-1220m elevation	Feb - June	Fed: None Calif: S2 CNPS: List 1B.1	No habitat; No potential
Lepechinia cardiophylla **Heart-leaved pitcher sage**	Chaparral and conifer-oak forests, about 1900-4000 ft. elev.; endemic to Santa Ana Mts., occurs on Santiago PK quad	April - July	Fed: none Ca: S2.3 CNPS: List 1B.2 USFS: S	No suitable habitat; No potential
Lepidium virginicum var. *robinsonii* **Robinson's pepper grass**	Shrublands (chaparral & coastal sage scrub) below about 2900 ft. elev.; Los Angeles Co, inland to Riverside & San Bernardino Cos, and S to Baja Calif	Jan - July	Fed: None Calif: S3 CNPS: List 4.3	Habitat present; Low potential
Lilium humboldtii ssp. ocellatum **Ocellated Humboldt lily**	Openings in chaparral, coastal scrub, foothill and riparian woodland and yellow pine forest. Shaded montane canyons below 100-6000ft. el. In central and southern California	Mar - July	Fed: none Calif: S3 CNPS: List 4.2	Habitat present; Low potential
Microseris douglasii var. platycarpha **Small-flowered microseris**	Woodland, grassland, usually clay soils in valley bottoms, below about 3300 ft. el.; LA, Orange, Riverside, San Diego Cos.	March - April	Fed: None Calif: S4 CNPS: List 4.2	No habitat; No potential
Mimulus clevelandii **Cleveland's bush monkeyflower**	Disturbed areas, open borders of woodland, and chaparral habitats at an elevation between 915–1465 meters	April - July	Fed: None Calif: S4 CNPS: List 4.2	Suitable habitat; Low potential
Mimulus diffusus **Palomar monkeyflower**	Sandy washes, disturbed areas at an elevation less than 2100 meters	April - June	Fed: None Calif: S3 CNPS: List 4.3	No habitat; No potential
Monardella australis ssp. Jokerstii **Jokerst's monardella**	Steep scree or talus, stony benches on canyon bottoms in montane forest (or chaparral) at an elevation of 1350–1750 meters in eastern San Gabriel Mountains	July – Sept.	Fed: None Calif: S1 CNPS: List 1B.1 USFS: S	No habitat; No potential
Monardella hypoleuca ssp. Intermedia **Intermediate monardella**	Oak woodland, chaparral at less than 1500 meters	April – Sept.	Fed: None Calif: S2S3 CNPS: List 1B.3	Suitable habitat; **Moderate** potential
Monardella macrantha ssp. *hallii* **Hall's monardella**	Chaparral, cismontane and foothill woodlands, valley grassland, 984-5165ft el.; Peninsular Ranges (Riv. and SD Cos.)	June – Oct	Fed: None Calif: S3 CNPS: List 1B.3 USFS: S	Suitable habitat; Low potential
Nama stenocarpum **Mud nama**	Saline or alkaline mud flats of lakes, playa lakes, etc. Generally below about 1500 ft. elev.; occurrence near Mystic Lake	Jan. – July	Fed: None Calif: S1S2 CNPS: List 2B.2	No habitat; No potential
Nolina cismontana **chaparral nolina**	Dry chaparral of coastal mts. Elev. 426-4166 ft. m. South Coast, W. Traverse Ranges, Peninsular Rng	May-July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; Low potential
Penstemon californicus **California beardtongue**	Sandy soils, chaparral, yellow-pine forest or pinyon/juniper woodland. Elev. Range 1170-2300m. Peninsular Ranges and Mexico	May - August	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	No habitat; No potential
Pentachaeta aurea ssp. Allenii **Allen's pentachaeta**	Grassy areas below 500 feet	March - June	Fed: None Calif: S2 CNPS: List 1B.1	No habitat; No potential
Phacelia stellaris **Brand's star phacelia**	Dunes, alluvial scrub (sandy benches), about sea level to 1300 ft elev.; Los Angeles, Riverside, San Diego Cos., Baja Calif.	March – June	Fed: None Calif: S1 CNPS: List 1B.1	No habitat; No potential
Phacelia keckii **Santiago Peak phacelia**	Closed cone coniferous forest, chaparral; open areas and sometimes along creeks; 545-1600m elev.; known only from Orange and Riverside Cos.	May - June	Fed: None Ca: S2 CNPS: List 1B.3 USFS: S	Habitat present; Low potential

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
Piperia cooperi **chaparral rein orchid**	Dry sites, scrub, chaparral, woodland, forest at an elevation less than 1500 meters	March - June	Fed: None Calif: S3 CNPS: List 4.2	Suitable habitat; Low potential
Piperia leptopetala **narrow-petaled rein orchid**	Dry sites, scrub, and woodland at an elevation less than 2200 meters	May - July	Fed: None Calif: S4 CNPS: List 4.3	Habitat present; Low potential
Polygala cornuta var. fishiae **Fish's Milkwort**	Foothill chaparral, cismontane and riparian woodlands (often oak). below 3000 ft. el. Shrub that often forms thickets less than 2 meters in diameter.	May - August	Fed: None Calif: S4 CNPS: List 4.3	Suitable habitat; **Moderate** potential
Pseudognaphalium leucocephalum **White rabbit-tobacco**	Dry, sandy creek bottoms in chaparral, cismontane woodland, coastal scrub, riparian woodland. Elevational range 0 – 6890 ft.	Aug - Nov	Fed: None Calif: S2 CNPS: List 2B.2	Habitat present; **Moderate** potential
Romneya coulteri **Coulter's matilija poppy**	Shrublands, often associated with natural disturbance (i.e., fire, stream-banks); LA, Orange, San Diego, and Riverside Cos. below about 4000 ft.	May - July	Fed: None Calif: S4 CNPS: List 4.2	Suitable habitat; **High** potential
Senecio aphanactis **Chaparral ragwort**	Chaparral, cismontane woodland, coastal scrub, in alkaline flats below about 1300 ft. elev.; W Calif. (from Solano Co. south) and Baja Calif.	Jan - April	Fed: None Calif: S2 CNPS: List 2B.2	No habitat; No potential
Sidalcea neomexicana **Salt Spring checkerbloom**	Coastal scrub, desert scrub, chaparral, yellow pine forest (Alkaline playas and wetlands); 50-5000 ft. elevation SW Calif., Baja Ca., SW US, mainl. Mexico	March - June	Fed: none Calif: S2S3 CNPS: List 2B.2 USFS: S	No habitat; No potential
Symphyotrichum defoliatum **San Bernardino aster**	Near ditches, streams and springs. Cismontane woodland, lower montane coniferous forest, coastal scrub, meadows and seeps, marshes, swamps valley & foothill grassland. El. ≤ 6500 ft.	July-Nov	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Habitat present; Low potential
Tortula californica **California screw moss**	Chaparral, elevation between 33 and 328 feet	Can be id'd year round	Fed: None Calif: S2 CNPS: List 1B.2	No habitat; No potential
Plant references: CDFW (1998, 1999, 2014), Hickman (ed., 1993) Munz (1974), Skinner & Pavlik (1994), USFWS (1993, 1996), CNPS 2014, Calflora 2014.				

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
FISH (3)			
Catostomus santaanae **Santa Ana sucker**	Silver fish with dark irregular blotches on the dorsal surface. 200m. in length. In small to medium permanent streams. LA and San Gabriel drainage, lower Santa Ana River.	Fed: **THR** Calif: SSC NDDB: S1	No habitat; No potential
Rhinichthys osculus "subspecies 3" **Santa Ana speckled dace**	Endemic to Santa Ana and San Gabriel Riv. watersheds, historic in Big Tujunga Cyn. Santa Ana Riv populations in lower S.Bernardino Mtn foothills & washes	Fed: None Calif: SSC NDDB: S1 USFS: S	No habitat; No potential
Gila orcuttii **Arroyo chub**	Slow –moving or backwater sections of warm/ cool streams with mud or sand substrates. LA, San Gabriel, San Luis Rey, Santa Ana & Santa Margarita Riv and Malibu and San Juan creeks.	Fed: None Calif: SSC NDDB: S2 USFS: S	No habitat; No potential
REPTILES AND AMPHIBIANS (19)			
Anaxyrus californicus **Arroyo toad**	Washes and intermittent streams of semi-arid regions, sandy-banked rivers, riparian woodlands, and loose gravel. Southern CAto tip of Baja California. Desert popul. along Mojave River.	Fed: **END** Calif: SSC NDDB: S2S3	No habitat; No potential
Anniella pulchra pulchra **California silvery legless lizard**	Various habitats, mainly shrublands, <6000' elevation; Coast Ranges from Bay area to northern Baja Calif., sw Sierra Nevada, parts of the Central Valley, Trans. and Penins. ranges	Fed: None Calif: SSC NDDB: S3 USFS: S	Habitat present; **Medium** potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Aspidoscelis hyperythra **Orange-throated whiptail**	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood. Sandy areas, patches of rock. Southern Ca., west of desert, to tip of Baja California.	Fed: None Calif: SSC NDDB: S2 USFS: S	Habitat present; **Medium** potential
Aspidoscelis tigris stejnegeri **Coastal whiptail**	Woodlands, shrublands; SW Ca. through much of Baja Ca. , below ±7500 ft. elev.	Fed: None Calif: None NDDB:S2S3	Habitat present; **Medium** potential
Charina trivirgata **Rosy boa**	Rocky brushlands and desert. Attracted to permanent & intermittent streams. Death Valley, CA., to the tip of Baja Ca., and coastal so. CA to south-central Arizona.	Fed: None Calif: None NDDB: S3S4 USFS: S	Habitat present; **Medium** potential
Coleonyx variegatus abbotti **San Diego banded gecko**	Rock outcrops in shrublands, to 5000' elevation; southwest Calif. through much of n. Baja Calif.	Fed: None Calif: None NDDB:S1S2	No habitat; No potential
Crotalus ruber **Northern red-diamond rattlesnake**	Desert scrub, thorn scrub, and chaparral habitats below 4,000ft. San Bernardino County south through most of Baja California, Mexico.	Fed: None Calif: SSC NDDB: S2? USFS: S	Habitat present; **Present**
Diadophis punctatus (ssp. modestus and similis) **San Bernardino /San Diego ringneck snake**	Open relatively rocky areas within valley-foothill locales; mixed chaparral / annual grasslands; western SD and Riv. counties, southwest SB, Vent. and LA counties, northwest Baja Calif.	Fed: None Calif: None NDDB: S2? USFS: S	Habitat present; **Medium** potential
Emys marmorata **Western pond turtle**	Perennial ponds, streams, marshes, irrigation. ditches; coastal South & cent Ca., NW Baja Ca., below ≈ 4800 ft. el. (few higher el. pops)	Fed: None Calif: SSC NDDB: S3 USFS: S	No habitat; No potential
Lampropeltis zonata (pulchra) **California mountain Kingsnake** (San Diego pop.)	Habitat generalist. Moist chaparral/css, hardwood, coniferous woodlands, riparian zones, wet meadows. Central SD. Co. peninsular Ranges, Laguna, Palomar, Volcan and Hot Springs Mtns; in Santa Ana Mts. And Hollywood Hills and Santa Monica Mts. 0- 6500ft elev.	Fed: None Calif: SSC NDDB: S1S2 USFS: S	Habitat present; **Medium** potential
Lithobates pipiens **Northern leopard frog** (Native populations only)	Grassland, wet meadows, potholes, forests, woodland, brushlands, springs, canals, bogs, marshes, reservoirs	Fed: None Calif: SSC NDDB: S2	No habitat; No potential
Phrynosoma blainvillii **Coast horned lizard**	Open areas of sandy soil and low veg. in valleys, foothills and semiarid mts. 0-8000ft. Coastal sage scrub, low elevation chaparral, annual grassland, oak and riparian woodlands, and coniferous forests. SW CA to NW Baja CA, Mex	Fed: None Calif: SSC NDDB: S3S4	Habitat present; **Medium** potential
Plestiodon skiltonianus interparietalis **Coronado Island skink**	Grassland, woodlands, pine forests, chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers. Prefers rocky areas near streams with lots of veg. 0- 8300 feet.	Fed: None Calif: SSC NDDB: S1S2	Habitat present; **Medium** potential
Rana draytonii **California red-legged frog**	Pools in low-gradient foothill and valley streams (esp. intermittent) to ±4000 ft.; only extant S CA pops are in Ventura Co. and Santa Rosa Plateau (Riv. Co.)	Fed: **THR** Calif: SSC NDDB: S2S3	No habitat; No potential
Salvadora hexalepis virgultea **Coast patch-nosed snake**	Shrublands, usually with open sand; Santa Barbara County through southwest Calif., to northwest Baja Calif.	Fed: None Ca: SSC NDDB: S2S3	Habitat present; **Medium** potential
Scaphiopus hammondii **Western spadefoot toad**	Breeds in quiet streams & vernal pools, burrows beneath sand during dry season; W Ca., Cent. Val. To Baja Ca.	Fed: None Ca: SSC NDDB: S3	No temporary breeding pools; No potential
Taricha torosa **Coast range newt** (Monterey Co. & south only)	Wet forests, oak forest, chaparral and rolling grasslands. This species frequents terrestrial habitats, but breeds in ponds, reservoirs and slow moving streams. Endemic to Ca. Coast range mts from Mendocino to San Diego Co.	Fed: None Ca: SSC NDDB: S4	No habitat; No potential
Thamnophis hammondii **Two-striped garter snake**	In or near perennial fresh water and adjacent riparian habitat, usu. about pools in streams; SW Ca &NW Baja Ca	Fed: None Calif: SSC NDDB: S3S4 USFS: S	Habitat present; No perennial water Low potential
Thamnophis sirtalis ssp. **South coast garter snake**	In or near perennial fresh water and adjacent riparian habitat, usu. about pools in streams; SW Ca &NW Baja Ca. Sensitive population sea level to about 850m	Fed: None Calif: SSC NDDB: S1S2	Habitat present; No perennial water Low potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
BIRDS (51):			
Accipiter cooperii **Cooper's hawk** (nesting)	Cismontane woodland, riparian forest/woodland (including oak or walnut woodland and gum trees), upper montane coniferous forest. Forages in open areas over scrublands; CA, Mexico, Central America.	Fed: None Calif: WL NDDB: S4	**Present**
Accipiter striatus **Sharp-shinned hawk** (nesting)	Conifer-covered slopes near mixed stands of conifer and deciduous trees. Can use scrub habitat in winter. In So. CA. most common in coastal lowlands and desert areas. Common winter resident in so. CA. Breeds in high elev. forest or riparian. Likely only breeding in Northern CA.	Fed: None Calif: WL NDDB: S4	No habitat; No potential
Agelaius tricolor **Tricolored blackbird** (nesting colony)	Breeds colonially in freshwater marshes, nomadic among marshes and fields in winter; almost completely endemic to Calif.	Fed: None Calif: **END** NDDB: S1S2	No habitat; No potential
Aimophila ruficeps canescens **Southern California Rufous-crowned sparrow**	Sparse, mixed chaparral, scrub, rocky, brushy slopes. Central California to Baja California.	Fed: None Calif: WL NDDB: S2S3	Habitat present; **Medium** potential
Ammodramus savannarum **Grasshopper sparrow** (nesting)	Open grasslands with scattered shrubs, often an ecotone of grassland and sage scrub with an absence of trees. SW Canada to South Am. Migrates south, including so. CA in winter. Little known of winter range because of secretive habitats	Fed: None Calif: SSC NDDB: S2	No habitat; No potential
Artemisiospiza belli belli **Bell's sage sparrow**	Sage scrub and chaparral communities. Central Washington southward to Baja California, Mexico.	Fed: None Calif: WL NDDB: S2?	Habitat present; Low potential
Aquila chrysaetos **Golden eagle** (nesting & wintering)	Nests on rock ledge of cliff or in large tree (e.g., oak or eucalyptus in CA). Pair may have several alternate nests; may use same nest in consecutive years or shift to alternate nest used in different years. Forages in grassland and open habitats in rolling foothills, mtn areas, sage-juniper flats, and deserts. W. North America. This species is very sensitive to disturbance.	Fed: None Calif: **FP**, WL NDDB: S3	Habitat present; **Medium** potential
Ardea alba **Great Egret** (nesting colony)	Shallow water of fresh and saline emergent wetlands on the margins of estuaries, lakes and slow streams, on mudflats and salt ponds and in irrigated croplands and pastures. Nests and roosts in large trees near water. Common in coastal lowlands. Gather in colonies. One colony known to breed in Riv Co. Rare to uncommon in deserts, mainly as spring migrants.	Fed: None Calif: None NDDB: S4	No habitat; No potential
Ardea herodias **Great Blue Heron** (nesting colony)	Shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands and pastures and in mountains above foothills. Perches and roosts in secluded tall trees. Nests in colonies in tops of secluded large snags or live trees, usually the tallest available. Rarely nests on ground, rock ledges, sea cliffs or shrubs. Throughout CA.	Fed: None Calif: None NDDB: S4	No habitat; No potential
Asio otus **Long-eared owl** (nesting)	Breeds & roosts in riparian forests or other dense forest; forages at night over open land; ever more rare breeding in S Ca.; occurs N Amer. / Eurasia	Fed: None Calif: SSC NDDB: S3?	No habitat; No potential
Athene cunicularia **Burrowing owl** (burrow sites and some wintering sites)	Open dry grassland, desert or shrubland areas. Small mammal burrows are an essential element of burrowing owl habitat. Although they can occasionally occupy man-made structures. SW Canada south to Tierra del Fuego.	Fed: None Calif: SSC NDDB: S3	Habitat present; **Medium** potential
Baeolophus inornatus **oak titmouse**	Open pine or mixed oak-pine forest	Fed: None Calif: None NDDB: S4	No habitat; No potential
Botaurus lentiginosus **American bittern**	Wetlands of many sizes and types. In winter they move to areas where water bodies don't freeze, esp. near the coast, where they may occasionally use brackish marshes	Fed: None Calif: None NDDB: S3S4	No habitat; No potential
Buteo regalis **Ferruginous hawk**	Foraging in agricultural fields, grasslands and desert scrub from low perches. Winter migratory bird to southern California. Likely only breeds in northern Ca.	Fed: None Calif: WL NDDB: S3S4	No habitat; No potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Buteo swainsoni **Swainson's Hawk** (nesting)	Grassland/agricultural; large trees for nesting, desert scrub w Joshua Tree & freemont cottonwood overstory, near streams and open fields. Breeds overwhelmingly in Great Basin and Cent Valley of Ca.	Fed: None Calif: **THR** NDDB: S3	No habitat; No potential
Campytorhynchus bruneicapillus sandiegensis **Coastal cactus wren** (San Diego and Orange Co.)	Coastal sage scrub with cactus patches; southern Calif. and northwest Baja Calif.	Fed: None Calif: SSC NDDB: S3 USFS: S	Habitat present; Low potential
Chaetura vauxi **Vaux's swift** (nesting)	Nests in coniferous or mixed forest. Forages in forest openings, above streams	Fed: None Calif: SSC NDDB: S2S3	Habitat present; Low potential
Charadrius alexandrius nivosus **Western snowy plover** (nesting)	Sparsely vegetated flats and along the shores of alkaline and saline lakes, reservoirs, ponds braided river channels, agricultural waste-water ponds and salt evaporation ponds. Occurs year round in CA mainly in the San Joaquin Valley and the Salton Sea.	Fed: **THR** Calif: SSC NDDB: S2	No habitat; No potential
Charadrius montanus **Mountain plover** (wintering)	short vegetation, bare ground, and flat topography disturbed short- and mixed grass prairie, semi-desert grasslands, agricultural lands, and prairie dog colonies. Elev. 274-2140. Winters in CA.	Fed: None Calif: SSC NDDB: S2?	No habitat; No potential
Chondestes grammacus **lark sparrow** (nesting)	Open habitats, where grass adjoins scattered trees and shrubs, especially in poor or sandy soils. Park-like woodlands, mesquite grasslands, fallow fields with brushy edges, sagebrush	Fed: None Calif: None	No habitat; No potential
Circus cyaneus **Northern harrier** (nesting)	Emergent wetlands or along rivers or lakes, but may also nest in grasslands, grain fields, or on sagebrush flats several miles from water. Hunts in the open, nests on the ground. Throughout North America, winter migratory birds to southern Ca.	Fed: None Calif: SSC NDDB: S3	No habitat; No potential
Cistothorus palustris clarkae **Clark's marsh wren**	Marshes, especially with dense reeds	Fed: None Calif: SSC NDDB: S2S3	No habitat; No potential
Coccyzus americanusoccidentalis **Western yellow-billed cuckoo**	Inhabits extensive, relatively broad, well-shaded riparian forests. Declined to only a handful of tiny populations in California. Historically it occurred in most of the United States (excluding the northwestern states), and into Baja California and northern Mexico.	Fed: **THR** Calif: **END** NDDB: S1 USFS: S	No habitat; No potential
Coturnicops noveboracensis **yellow rail**	Shallow marshes, and wet meadows	Fed: None Calif: SSC NDDB: S1S2 USFS: S	No habitat; No potential
Dendroica petechia brewsteri **Yellow Warbler** (nesting)	Riparian, including willow, cottonwood, sycamore Alders and aspen for nesting and foraging, also conifer forest.	Fed: None Calif: SSC NDDB: S3S4	No habitat; No potential
Egretta thula **Snowy egret** (nesting colony)	Widespread in CA. along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches and wet fields. In So. CA, common yearlong in the Imperial Valley and along the Colorado River. Desert regions, uncommon in spring migration and rare through summer.	Fed: None Calif: None NDDB: S4	No habitat; No potential
Elanus leucurus **White-tailed kite** (nesting)	Breeds in woodlands and riparian forests or near marshes at the edge of open terrain/foraging areas such as savanna, partially cleared lands and cultivated fields, mostly in lowland situations. Pacific Coast (Calif, northern Baja, Oregon), other scattered localities	Fed: None Calif: **FP** NDDB: S3S4	No habitat; No potential
Empidonax traillii brewsteri **little willow flycatcher** (nesting)	Wet mountain meadow systems with standing water for at least part of the breeding season (May to July) and with ample numbers of willow and other associated trees and shrubs	Fed: None Calif: **END** NDDB: S1S2 USFS: S	No habitat; No potential
Empidonax traillii extimus **Southwestern willow flycatcher** (nesting)	Rare and local is southern Calif.; breeds in extensive thickets of willow riparian forests; southwest US and northern Baja Calif.	Fed: **END** Calif: **END** NDDB: S1 USFS: S	No habitat; No potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Eremophila alpestris actia **California horned lark**	Short-grass prairie, "bald" hills, mtn meadows, open coastal plains, fallow fields and alkali flats. W/i coastal Sonoma Co. to San Diego Co., San Joaquin Valley and east to foothills	Fed: None Calif: WL NDDB: S3	**Present**
Falco columbarius **Merlin** (wintering)	Woodlands, grasslands, agricultural fields, and areas around livestock feed lots. Winter migratory bird to southern California.	Fed: None Calif: WL NDDB: S3S4	No habitat; No potential
Falco mexicanus **Prairie falcon** (nesting)	Nests on high cliffs, primarily in desert and semi-desert areas with little disturbance. Forages primarily over open lands; occurs throughout arid western US and Mexico. Breeding in so. California is significantly reduced.	Fed: None Calif: None NDDB: S4	No habitat; No potential
Falco peregrinus anatum **American Peregrine falcon** (nesting)	Found in a variety of open habitats. prefers open water (within .5-1 mile. Nests in cliffs along mnt valleys and river gorges usu. < 9500 ft. elev. Prefers high cliffs with sweeping views over low cliffs and hills or narrow canyons and ravines. Habitats with high concentrations of birds within 10 miles of nesting sites essential.	Fed: Delisted Calif:Delist,**FP** NDDB: S3S4	Habitat present-forage only; Low potential
Grus canadensis Canadensis **lesser sandhill crane** (wintering)	Open wetland habitats surrounded by shrubs or trees. They nest in marshes, bogs, wet meadows, prairies, burned-over aspen stands, and other moist habitats, preferring those with standing water	Fed: None Calif: SSC NDDB: S3S4	No habitat; No potential
Haliaeetus leucocephalus **Bald eagle** (nesting & wintering)	Breed in large trees, usually near major rivers or lakes; winters more widely; wide but scattered distribution in N America; esp. coastal regions	Fed: Delisted Calif: **END, FP** NDDB: S2 USFS: S	No habitat; No potential
Hydroprogne caspia **Caspian tern** (nesting colony)	Salt marshes, barrier islands, dredge spoil islands, freshwater lake islands, and river islands	Fed: None Calif: None NDDB: S4	No habitat; No potential
Icteria virens **Yellow-breasted chat** (nesting)	Summer resident, inhabits riparian thickets of willow near watercourses, low dense riparian willow.	Fed: None Calif: SSC NDDB: S3	No habitat; No potential
Lanius ludovicianus **Loggerhead shrike** (nesting)	Open areas where small trees, shrubs, and fences can provide suitable perches. Nests in small trees and large shrubs. Throughout much of North America.	Fed: None Calif: SSC NDDB: S4	No habitat; No potential
Nycticorax nycticorax **Black-crowned night-heron** (nesting colony)	Associated with large wetlands including swamps, streams, rivers, marshes, mud flats and the edge of lakes. Widespread in the US.	Fed: None Calif: None NDDB: S4	No habitat; No potential
Passerculus sandwichensis beldingi **Belding's savannah sparrow**	Coastal marshes dominated by pickleweed, Coastal so. CA and Baja Ca.	Fed: None Calif: **END** NDDB: S3	No habitat; No potential
Phalacrocorax auritus **double-crested cormorant** (nesting colony)	Colonial waterbirds that seek aquatic bodies big enough to support their mostly fish diet	Fed: None Calif: WL NDDB: S4	No habitat; No potential
Plegadis chihi **White-faced ibis** (nesting colony)	Fresh and saltwater marshes containing rushes and sedges for nesting. Also near ponds, rivers and some agricultural fields. 0-4300m elev. Widespread in western and mid-west US.	Fed: None Calif: WL NDDB: S3S4	No habitat; No potential
Polioptila californica californica **coastal California gnatcatcher**	Sage scrub comms. also chaparral, grasslands & riparian comms adjacent to or mixed w/ sage scrub. So Ventura Co to LA, Orange, Riv., San Bern., San D. Cos into Baja Ca, Mexico.	Fed: **THR** Calif: SSC NDDB: S2	Habitat present; **Medium** potential
Pooecetes gramineus affinis **Oregon vesper sparrow** (wintering)	Open habitats with grass, including prairie, sagebrush steppe, meadows, pastures, and roadsides	Fed: None Calif: SSC NDDB: S3?	No habitat; No potential
Spinus lawrencei **Lawrence's goldfinch** (nesting)	Dry grassy slopes with weed patches, chaparral and open woodlands	Fed: None Calif: None NDDB: S3	Habitat present; **Present**
Spizella atrogularis **black-chinned sparrow** (nesting)	Chaparral, sagebrush, arid scrublands, and brushy hillsides	Fed: None Calif: None NDDB: S3	Habitat present; **Medium** potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Strix occidentalis occidentalis **California spotted owl**	In so. CA. Montane hardwood and conifer forests at mid-high el. Coast oak woodland, valley foothill riparian at lower el. Breeds/roosts in forests woods with large old trees and snags, dense canopies, multiple canopy layers. Spread from No.CA south along the W slope of the Sierra Nevada and in Mts. of central and so CA nearly to the Mex border.	Fed: None Calif: SSC NDDB: S3 USFS: S	No habitat; No potential
Vireo bellii pusillus **Least Bell's vireo**	Found in riparian woodlands, bottomlands, and mesquite. Ranges from northern Mex and Baja Ca, into so Ca, and the so. mid-western US	Fed: **END** Calif: **END** NDDB: S2	No habitat; Low potential
Xanthocephalus xanthocephalus **yellow-headed blackbird** (nesting)	Freshwater wetlands and agricultural areas	Fed: None Calif: SSC NDDB: S3	No habitat; No potential
MAMMALS (15):			
Antrozous pallidus **Pallid bat**	Rock outcrops of shrublands, below about 6000' elevation; in Calif. (excludes high mountains), southwest North America to interior Oregon and Washington; hibernates in winter	Fed: none Calif: SSC NDDB: S3 USFS: S	Habitat present; **High** potential
Chaetodipus californicus femoralis **Dulzura pocket mouse**	Usually along the border of grass-chaparral edges, also along coastal sage, chaparral and grassland up to 4600 ft. in elevation in southern California.	Fed: none Calif: SSC NDDB: S3	Habitat present; **High** potential
Chaetodipus fallax fallax **Northwestern San Diego pocket mouse**	Open shrublands and sandy areas; SW Calif. and NW Baja Calif. (inland to San Bernardino Val)	Fed: None Calif: SSC NDDB: S3S4	No habitat; No potential
Dipodomys merriami parvus **San Bernardino kangaroo rat**	Sparse, gently sloping grassland, sometimes at margins of cultivated or disturbed lands; San Bernardino County W Riverside Co. and adjacent San Diego Co.	Fed: **END** Calif: SSC NDDB: S1	No habitat; No potential
Dipodomys stephensi **Stephens' kangaroo rat**	Sparse, gently sloping grassland, sometimes at margins of cultivated or disturbed lands; San Bernardino County W Riverside Co. and adjacent San Diego Co.	Fed: **END** Ca: **THR** NDDB: S2	No habitat; No potential
Eumops perotis californicus **Western mastiff bat**	Lowlands (with rare exceptions); Cent and So Ca., southern AZ, NM, southwest TX; roosts in deep rock crevices, often cliff faces. Forages over wide area. Can roost in trees.	Fed: None Calif: SSC NDDB: S3S4	Habitat present; Low potential
Lasiurus blossevillii **Western red bat**	Roost in tree foliage, typically associated with cottonwoods in riparian areas below 6500 ft. Widespread from Canada through the US into Central and S. America, but populations have declined due to loss of habitat.	Fed: None Calif: SSC NDDB: S3	No habitat; No potential
Lasiurus cinereus **Hoary bat**	Wooded areas where it roosts in the open by hanging from a branch, forages over wide area. Prefers trees at the edge of clearings, but can occur in heavy forests, open areas and urban areas. Widespread from Canada through the US into Central and S. America.	Fed: None Calif: None NDDB: S4	Habitat present; **High** potential
Lasiurus xanthinus **Western yellow bat**	Roosts in trees, hanging from the underside of leaves. Desert regions of the sw. US. With a particular association to palm trees. Distributed in So. CA, AZ, NM and TX, into Mexico.	Fed: None Calif: SSC NDDB: S3	Habitat present; Low potential
Lepus californicus bennettii **San Diego black-tailed jackrabbit**	Chaparral, coastal or Riversidean sage scrub with adjacent open grassland. Los Angeles County south to San Quintin, Baja Ca, Mex.	Fed: None Calif: SSC NDDB: S3S4	Habitat present; **High** potential (Observed in previous surveys)
Myotis ciliolabrum **Western small-footed myotis**	Adapted to moist areas. Roosts alone or in small groups in rock crevices, mines, caves or buildings. W. North Am from Canada to central Mex as far east as Ok. Widespread in CA	Fed: None Calif: None NDDB: S3	No habitat; No potential
Myotis yumanensis **Yuma myotis**	Variety of habitats, ie. Juniper and riparian woodlands, Arid shrublands. Closely associated with water. Roosts in caves, attics, buildings, mines, under bridges and similar structures. W. North Am from Canada to central Mex as far east as Ok. Widespread in CA	Fed: None Calif: None NDDB: S4	No habitat; No potential
Neotoma lepida intermedia **San Diego desert wood rat**	Arid shrublands, and rocky outcrops and crevices; cismontane Calif., San Luis Obispo to San Diego County and northwest Baja Calif.	Fed: None Calif: SSC NDDB: S3S4	Habitat present; **High** potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Nyctinomops femorosaccus **Pocketed free-tailed bat**	Deserts and arid lowlands; E Riv and San Diego Cos, through SW US, Baja Calif., mainland Mexico; Roost mainly in crevices of high cliffs	Fed: None Calif: SSC NDDB: S3	No habitat; No potential
Vulpes vulpes necator **Sierra Nevada red fox**	Alpine and subalpine meadows and montane boreal forests	Fed: None Ca: **THR** NDDB: S1 USFS: S	No habitat; No potential
INVERTEBRATES (8):			
Branchinecta lynchi **Vernal pool fairy shrimp**	Grassland vernal pools; Central Val, cent and S Coast Ranges, W Riverside Co.	Fed: **THR** Calif: None NDDB: S2S3	No habitat; No potential
Branchinecta sandiegonensis **San Diego fairy shrimp**	Pools, ponds, and depressions	Fed: **END** Calif: None NDDB: S2	No habitat; No potential
Carolella busckana **Busck's gallmoth**	Beaches, salt marshes, and sand dunes	Fed: None Calif: None NDDB: SH	No habitat; No potential
Ceratochrysis longimala **Desert cuckoo wasp**	Open, sunny habitats	Fed: None Calif: None NDDB: S1	Habitat present; Low potential
Danaus plexippus **monarch butterfly**	Milkweed and Eucalyptus trees (overwintering)	Fed: None Calif: None NDDB: S4 USFS: S	Habitat present; **High** potential
Euphydryas editha quino **Quino checkerspot butterfly**	Lower elevation (sea level to 4500 feet) although increasing in upper elev. Range. meadow areas, or clearings within coastal sage scrub or grassland vegetated by their host plants: dwarf plaintain and owl's clover.	Fed: **END** Calif: None NDDB: S1	No habitat; No potential
Raphiomidas terminatus abdominalis **Delhi sands flower-loving fly**	Delhi fine sands, often with unconsolidated dunes present. Southwestern San Bernardino County and northwestern Riverside County	Fed: **END** Calif: None NDDB: S1	No habitat; No potential
Streptocephalus woottoni **Riverside fairy shrimp**	Vernal pools near Murrieta (Riv.Co.), Miramar and Otay Mesa (San Diego Co.), one site in Orange Co., and two sites in Baja.	Fed: **END** Calif: None NDDB: S1S2	No habitat; No potential

Table 12: U.S. Forest Service Sensitive Species Probability Table

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
PLANTS (n=24)				
Abronia villosa var. *aurita* **Chaparral sand verbena**	Sand, mostly broad alluvial fans and benches, 80-1600 m elev (CNPS), 0-1600m (CalFlora), "Inland Empire" and adj. Colorado Des. And interior San Diego Co.	Feb. – July	Fed: None Calif: S2 CNPS: List 1B.1 USFS: S	Suitable habitat; Low potential
Brodiaea orcuttii **Orcutt's brodiaea**	Vernal moist grasslands, periphery of vernal pools. Occasionally streamside embankments. San Bernardino County south to Baja California. Elev. 100- 5250ft	May-July	Fed: none Calif: S2 CNPS: List 1B.1	No habitat; No potential
Calochortus weedii var. *intermedius* **Intermediate mariposa-lily**	Chaparral, coastal sage scrub, valley grassland, sandy or clay soils, often on sandstone outcrops between 950-2800 ft. el.; coastal S and cent. Calif. Cos.	May - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; **High** potential
Caulanthus simulans **Payson's jewel-flower**	Chaparral and coastal scrub, pinyon/ juniper woodland; frequently in burned or disturbed areas such as streambeds, also on rocky steep slopes; 300-7200 ft elev; known only from Riv. and SD Cos	Mar - June	Fed: None Cal: S4 CNPS: List 4.2 USFS: S	Habitat present; Low potential
Chorizanthe parryi var. Fernandina **San Fernando Valley spineflower**	Sand, between 90–500 meters in Western Transverse Ranges	April - July	Fed: Candidate Calif: **END** CNPS: List 1B.1 USFS: S	No habitat; No potential
Chorizanthe parryi var. *parryi* **Parry's spineflower**	LA, San Bernardino, and Riverside Cos.; sandy places in alluvial washes, coastal or desert scrublands, valley and foothill grasslands," +/- 1000-4000 ft. elev.	April - June	Fed: None Calif: S3 CNPS: List 1B.1 USFS: S	Habitat present; Low potential
Clinopodium chandleri **San Miguel savory**	Chaparral and oak woodland, and may be restricted to gabbroic or metavolcanic derived soils	March - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	No habitat; No potential
Dudleya multicaulis **Many-stemmed dudleya**	Heavy soils, often clay, in grassland or shrubland, SW Calif., below about 2600 ft. elev.	April - July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; low potential
Hesperocyparis forbesii **Tecate cypress**	Closed-cone coniferous forest, chaparral; known from a few locations in so. CA & in Baja CA; primarily north-facing slopes, groves often assoc. w/ chaparral; clay, gabbro & metavolcanic; 393-5118 ft elev.	Can be IDd all year	Fed: None Calif: S2 CNPS: List 1B.1 USFS: S	Suitable habitat; no soils; No potential
Horkelia cuneata ssp *puberula* **Mesa horkelia**	Perennial herb found in chaparral, cismontane woodland and coastal scrub on sandy or gravely soils. Elevational range 229 – 2296 feet.	Feb – July (Sept rare)	Fed: None Calif: S1 CNPS: List 1B.1 USFS: S	No habitat; No potential
Lepechinia cardiophylla **Heart-leaved pitcher sage**	Chaparral and conifer-oak forests, about 1900-4000 ft. elev.; endemic to Santa Ana Mts., occurs on Santiago PK quad	April - July	Fed: none Ca: S2.3 CNPS: List 1B.2 USFS: S	No suitable habitat; No potential
Linanthus orcuttii **Orcutt's linanthus**	Openings in Chaparral, pine forest, pinyon /juniper woodland and desert scrub. Elev range 2625-7050 ft. SB Mts. Peninsular Ranges, Desert, Baja CA.	May-June	Fed: none Calif: S2 CNPS: List 1B.3	No habitat; No potential
Monardella australis ssp. Jokerstii **Jokerst's monardella**	Steep scree or talus, stony benches on canyon bottoms in montane forest (or chaparral) at an elevation of 1350–1750 meters in eastern San Gabriel Mountains	July – Sept.	Fed: None Calif: S1 CNPS: List 1B.1 USFS: S	No habitat; No potential
Monardella hypoleuca v. lanata **Felt leaved monardella**	Chaparral and foothill woodland, rocky, granitic slopes. 984-4920ft.	June-Aug	Fed: None Calif: S2.2 CNPS: List 1B.2	Suitable habitat; low potential
Monardella macrantha ssp. *hallii* **Hall's monardella**	Chaparral, cismontane and foothill woodlands, valley grassland, 984-5165ft el.; Peninsular Ranges (Riv. and SD Cos.)	June – Oct	Fed: None Calif: S3 CNPS: List 1B.3 USFS: S	Suitable habitat; Low potential

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
Nolina cismontana **chaparral nolina**	Dry chaparral of coastal mts. Elev. 426-4166 ft. m. South Coast, W. Traverse Ranges, Peninsular Rng	May-July	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Suitable habitat; Low potential
Penstemon californicus **California beardtongue**	Sandy soils, chaparral, yellow-pine forest or pinyon/juniper woodland. Elev. Range 1170-2300m. Peninsular Ranges and Mexico	May - August	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	No habitat; No potential
Phacelia keckii **Santiago Peak phacelia**	Closed cone coniferous forest, chaparral; open areas and sometimes along creeks; 545-1600m elev.; known only from Orange and Riverside Cos.	May - June	Fed: None Ca: S2 CNPS: List 1B.3 USFS: S	Habitat present; Low potential
Scutellaria bolanderi ssp. *austromontana* **Southern skullcap**	Gravelly or sandy soils, stream banks, chaparral, oak or pine woodland; Elev. Range 1968-6560 ft. San Bern. Mts, Peninsular Ranges and S. Mojave Desert	June – August	Fed: None Calif: S2 CNPS: List 1B.2	Habitat present; Low potential
Sibaropsis hammittii **Hammitt's claycress**	Washes, steep hillsides, dry flats, rocky bluffs and exposed crevices. Elev. 2427-3475 ft.	Mar-Apr.	Fed: none Calif: S2.2 CNPS: List 1B.2	Habitat present; Low potential
Sidalcea neomexicana **Salt Spring checkerbloom**	Coastal scrub, desert scrub, chaparral, yellow pine forest (Alkaline playas and wetlands); 50-5000 ft. elevation SW Calif., Baja Ca., SW US, mainl. Mexico	March - June	Fed: none Calif: S2S3 CNPS: List 2B.2 USFS: S	No habitat; No potential
Streptanthus campestris **Southern jewel flower**	Open, rocky conifer forest, chaparral, Yellow pine forest, pinyon-juniper woodland. Elev. 2959-7550 ft.	May-July	Fed: none Calif: S2.3 CNPS: List 1B.3	No habitat; No potential
Symphyotrichum defoliatum **San Bernardino aster**	Near ditches, streams and springs. Cismontane woodland, lower montane coniferous forest, coastal scrub, meadows and seeps, marshes, swamps valley & foothill grassland. El. ≤ 6500 ft.	July-Nov	Fed: None Calif: S2 CNPS: List 1B.2 USFS: S	Habitat present; Low potential
Tetracoccus dioicus **Parry's tetracoccus**	Robust shrub, usually in Chamise Chaparral or coastal scrub; stony decomposed gabbro soil, approx 500-3500 ft elev.	April-May	Fed: None Calif: S 2.2 CNPS: List 1B.2	Suitable habitat; Low potential

Plant references: CDFW (1998, 1999, 2014), Hickman (ed., 1993) Munz (1974), Skinner & Pavlik (1994), USFWS (1993, 1996), CNPS 2014, Calflora 2014.

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
FISH (2)			
Rhinichthys osculus "subspecies 3" **Santa Ana speckled dace**	Endemic to Santa Ana and San Gabriel River watersheds, historic in Big Tujunga Cyn. Santa Ana River populations in lower San Bernardino Mtn foothills & washes	Fed: None Calif: SSC NDDB: S1 USFS: S	No habitat; No potential
Gila orcuttii **Arroyo chub**	Slow –moving or backwater sections of warm/ cool streams with mud or sand substrates. LA, San Gabriel, San Luis Rey, Santa Ana & Santa Margarita Riv and Malibu and San Juan creeks.	Fed: None Calif: SSC NDDB: S2 USFS: S	No habitat; No potential
REPTILES AND AMPHIBIANS (8)			
Anniella pulchra pulchra **California silvery legless lizard**	Various habitats, mainly shrublands, <6000' elevation; Coast Ranges from Bay area to northern Baja Calif., sw Sierra Nevada, parts of the Central Valley, Trans. and Penins. ranges	Fed: None Calif: SSC NDDB: S3 USFS: S	Habitat present; **Medium** potential
Aspidoscelis hyperythra **Orange-throated whiptail**	Low-elevation coastal scrub, chaparral, and valley-foothill hardwood. Sandy areas, patches of rock. Southern Ca., west of desert, to tip of Baja California.	Fed: None Calif: SSC NDDB: S2 USFS: S	Habitat present; **Medium** potential
Charina trivirgata **Rosy boa**	Rocky brushlands and desert. Attracted to permanent & intermittent streams. Death Valley, CA., to the tip of Baja Ca., and coastal so. CA to south-central Arizona.	Fed: None Calif: None NDDB: S3S4 USFS: S	Habitat present; **Medium** potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Crotalus ruber **Northern red-diamond rattlesnake**	Desert scrub, thorn scrub, and chaparral habitats below 4,000ft. San Bernardino County south through most of Baja California, Mexico.	Fed: None Calif: SSC NDDB: S2? USFS: S	Habitat present; **Present**
Diadophis punctatus (ssp. modestus and similis) **San Bernardino /San Diego ringneck snake**	Open relatively rocky areas within valley-foothill locales; mixed chaparral / annual grasslands; western SD and Riv. counties, southwest SB, Vent. and LA counties, northwest Baja Calif.	Fed: None Calif: None NDDB: S2? USFS: S	Habitat present; **Medium** potential
Emys marmorata **Western pond turtle**	Perennial ponds, streams, marshes, irrigation. ditches; coastal South & cent Ca., NW Baja Ca., below ≈ 4800 ft. el. (few higher el. pops)	Fed: None Calif: SSC NDDB: S3 USFS: S	No habitat; No potential
Lampropeltis zonata (pulchra) **California mountain Kingsnake** (San Diego pop.)	Habitat generalist. Moist chaparral/css, hardwood, coniferous woodlands, riparian zones, wet meadows. Central SD. Co. peninsular Ranges, Laguna, Palomar, Volcan and Hot Springs Mtns; in Santa Ana Mts. And Hollywood Hills and Santa Monica Mts. 0- 6500ft elev.	Fed: None Calif: SSC NDDB: S1S2 USFS: S	Habitat present; **Medium** potential
Thamnophis hammondii **Two-striped garter snake**	In or near perennial fresh water and adjacent riparian habitat, usu. about pools in streams; SW Ca &NW Baja Ca	Fed: None Calif: SSC NDDB: S3S4 USFS: S	Habitat present; **Medium** potential
BIRDS (7):			
Campytorhynchus bruneicapillus sandiegensis **Coastal cactus wren** (San Diego and Orange Co.)	Coastal sage scrub with cactus patches; southern Calif. and northwest Baja Calif.	Fed: None Calif: SSC NDDB: S3 USFS: S	Habitat present; Low potential
Coccyzus americanus occidentalis **Western yellow-billed cuckoo**	Inhabits extensive, relatively broad, well-shaded riparian forests. Declined to only a handful of tiny populations in California. Historically it occurred in most of the United States (excluding the northwestern states), and into Baja California and northern Mexico.	Fed: **THR** Calif: **END** NDDB: S1 USFS: S	No habitat; No potential
Coturnicops noveboracensis **yellow rail**	Shallow marshes, and wet meadows	Fed: None Calif: SSC NDDB: S1S2 USFS: S	No habitat; No potential
Empidonax traillii brewsteri **little willow flycatcher** (nesting)	Wet mountain meadow systems with standing water for at least part of the breeding season (May to July) and with ample numbers of willow and other associated trees and shrubs	Fed: None Calif: **END** NDDB: S1S2 USFS: S	No habitat; No potential
Empidonax traillii extimus **Southwestern willow flycatcher** (nesting)	Rare and local is southern Calif.; breeds in extensive thickets of willow riparian forests; southwest US and northern Baja Calif.	Fed: **END** Calif: **END** NDDB: S1 USFS: S	No habitat; No potential
Haliaeetus leucocephalus **Bald eagle** (nesting & wintering)	Breed in large trees, usually near major rivers or lakes; winters more widely; wide but scattered distribution in N America; esp. coastal regions	Fed: Delisted Calif: **END, FP** NDDB: S2 USFS: S	No habitat; No potential
Strix occidentalis occidentalis **California spotted owl**	In so. CA. Montane hardwood and conifer forests at mid-high el. Coast oak woodland, valley foothill riparian at lower el. Breeds/roosts in forests woods with large old trees and snags, dense canopies, multiple canopy layers. Spread from No.CA south along the W slope of the Sierra Nevada and in Mts. of central and so CA nearly to the Mex border.	Fed: None Calif: SSC NDDB: S3 USFS: S	No habitat; No potential
MAMMALS (3):			
Antrozous pallidus **Pallid bat**	Rock outcrops of shrublands, below about 6000' elevation; in Calif. (excludes high mountains), southwest North America to interior Oregon and Washington; hibernates in winter	Fed: none Calif: SSC NDDB: S3 USFS: S	Habitat present; **High** potential
Myotis thysanodes **Fringed myotis**	Caves, mine tunnels, rock crevices and old buildings	Fed: none Calif: none NDDB: S3 USFS: S	No caves/mines; Low potential

Special Status Species	HABITAT AND DISTRIBUTION	Status Designation	Occurrence Probability
Vulpes vulpes necator **Sierra Nevada red fox**	Alpine and subalpine meadows and montane boreal forests	Fed: None Ca: **THR** NDDB: S1 USFS: S	No habitat; No potential
INVERTEBRATES (1):			
Danaus plexippus **monarch butterfly**	Milkweed and Eucalyptus trees (overwintering)	Fed: None Calif: None NDDB: S4 USFS: S	Habitat present; **High** potential

Table 11 and 12 Legend for Species Designations

Federal designations: (federal Endangered Species Act, US Fish and Wildlife Service):

END: Federally listed, endangered.
THR: Federally listed, threatened.
C1: Category I candidate. Sufficient data are available to support federal listing, but not listed at this time (equivalent to "candidate" (USDI Fish and Wildlife Service 1996).
Former C2: Formerly a Category 2 candidate species. Threat and/or distribution data are not sufficient to support federal listing at this time. No longer recognized by FWS.
C3a: Extinct.
C3b: Taxonomically invalid.
C3c: Too widespread and/or not threatened. No longer considered as a federal candidate for listing.
FSC: Federal Species of Concern

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

END: State listed, endangered.
THR: State listed, threatened.
RARE: State listed as rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
FP: Fully Protected
SSC: California Species of Special Concern (DFW) - Declining population levels, limited range, and/or continuing threats have made them vulnerable to extinction (vertebrate species)
WL: Watch List

CDFW Natural Diversity Data Base Designations: Applied to special status plants and sensitive plant communities; where correct category is uncertain, CDFW uses two categories or question marks.

S1: **Critically Imperiled:** Fewer than 6 occurrences or fewer than 1000 individuals or less than 2000 acres.
S1.1: Very threatened
S1.2: Threatened
S1.3: No current threats known
S2: **Imperiled:** 6-20 occurrences or 1000-3000 individuals or 2000-10,000 acres (decimal suffixes same as above).
S3: **Vulnerable:** 21-100 occurrences or 3000-10,000 individuals or 10,000-50,000 acres (decimal suffixes same as above).
S4: Apparently secure in California; this rank is clearly lower than S3 but factors exist to cause some concern, i.e., there is some threat or somewhat narrow habitat. No threat rank.
S5: Demonstrably secure or ineradicable in California. No threat rank.
SH: All sites in California are historical

California Native Plant Society (CNPS) designations: (Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Wildlife Code. This interpretation is inconsistent with other definitions; see text.)

List 1A: Plants presumed extirpated in California and either Rare or Extinct elsewhere.
List lB: Plants rare, threatened or endangered in California and elsewhere.
List 2A: Plants presumed extirpated in California, but common elsewhere in their range.
List 2B: Plants rare, threatened or endangered in California, but more common elsewhere in their range.
List 3: Plants about which we need more information; a review list.
List 4: Plants of limited distribution; a watch list.

California Native Plant Society (CNPS) designations*(continued)*:
Threat Ranks:

0.1: Seriously threatened in Ca (over 80% of occurrences threatened/ high degree and immediacy of threat)
0.2: Moderately threatened in Ca (20-80% occur. threatened/moderate degree and immediacy of threat)
0.3: Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Forest Service Designation

S: Sensitive Species

Definitions of occurrence potential:

Present: Observed on the site during surveys described here, or recorded on-site by other qualified biologists.
High: Observed in similar habitat in region by qualified biologists, or often occurs in habitat similar to that on the site, and within the known range of the species.
Moderate: Reported sightings in surrounding region, or site is within the known range of the species and often occurs in habitat similar to that on the site.
Low: Site is within the known range of the species but habitat on the site is rarely used by the species.
No: A focused study failed to detect the species, or, no suitable habitat is present, or the site is well outside known geographic or elevational ranges.
Unknown: No focused surveys have been performed in the region, and the species' distribution and habitat are poorly known.

Table 13: Point Data, Population Estimates, and Areal Extent of *R. Coulteri* 2008

Latitude (N)	Longitude (W)	Figure 8 Location	Population Size	Areal Extent of Population l x w (ft)	Impacted
33504071	117362028	1	5	100 x 15	
33504110	117362284	2	15	25 x 6	
33504086	117362439	3	85	55 x 25	
33504002	117362641	4	76	200 x 50	
33503993	117362781	5	51	200 x 65	
33503934	117362918	6	33	125 x 75	
33503919	117363148	7	45	150 x 66	X (portion)
33503847	117363307	8	10	100 x 9	X
33503781	117363519	9	15	150 x 25	X
33503757	117363674	10	25	300 x 35	X
33503811	117363613	11	31	75 x 36	X
33504104	117363735	12	75	185 x 55	X
33504702	117363793	13	57	225 x 68	X
33503702	117365536	14	3	20 x 3	

Table 14: Point Data, Population Estimates, and Areal Extent of *R. Coulteri* 2013

Latitude (N)	Longitude (W)	Figure 8 Location	Population Size	Areal Extent of Population l x w (ft)	Impacted
33504071	117362028	1	2	100 x 15	
33504110	117362284	2	7	25 x 6	
33504086	117362439	3	35	55 x 25	
33504002	117362641	4	43	200 x 50	
33503993	117362781	5	24	200 x 65	
33503934	117362918	6	12	125 x 75	
33503919	117363148	7	22	150 x 66	X (portion)
33503847	117363307	8	5	100 x 9	X
33503781	117363519	9	7	150 x 25	X
33503757	117363674	10	12	300 x 35	X
33503811	117363613	11	15	75 x 36	X
33504104	117363735	12	30	185 x 55	X
33504702	117363793	13	21	225 x 68	X
33503702	117365536	14	1	20 x 3	

Table 15: State and Federal Jurisdictional Features In The Survey Area

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1	2,771	36,078	13	2,771	34,915	12.6	-	-	36,078 [2,771]	-	34,915 [2771]		36,078/ 13.0
1a	397	794	2	198	298	1	-	-	776 [397]	-	298 [198]		794/ 2.0
1b	234	468	2	117	190	1	-	-	336 [234]	-	190 [117]		468 / 2.0
1c	566	1,132	2	377	510	1.2	-	-	1,104 [566]	-	510 [377]		1,132 / 2.0
1d	248	546	2.2	124	280	1.3	-	-	489 [248]	-	280 [124]		546 / 2.2
1e	190	380	2	95	105	0.7	-	-	372 [190]	-	105 [95]		380 / 2.0
1f	910	3,276	3.6	890	1,148	1.4	-	-	2,072 [910]	-	1,148 [890]		3,276 / 3.6
1f1	438	1,095	2.5	328	375	1	-	-	872 [438]	-	375 [328]		1,095 / 2.5
1f2	122	195	1.6	61	38	0.5	-	-	72 [73]	-	38 [61]		195 / 1.6
1f3	109	218	2	75	31	0.5	-	-		-			218 / 2.0
1f4	125	250	2	125	50	0.7	-	-		-			250 / 2.0
1f5	147	309	2.1	147	30	0.5	-	-		-			309 / 2.1
1g	151	574	3.8	75	90	1	-	-	299 [151]	-	90 [75]		574 / 3.8
1h	17	34	2	12	6	0.5	-	-	15 [17]	-	6 [12]		34 / 2.0

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1i	368	4,710	12.8	184	297	1	-	-	109 [57]	-	297 [184]	-	4,710/ 12.8
1i1	68	197	2.9	35	50	0.9	-	-	-	-	-	-	197 /2.9
1j	108	281	2.6	75	27	0.5	-	-	-	-	-	-	281 / 2.6
1k	95	190	2	80	77	1.1	-	-	-	-	-	-	190 / 2.0
1l	240	288	1.2	200	72	0.4	-	-	-	-	-	-	288 / 1.2
1l1	99	149	1.5	100	16	0.4	-	-	-	-	-		149 / 1.5
1m	13	13	1	0	0	0	-	-	-	-	-	-	13/ 1.0
2	211	232	1.1	70	56	0.8	-	-	191 [191]	-	56 [70]	-	232 / 1.1
3	4,041	255,795	63.3	4,041	8,082	2	-	-	168,402 [2,420]	-	8,082 [4,041]	-	255,795/63.3
3a	293	293	1	102	41	0.4	-	-	-	-	-	-	293 / 1.0
3b	351	1,229	3.5	105	84	0.8	-	-	-	-	-	-	1,229 / 3.5
3c	536	1,608	3	427	342	0.8	-	-	-	-	-	-	1,608 / 3.5
3c1	134	161	1.2	60	24	0.4	-	-	-	-	-	-	161 / 3.0
3d	495	693	1.4	371	186	0.5	-	-	-	-	-	-	693 / 1.2
3e	513	2,514	4.9	256	290	0.9	-	-	345 [250]	-	290 [256]	-	2,514 / 4.9
3f	325	423	1.3	157	94	0.6	-	-	414 [325]	-	94 [157]	-	423 / 1.3
3g	1,965	6,485	3.3	1,572	1,886	1.2	-	-	6,398 [1,965]	-	1,886 [1,572]	-	6,485 / 3.3
3g1	768	1,152	1.5	625	375	0.6	-	-	1,165 [768]	-	375 [625]	-	1,152 /1.5

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3g1a	226	226	1	53	53	0	-	-	225 [226]	-	53 [53]	-	226/ 1.0
3g1a1	59	118	2	25	10	0	-	-	58 [59]	-	10 [25]	-	118 / 2.0
3g2	1,293	17,326	13.4	1,034	5,687	5.5	-	-	17,326 [1,293]	-	5,687 [1,034]	-	17,326 / 13.4
3g2a	390	897	2.3	280	224	0.8	-	-	501 [390]	-	224 [280]	-	897 / 2.3
3g2a1	305	458	1.5	0	0	0	-	-	304 [305]	-	-	-	458 / 1.5
3g2b	266	532	2	165	66	0	-	-	262 [266]	-	66 [165]	-	532 / 2.0
3g2c	252	378	1.5	126	114	0.6	-	-	383 [252]	-	114 [126]	-	378 / 1.5
3g2c1	95	190	2	52	42	0	-	-	94 [95]	-	42 [52]	-	190 / 2.0
3g2d	74	222	3	37	72	1.2	-	-	74 [74]	-	72 [37]	-	222 / 3.0
3g3	324	648	2	162	158	0.9	-	-		-	-	-	648 / 2.0
3h	1,301	6,635	5.1	1,301	2,862	2.2	-	-	6,615 [1,301]	-	2,862 [1,301]	-	6,635 / 5.1
3h1	744	1,488	2	744	670	0.9	-	-	1,482 [744]	-	670 [744]	-	1,488 / 2.0
3h1a	245	515	2.1	172	155	0	-	-	222 [223]	-	155 [172]	-	515 / 2.1
3h1b	396	990	2.5	264	261	0.9	-	-	265 [266]	-	261 [264]	-	990 / 2.5

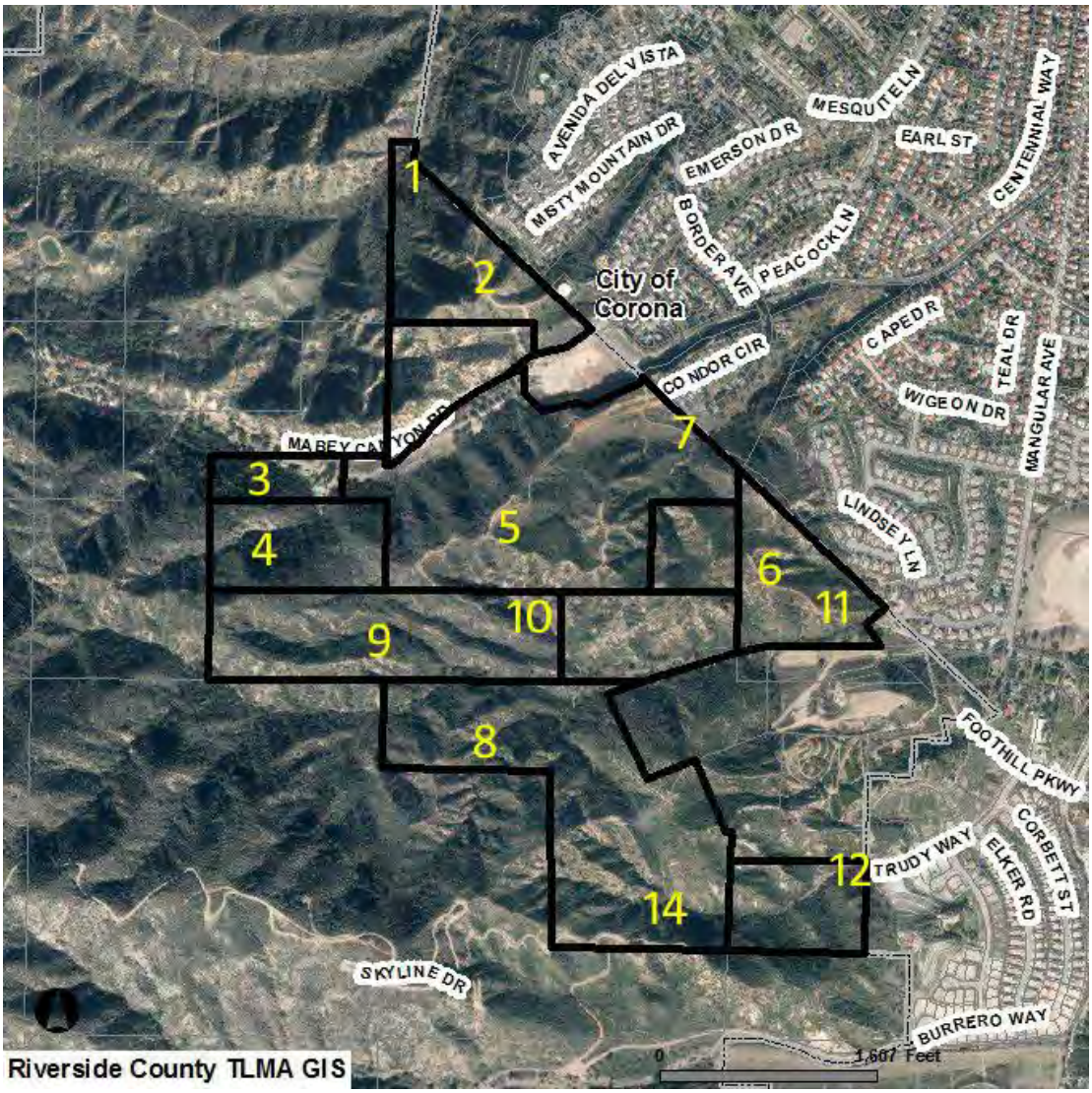
Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3i	310	651	2.1	110	44	0.4	-	-	304 [310]	-	44 [110]	-	651 / 2.1
3j	2,367	21,066	8.9	1,635	7,338	3.1	-	-	13,580 [1,635]	-	7,338 [1,635]	-	21,066/ 8.9
3k	440	1,364	3.1	322	354	1.1	-	-	381 [266]	-	354 [266]	-	1,364 / 3.1
3k1	158	205	1.3	95	57	0	-	-	120 [121]	-	57 [95]	-	205 / 1.3
3l	344	447	1.3	222	89	0	-	-	144 [222]	-	89 [222]	-	447 / 1.3
3m	771	1,850	2.4	325	293	0	-	-	-	-	-	-	1,850/ 2.4
4 *													
4a	233	350	1.5	75	45	0.6	-	-	-	-	-	-	350 / 1.5
4b	269	484	1.8	70	42	0.6	-	-	-	-	-	-	484/ 1.8
4c*													
5	1,187	8,546	7.2	900	900	1	-	-	2403 [1,187]	-	900 [900]	-	8,546 / 7.2
5a	186	1,302	7	92	147	1.6	-	-	86 [160]	-	147 [92]	-	1,302 /7.0
5a1	288	518	1.8	220	132	0.6	-	-	-	-	-	-	518 / 1.8
5a2	109	174	1.6	60	66	0	-	-	64 [63]	-	66 [60]	-	174 / 1.6
5b*													
5b1*													

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
5c	104	208	2	40	36	0.6	-	-	208 [104]	-	36 [40]	-	208 / 2.0
5d	71	142	2	50	70	0	-	-	137 [71]	-	70 [50]	-	142 / 2.0
5e	401	762	1.9	175	208	0.8	-	-	400 [401]	-	208 [175]	-	762 / 1.9
6	904	53,336	59	904	23,504	26	-	-	3,694 [244]	-	-	-	53,336 / 59.0
6a	-	-	-	-	-	-	-	-	-	-	-	-	-
6b	-	-	-	-	-	-	-	-	-	-	-	-	-
6c	-	-	-	-	-	-	-	-	-	-	-	-	-
7	99	574	5.8	99	376	3.8	-	-	-	-	-	-	574 / 5.8
7a	-	-	-	-	-	-	-	-	-	-	-	-	-
7b	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**31,259**	**444,364 (10.2 acres)**		**23,664**	**94,140 (2.16 acres)**		**0 (0.00 acres)**	**0 (0.00 acres)**	**268841 [22,249] (6.17 acres)**	**0 (0.00 acres)**	**68,560 [19,851] (1.57 acres)**	**0 (0.00 acres**	**444,364 (10.2 acres)**

*** - Foothill Project**

APPENDIX B

Site Photos





(1) Northern edge of the project site facing north. Wardlow Wash visible in the center.



(2) Northern portion of the project site facing east.



(3) Western project area near Mabey Canyon view south.



(4) Western project area view south



(5) Center of the project site view north.



(6) Eastern project area view southeast



(7) East project boundary view northwest



(8) Southwest project area view south



(9) Center west project area view west



(10) Center of the project area view west



(11) Center east project boundary view east. W. Foothill Parkway visible.



(12) Southeast project boundary near Trudy Way, view west



(13) California sycamore on-site.



(14) Southwest project area view NW



(15) *Quercus agrifolia* on-site.



(16) *Baccharis salicifolia* on-site



(17) Eucalyptus alliance on-site adjacent to Mabey Canyon Wash.



(18) *Schinus* alliance on-site adjacent to Mabey Canyon Wash



(19) Ca. annual grassland alliance on-site.



(20) Chaparral alliance on-site



(21) *Salix lasiolepis* on-site



(22) Coulter's Matilija Poppy preferred habitat.



(23) Sage scrub alliance on-site.



(24) Wardlow Wash on-site.



(25) Wardlow Wash (2) on-site.



(26) Mabey Canyon Wash on-site.



(27) Mabey Canyon Wash (2) on-site.



(28) Unnamed blue-line stream on-site.

APPENDIX C

Plants to be Avoided Adjacent to the MSHCP Conservation Area

TABLE 6-2 From the Riverside County MSHCP:
PLANTS THAT SHOULD BE AVOIDED ADJACENT TO THE MSHCP CONSERVATION AREA

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species)	acacia
Achillea millefolium var. *millefolium*	common yarrow
Ailanthus altissima	tree of heaven
Aptenia cordifolia	red apple
Arctotheca calendula	cape weed
Arctotis spp. (all species & hybrids)	African daisy
Arundo donax	giant reed or arundo grass
Asphodelus fistulosus	asphodel
Atriplex glauca	white saltbush
Atriplex semibaccata	Australian saltbush
Carex spp. (all species*)	sedge
Carpobrotus chilensis	ice plant
Carpobrotus edulis	sea fig
Centranthus ruber	red valerian
Chrysanthemum coronarium	annual chrysanthemum
Cistus ladanifer	(incl. hybrids/varieties) gum rockrose
Cortaderia jubata [*syn.C. Atacamensis*]	jubata grass, pampas grass
Cortaderia dioica [syn. *C. sellowana*]	pampas grass
Cotoneaster spp. (all species)	cotoneaster
Cynodon dactylon	(incl. hybrids varieties) Bermuda grass
Cyperus spp. (all species*)	nutsedge, umbrella plant
Cytisus spp. (all species)	broom
Delosperma 'Alba'	white trailing ice plant
Dimorphotheca spp. (all species)	African daisy, Cape marigold
Drosanthemum floribundum	rosea ice plant

BOTANICAL NAME	COMMON NAME
Drosanthemum hispidum	purple ice plant
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive
Eucalyptus spp. (all species)	eucalyptus or gum tree
Eupatorium coelestinum [syn. Ageratina sp.]	mist flower
Festuca arundinacea	tall fescue
Festuca rubra	creeping red fescue
Foeniculum vulgare	sweet fennel
Fraxinus uhdei	(and cultivars) evergreen ash, shamel ash
Gaura (spp.) (all species)	gaura
Gazania spp. (all species & hybrids)	gazania
Genista spp. (all species)	broom
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
Hypericum spp. (all species)	St. John's Wort
Ipomoea acuminata	Mexican morning glory
Lampranthus spectabilis	trailing ice plant
Lantana camara	common garden lantana
Lantana montevidensis [syn. *L. sellowiana*]	lantana
Limonium perezii	sea lavender
Linaria bipartita	toadflax
Lolium multiflorum	Italian ryegrass
Lolium perenne	perennial ryegrass
Lonicera japonica	(incl. ‘Halliana') Japanese honeysuckle
Lotus corniculatus	birdsfoot trefoil
Lupinus arboreus	yellow bush lupine
Lupinus texanus	Texas blue bonnets
Malephora crocea	ice plant
Malephora luteola	ice plant
Mesembryanthemum nodiflorum	little ice plant
Myoporum laetum	myoporum
Myoporum pacificum	shiny myoproum
Myoporum parvifolium	(incl. ‘Prostratum') ground cover myoporum
Oenothera berlandieri	Mexican evening primrose
Olea europea	European olive tree
Opuntia ficus-indica	Indian fig
Osteospermum spp. (all species)	trailing African daisy, African daisy,
Oxalis pes-caprae	Bermuda buttercup
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass

BOTANICAL NAME	COMMON NAME
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Plumbago auriculata	cape plumbago
Polygonum spp. (all species)	knotweed
Populus nigra 'italica	' Lombardy poplar
Prosopis spp. (all species*)	mesquite
Ricinus communis	castorbean
Robinia pseudoacacia	black locust
Rubus procerus	Himalayan blackberry
Sapium sebiferum	Chinese tallow tree
Saponaria officinalis	bouncing bet, soapwart
Schinus molle	Peruvian pepper tree, California pepper
Schinus terebinthifolius	Brazilian pepper tree
Spartium junceum	Spanish broom
Tamarix spp. (all species)	tamarisk, salt cedar
Trifolium tragiferum	strawberry clover
Tropaelolum majus	garden nasturtium
Ulex europaeus	prickly broom
Vinca major	periwinkle
Yucca gloriosa	Spanish dagger

An asterisk (*) indicates some native species of the genera exist that may be appropriate.
Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.

APPENDIX D

Riverside County Required Documentation

BIOLOGICAL REPORT SUMMARY SHEET

Applicant Name: _____
Assessor's Parcel Number(s): 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006
Section, Township and Range: Section 3, 4 and 9, Township 4 South, Range 7 West
Building and Safety Log Number: _____
Case Number: _____ Lot/Parcel _____ EA Number _____

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

MARK ITEM(S) SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE of CONCERN	*(Mark Yes, No, or N/A regarding species findings on the referenced site)*		
X	Munz's Onion	Yes	No	n/a
X	San Diego ambrosia	Yes	No	n/a
X	Braunton's milkvetch	Yes	No	n/a
X	thread-leaved brodiaea	Yes	No	n/a
X	Santa Ana River woolystar	Yes	No	n/a

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

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

L & L Environmental, Inc. — **3/11/2014**
Signature and Company Name — Date

10(a) Permit Number (if applicable) — Permit Expiration Date

County Use Only

Received By: _____ Date: _____
PD-B# _____

Attachment E-4

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

Case Number: _____ Lot/Parcel No. _____ EA Number _____
Assessor's Parcel Number(s): 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006
Date: 3/11/2015

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

Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact

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

☐ ■ ☐ ☐

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

☐ ☐ ■ ☐

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

☐ ☐ ■ ☐

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

☐ ■ ☐ ☐

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

☐ ■ ☐ ☐

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

☐ ☐ ☐ ■

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

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

☐ ■ ☐ ☐

Findings of Fact:

A habitat assessment and focused surveys for botanical species, coastal California gnatcatcher, least Bell's vireo, burrowing owl and jurisdictional delineation were conducted. No threatened or endangered plants or animals were identified onsite. The botanical, coastal California gnatcatcher, least Bell's vireo and burrowing owl surveys were negative. Coulter's matilija poppy occurs within the impact area. Habitat for nesting birds including raptors is present in the impact area.

6.17 acres of State of California Streambeds jurisdiction and Riparian/Riverine habitat and 1.57 acres of federal, Waters of the U.S will be impacted by the Project. 0.1 acres of coast live oak woodland would be impacted.

A 10 acre PQP parcel will be isolated from the nearby Core B, MSHCP Conservation Area.

Proposed Mitigation:

- Preservation of 10 acres of natural habitat biologically equivalent or superior to the PQP land the survey area surrounds, adjacent to Forest Service land and the placement of a deed restriction on the 10 acres to prevent future development,
- Replacement of oak trees impacted by the Project, at no less than a 1:1 ratio, in the landscape areas.
- Mitigation for State and Federal jurisdictional features and Riparian/Riverine habitat at no less than a 1:1 basis.
- Avoidance of clearing or grubbing in the nesting season (January 1 – September 1) or completion of a nesting bird survey.
- A pre-construction burrowing owl Clearance survey shall be conducted no more than 30 days before earth disturbance (construction).
- Urban/Wildlands Interface minimization measures.

Monitoring Recommended:

Monitoring is recommended during clearing of vegetation within the nesting season.

Monitoring is recommended when working in or adjacent to jurisdictional waters

Monitoring is recommended for any on-site mitigation establishment period.

Source: CGP Fig. VI.36-VI.40
Revised October 1999

APPENDIX E

GEC Report: Habitat Assessment and Focused Surveys for Burrowing Owl

HABITAT ASSESSMENT & FOCUSED SURVEYS FOR BURROWING OWL
TTM 34471
APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006
In the
City of Corona
Riverside County, CA
USGS 7.5-minute topographic Black Star & Corona South Quadrangles
Township 4 South, Range 7 West, portions of Sections 3, 4 and 9



Prepared For:
Richland Developers, Inc.
3161 Michelson Drive,
Suite 425
Irvine, CA 92612
949-383-4137

Prepared By and Principal Investigator:

GONZALES
ENVIRONMENTAL CONSULTING, LLC

51-842 Avenida Diaz
La Quinta, CA 92253
(760) 777-1621

Report Date: August 1, 2013
Revised April 23, 2014

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I. TITLE PAGE

A. **Date report prepared**: August 1, 2013 Revised April 23, 2014

B. **Report Title:** Habitat Assessment and Focused Surveys for Burrowing Owl APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA

C. Project site location: USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3,4 and 9, Township 4 South, Range 7 West

D. Location(s): Mabey Canyon Wash, Wardlow Wash and Unnamed drainages

E. Owner/Applicant:
Richland Developers, Inc.
3161 Michelson Drive,
Suite 425
Irvine, CA 92612
949-383-4137

F. Principal Investigator(s): Teresa Gonzales and Paul Gonzales
Address: 51842 Avenida Diaz
La Quinta, CA 92253
Phone: 760.777-1621

G. Name and phone number of person preparing report and of all persons who performed fieldwork on the site

Name of Person	Phone Number	Role on project
Teresa Gonzales	760.777-1621	Prepared report and performed fieldwork
Paul Gonzales	760.777-1621	Performed fieldwork

This document should be cited as:
Gonzales Environmental Consulting, LLC. 2013. Habitat Assessment and Focused Surveys for Burrowing Owl APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA; USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3,4 and 9, Township 4 South, Range 7 West. April 23, 2014, La Quinta, California. Prepared for Richland Developers, Inc.

II. EXECUTIVE SUMMARY

The project site is located in the City of Corona of Riverside County, California. In April, May, June, and July 2013, Teresa Gonzales, Principal Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for Least Bell's vireo, coastal California gnatcatcher and burrowing owl.

The primary vegetation communities characterized as *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances.

The proposed project site is within the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP)and MSHCP Burrowing Owl Survey Area.

In April, May, June and July 2013 Teresa Gonzales, Principal Biologist and Paul Gonzales, Senior Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for Burrowing owl on the proposed project site. No burrowing owl(s) were found during our surveys of the area.

III. PROJECT AND PROPERTY DESCRIPTION

This report summarizes the findings of focused surveys to determine presence or absence of burrowing owl (*Athene cunicularia*) on the Skyline project site.

Property Description

The project is located south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive in the Corona area of Riverside County, California. Regional and location maps are provided as Figures 1 and 2.

Proposed Project Area

Corona, also called "The Circle City," was founded in 1886 by Robert Taylor and members of the south Riverside Land and Water Company. Mr. Taylor, along with an engineer, H. Clay Kellogg, decided to build the city around a central point. This central point is known as Grand Blvd. They lined it with pepper trees and began developing what we know as Corona. Most early homes and businesses were located around this large circle. The businesses were located near the center at 6th and Main St., while the residences were more out towards the perimeter. Citrus groves were planted to the south. Industrial and fruit packing plants were built to the north near the railroad tracks (Usacitiesonline).

Proposed Project Site

The site is located within San Bernardino Meridian in portions of Sections 3, 4 and 9, Township 4 South, Range 7 West in Riverside County, California (Figures 1, 2 and 3). This location is shown on the Corona South and Black Star Canyon**,** California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Corona South and Black Star Canyon 1979); page 772 Blocks G1, G2, G3, H2, H3 and J3 of the Riverside County Street Guide and Directory (Thomas Brothers Maps Design 2013). The approximate center of the site is located at the center of the project area is 33°50’39.72”N/117°36’41.11”W.

The proposed project site is sloping to the north and east, depending on the location in the landscape. It occurs at an elevation between 1,160 and 1,420 feet below mean sea level.

Portions of the project site have been disturbed by anthropogenic disturbances. Vegetation has been disturbed by fire roads, illegal access and adjacent land uses. During our many site visits we personally observed hikers, runners and mountain bikers utilizing the proposed project site. Additional disturbance to the drainage area has occurred since our 2008 visits. Fire roads and trails now impact a great portion of the drainage.

Land immediately adjacent to the site's northern, eastern, and western boundaries contain single-family residences, or areas that have been graded for lots. The land to the south is part of the Cleveland National Forest.

Similar to many of the other open areas in the area, the site shows signs of off-road vehicle, mountain biking, and anthropogenic use. Vehicle tracks and roads traverse the site, degrading plant and animal habitat.

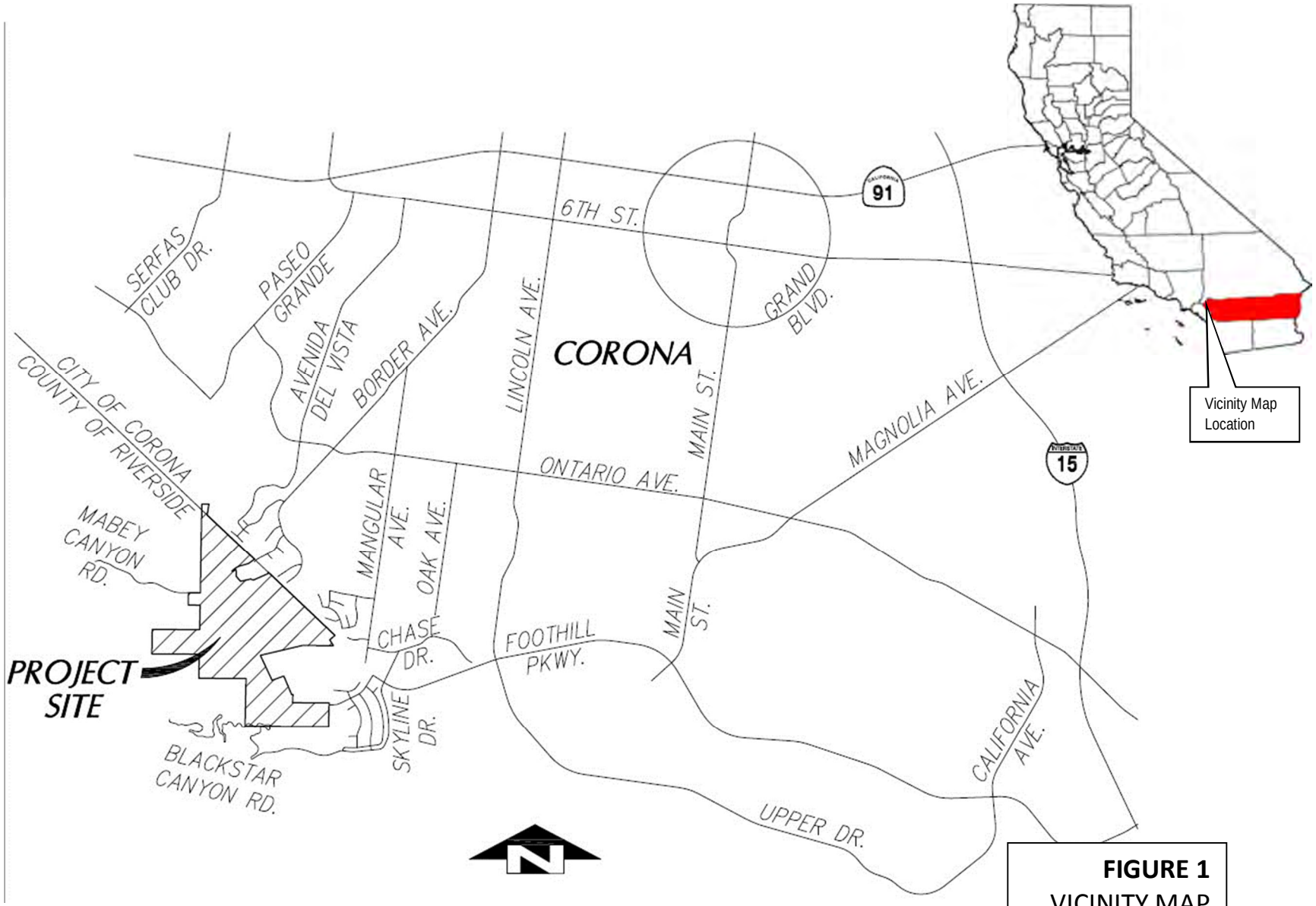


FIGURE 1
VICINITY MAP

Source: KWC Engineers. Not to scale.

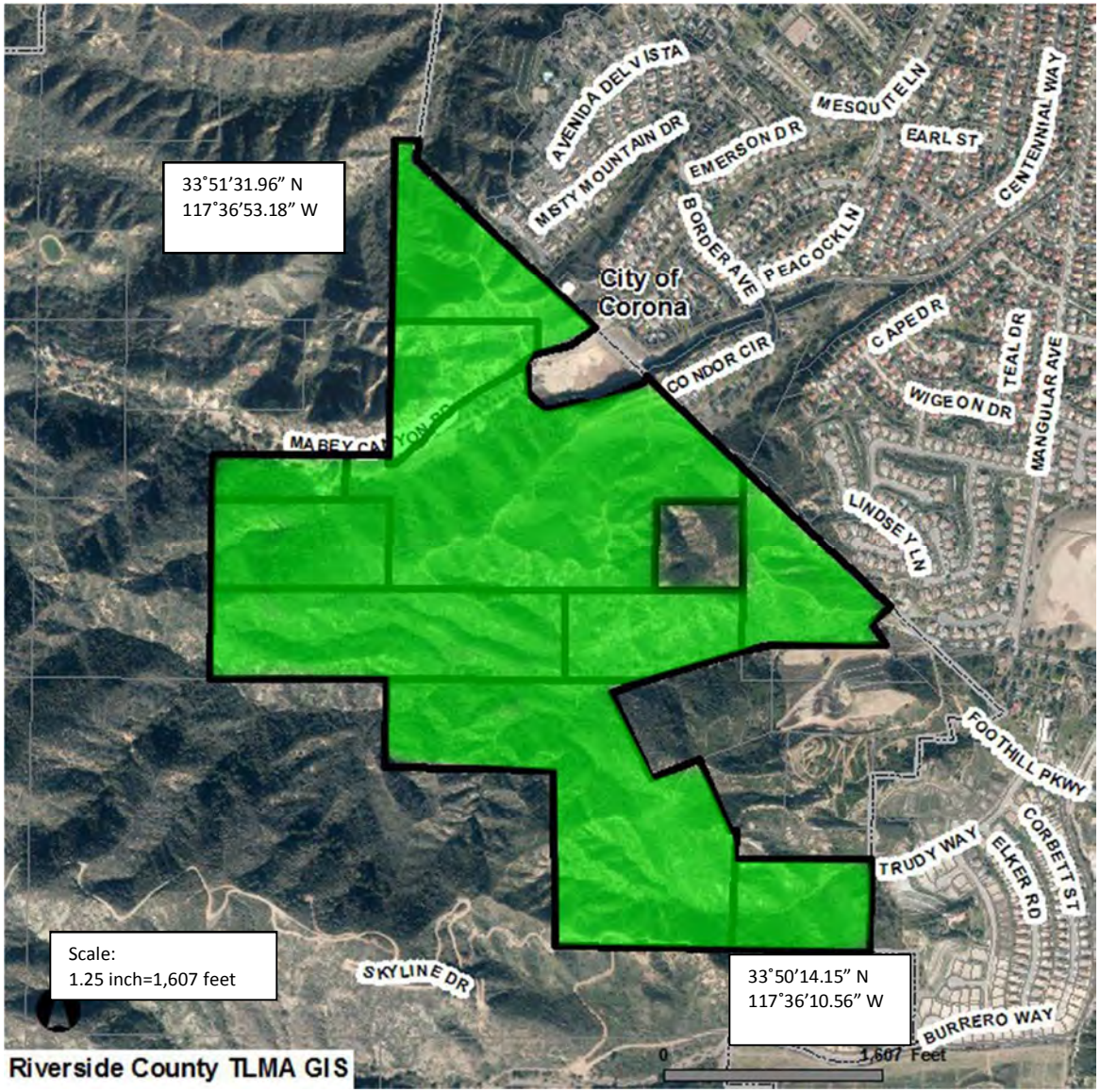


FIGURE 2
LOCATION MAP

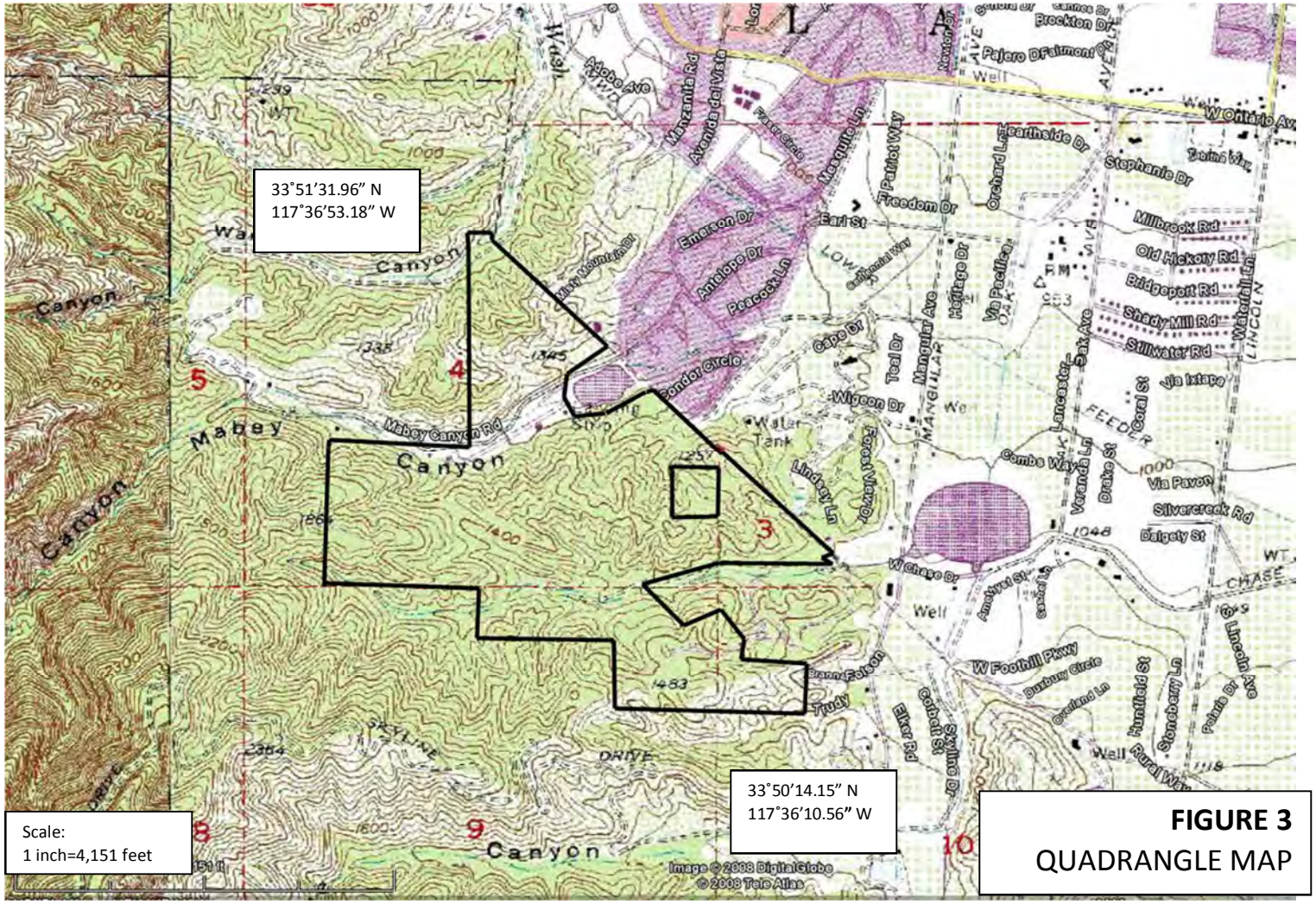


FIGURE 3
QUADRANGLE MAP

Source: Black Star Canyon and Corona South quadrangle 7.5 topographical map. July 1, 1988. Please note that this is a locality map, and should not be used for calculations.

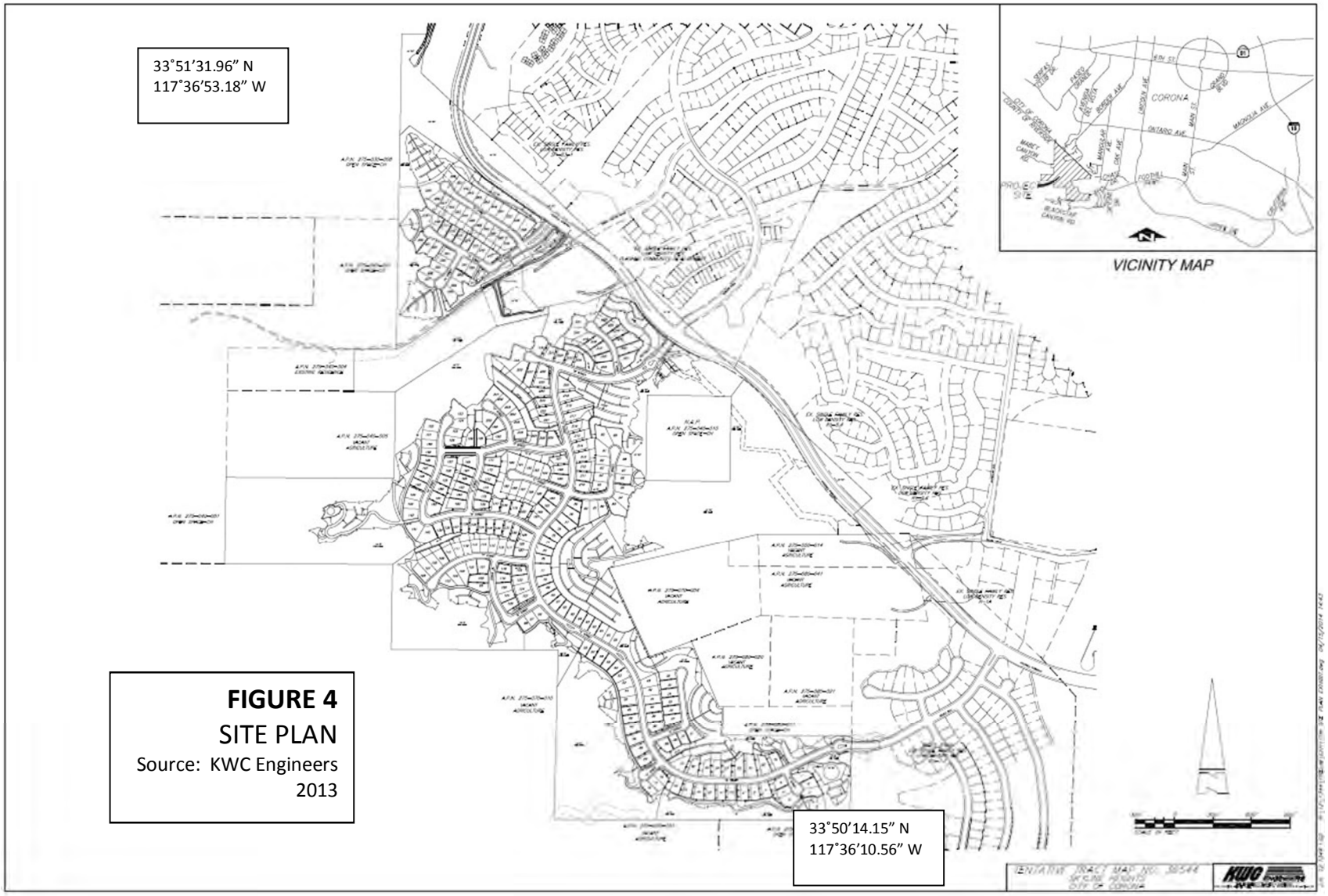


FIGURE 4
SITE PLAN
Source: KWC Engineers 2013

Proposed Project Description

Overview

The Skyline Heights (TTM 36544) project is comprised of 270.9 acres vacant land situated in the hills to the southwest of the City of Corona in Western Riverside County, California adjacent to Foothill Parkway. The project area includes the area to be acquired by RCTC/City of Corona for the construction of the future Foothill Parkway westerly extension and Mabey Canyon Debris Basin. The site is located approximately 3 miles south of the 71 and 91 Freeways and approximately 4 miles west of Interstate 15 (I-15). The site is within the City of Corona's Sphere of Influence and is proposed to be annexed to the City during the entitlement process. The City of Corona is currently processing the Capital Improvement Project for the Foothill Parkway Westerly Extension between Green River Road and Trudy Way. Construction is planned to be completed in the next few years. Foothill Parkway will border the eastern portion of the project and will be the primary access to the site.

The Skyline Heights project is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels. Within the general boundaries of the project is an undeveloped 10.0-acre parcel which is considered "Not a Part" and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded forest service access road, is located just to the south of the project. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.

The project site consists of sparsely vegetated and otherwise undeveloped land with the exception of dirt roads. The site is characterized by steep topography, generally increasing in elevation from the northeast to the southwest. Several canyons and ravines are present which will convey natural drainage across the project site.

Zoning and Land Use/Site Plan

The existing General Plan Land Use designation for this site is Agriculture and the existing Zoning is Rural Residential I (0.2-0.5 du/ac). The project will be processing a GPA and Zone Change for the property through the City of Corona. The proposed General Plan designation will be Low Density Residential (3-6 du/ac). The proposed Zoning for this project will be designated as R-1-7.2 Single Family Residential with 7,200 square feet minimum lots.

A Conceptual Site Plan has been prepared for the project and will consist of two (2) graded areas. The area north of Mabey Canyon is proposing 45 Single Family lots and the area to the south will be 247 Single Family lots. This totals to 292 Single Family Low Density Residential lots for a project density of 1.08 du/ac.
The project will be developed in three map recording phases. The proposed development requires the construction of Foothill Parkway and infrastructure improvements along the project frontage as proposed by the City of Corona's Foothill Parkway Westerly Extension Capital Improvement Project. The anticipated completion date of this section of Foothill Parkway is 2015. This development assumes that Foothill Parkway is in place prior to the construction of the project.

Site Plan Layout, Circulation and Access
The primary access to the site is from the future westerly extension of Foothill Parkway proposed by the City of Corona. Foothill Parkway is designated as a Secondary Highway with 72 feet of pavement within a 103 foot right-of-way. This regional thoroughfare is anticipated to be constructed in the next few years and is targeted to be completed by 2015. Area 1 proposes a single point public roadway access off of Foothill Parkway just north of Mabey Canyon Debris Basin. This public roadway is 88 foot wide with a 16 foot wide raised median. A 28 foot wide emergency fire and existing residents' access road will also be proposed for emergency purposes to connect to the existing dirt access along Mabey Canyon south of the proposed roadway. The new access road is proposed to become the primary access route for the existing residents west of the project site. Area 2 proposes a 68 foot private local collector roadway section that extends into the project site from the intersection of Border Avenue and future Foothill Parkway. A 60 foot private roadway section will connect and continue this spine local roadway southerly to connect with existing 68 foot wide Trudy Way (Tract 31955).

In addition to these proposed roadways, other local private roadways are proposed throughout the project site. These proposed roadways are designed with 36 foot wide pavement within a 56 foot right-of-way or 36 foot wide pavement within a 60 foot right-of-way. The parkways are 10 foot wide or 12 foot wide with 4 foot sidewalks (not curb adjacent).

Grading, Construction and Phasing
Although an exact construction schedule is not known at this time, grading for the Skyline Heights Project is anticipated to begin about first Quarter 2015.

The site will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the project development. The anticipated maximum cuts and fills depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut

and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor.

Drainage Facilities

There are several existing canyons and ravines that run across the project site. Three of the canyons are shown as blue line streams according to the USGS Quad Maps. Wardlow Wash and Mabey Canyon Wash are two of those blue lined streams and are located in the northerly portion of the project. The tributary drainage to Wardlow Wash is approximately 975 acres and currently drains directly to the Santa Ana River. The tributary drainage to Mabey Canyon Wash is approximately 930 acres and currently drains to the existing Mabey Canyon Debris Basin. The project site is not proposing to grade or alter the Mabey Canyon streambed, with the exception of increasing the spillway and construction of an access road. The other blue line stream is un-named (D-1) and is located in the central portion of the project site. The tributary drainage to this stream is approximately 311 acres and currently drains to the Kroonen Canyon Channel and Oak Street Creek Reservoir located near Chase Drive and Mangular Avenue. D-1 is proposed to be filled in across the project site and a 72-inch storm drain system is proposed to convey the storm water runoff underground and discharge back to the existing stream at the easterly terminus of the project site. D-2 is an unnamed non-jurisdictional swell in the southern portion of the project site. Several other smaller non-jurisdictional tributaries are also being filled in within the development. A system of storm drain pipes are proposed to convey the runoff across the site to the designated discharge points. Three detention basins are proposed within the project site to detain the increased runoff flows from the project development and are identified on Tentative Tract Map 36544.

The project hydrology and storm drain system will be designed in accordance with recent City of Corona and Riverside County Flood Control & Water Conservation District's design requirements. The onsite storm drain pipes, laterals, catch basins, and inlet and outlet structures are to be publicly maintained by the City of Corona. The proposed detention basins are designated to be publicly maintained by the City of Corona.

Project Utilities

The City of Corona Department of Water and Power will be the water, sewer, and reclaimed water service purveyor to the proposed Skyline Heights Development.

Water: The proposed onsite water facilities will include an intermediate water pressure Zone 6A Water Reservoir site, a Zone 6A Booster Pump Station site, and a network of Zone 5 (1380' HWL) and Zone 6A (1560' HWL) water distribution pipelines. The water supply to the project will be provided by a connection to the City's transmission water system in future Foothill Parkway and to the distribution water system in Trudy Way. Approximately 58 lots will be serviced by the existing Zone 5 (1380' HWL) water

pressure system. The minimum and maximum pad elevations served will be 1185 and 1227, respectively. This will yield a static water pressure between 66 psi and 84 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. The remainder of the project will be serviced by the proposed intermediate Zone 6A (1560' HWL) water system. The proposed above ground DN Type 1 (prestressed concrete) tank water reservoir will be sized to accommodate the operational, emergency, and fire storage for the project as required by the City of Corona Department of Water and Power. The estimated reservoir capacity is approximately 0.6 MG and is sized to accommodate storage for 247 lots. The minimum and maximum pad elevations served will be 1220 and 1416, respectively. This will yield a static water pressure between 62 psi and 147 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. Pressure regulators will be required for lots having pressures greater than 80 psi. The proposed Booster Pump Station has a firm pumping capacity to provide the required flows and pressures using one (1) duty pump and one (1) standby pump at 500 gpm each and one 1500 gpm fire flow pump.

Sewer: The proposed onsite sewer facilities will include a system of 8-inch gravity sewer pipelines. Sewer Area 1 consisting of 55 tributary lots will be routed to a connection point at the intersection of Mabey Canyon Road and Falcon Circle. Sewer Area 2, which consists of 197 tributary lots, will drain by gravity to an existing gravity sewer system located at the intersection of Border Avenue and Condor Circle. The remaining portion in Sewer Area 3 consisting of 50 tributary lots will also drain by gravity to an existing gravity sewer system in Trudy Way. The downstream sewer system will be analyzed to determine impacts to the system and recommended mitigation measures.

Recycled Water: The proposed onsite private recycled water facilities will include a system of onsite private recycled water pipelines that will connect with the recycled water facilities in future Foothill Parkway. The City of Corona Department of Water and Power will identify the proposed recycled water facilities to be constructed to enhance the City's reclaimed water system. The project's HOA landscaped areas will be serve by two zones, the existing Zone 3 (1380' HWL) and the proposed Zone 3A (1625' HWL) water system. The project site will have two main connection point locations to the City's existing recycled water system. The first location at the intersection of Foothill Parkway and Border Avenue where it is proposed to construct a 12-inch pipeline from an existing 12-inch line in Foothill Parkway. This provides the water supply from Zone 3 recycled water system into the project site to serve the proposed Zone 3A HOA landscaped areas via a proposed Zone 3A Booster Pump Station having a firm pumping capacity of 1150 gpm. The booster pumps shall be a variable frequency drive type to decrease the wear and tear of the pumps and extend the life of the pumps. The second connection point is located north of Mabey Canyon Road which will serve the HOA landscaped areas north of Mabey Canyon (KWC Engineers).

Annexation Properties

Several properties, not part of the project described in this report, are part of the general plan amendment/annexation or study area. As part of the process the City of Corona requested that technical reports address additional properties within the annexation boundary. Annexation properties include: JHB Colony Investments (APN 275030006, 275040006, 275040011, 275040012, 275040015, 275050004, 275070003, and 275080010), Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009). According to the City of Corona no immediate development is planned for Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009) at this time.

IV. STUDY AREA CONDITIONS

The following sections summarize the study area conditions. For purposes of this report, the term study area includes the proposed project construction limits and a surrounding 1,300-foot buffer (Figure 2).

Physical Conditions

Elevation of the assessment area ranges from a from a low of 1338± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1483± feet above msl in the southeastern portion of the assessment area. This represents an elevational change across the assessment area of 55± feet. The elevational change occurs between tops of steep hills and the bottoms of intervening drainages. Wardlow Wash, Mabey Canyon Wash and Unnamed Blue line stream channel flows west to northeast or west to east depending on the location in the landscape. Portions of the project site have been disturbed by past land uses. Adjacent land uses include residential housing to the north, east and west, with open space to the south.

The primary plant communities in the project area are Quercus agrifolia Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances.

Definitions

Vegetation Communities

Vegetation habitats or communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within the community and the associated flora. The nomenclature for vegetation communities follows CDFW Vegetation Alliances of Western Riverside County, California.

Wildlife Habitats

Wildlife habitats differ from vegetation communities in that a wildlife habitat may contain several vegetation communities that are similar in structure but different in the plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat to impacts. In addition, the interaction of various wildlife species occurs between many different wildlife habitats. This becomes more evident where these habitats overlap in areas known as ecotones. These ecotones support a combination of species from two or more adjoining habitats that generally increases the number and diversity of species within these areas. Wildlife habitats encountered on the project site approximate the vegetation communities discussed is this report.

Vegetation

The project encompasses several vegetation community types. Vegetation communities currently present are characterized as Quercus agrifolia Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances. The locations of the native plant communities have been generally the same over the years. The existing plant communities are described in more detail below.

Quercus agrifolia (Coast live oak woodland) Alliance

Coast live oak occurs as the dominant tree in the canopy. Poison oak is the dominant shrub in the understory. It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 5
Quercus agrifolia ON-SITE

California Sycamore Woodland Alliance

This riparian community on the proposed project site is composed primarily of sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Sycamores have well developed vegetative reproduction, giving the woodland a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in Mabey Canyon Wash.



FIGURE 6
CALIFORNIA
SYCAMORE ON-SITE

Salix lasiolepis Alliance

This riparian community on the proposed project site is composed primarily of arroyo willow (*Salix lasiolepis*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Willows have well developed vegetative reproduction, giving the islands of habitat a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 7
SALIX LASIOLEPIS ON-SITE

***Baccharis salicifolia* (Mulefat thickets) Alliance**

A depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This early serial community is maintained by frequent flooding. Found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland, especially under heavy grazing. Mulefat scrub often occurs in pure stands. Secondary species vary regionally. This community is very limited on the project site, existing only in small areas of unnamed drainage, Mabey Canyon Wash and Wardlow Canyon Wash.



FIGURE 8
BACCHARIS SALICIFOLIA ON-SITE

Sage Scrub Alliances

California sage brush-purple sage

This series is often considered part of the coastal scrub, which is better thought of as a collection of series. This approach allows stands of composition, which can be considered, regardless of geographic location. Stands of this series differ from the California buckwheat series and White sage series in that California buckwheat and white sage are equally important. In addition, more chaparral species occur in stands of this series than in stands of the California buckwheat series or White sage series. Other sage scrub alliances noted on site: *Encelia californica* (California brittle bush scrub) Alliance, Artemisia californica - Eriogonum fasciculatum (California sagebrush – California buckwheat scrub) Alliance, and *Eriogonum fasciculatum* (California buckwheat scrub) Alliance.



FIGURE 9
SAGE SCRUB
ALLIANCES ON-SITE

Chaparral Alliances

Chamise-California buckwheat- white sage

Chamise occurs in many chaparral, coastal scrub, and tree series. Chamise cover is 30-60% and white sage cover is 30-60%. In some areas, stands of chamise mix with stands of coastal scrub forming a mosaic of different series [Black sage series, California buckwheat series, California sagebrush series, mixed sage series, Purple sage series, and White sage series]. Other chaparral alliances noted on site: *Rhus ovata* (Sugarbush chaparral) Alliance.



FIGURE 10
CHAPARRAL
ALLIANCES ON-SITE

California Annual Grassland Alliance

This habitat alliance consists of a dense to sparse cover of annual grasses with flowering culms .2-.5 m high. This habitat is often associated with numerous species of showy-flowered, native annual forbs, especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. This extensive series is composed of many alien and native annual species; composition varies among stands.



FIGURE 11
CALIFORNIA ANNUAL GRASSLAND ALLIANCE ON-SITE

Eucalyptus spp. Alliance (Eucalyptus)

Non-native landscape species (Eucalyptus) are located immediately adjacent to the unnamed drainage and Mabey Canyon Wash proposed project area.



FIGURE 12
EUCALYPTUS
ALLIANCE ON-SITE

Schinus spp. Alliance (Pepper)

Non-native landscape species (Pepper) are located immediately adjacent to Mabey Canyon Wash proposed project area.



FIGURE 13
SCHINUS ALLIANCE
ON-SITE

The major plant communities in the survey area are chaparral, sage scrub, and nonnative grasslands alliances. Adjacent to the urban areas, landscape species (Eucalyptus and Pepper trees) dominate. Habitat consists of dense chaparral (*Rhus ovata, Quercus agrifolia, Frangula californica*) on the northern slopes and coastal sage scrub (*Artemisia californica*, *Salvia mellifera, Salvia leucophylla*) on the dry south facing slopes. Scattered areas of sage scrub including California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), brittlebush (*Encelia farinosa*) and white sage (*Salvia apiana*) occur on the slopes and in the wash. Grasslands composed primarily of non-native species bromes *(Bromus* spp.), short-podded mustard (*Hirschfeldia incana*)*,* filaree (*Erodium* spp.), Russian thistle (*Salsola tragus*)*,* doveweed *(Croton setigerus*)*,* and deer weed (*Acmispon glaber*) occur throughout the project area. Drainage swells traverse the slopes. At the base of the swells, small tertiary drainages braid the area. Habitat within these drainages consists of chaparral and sage scrub species. No evidence of channel, bed, or banks exists in these areas.

The very northern tip of the project intersects with Wardlow Wash (blue-line stream). Most of the area in the northern portion drains towards Mabey Canyon Wash (blue-line stream). Mabey Canyon Wash, as it exists within the project area, is constrained into a 12' wide channel. One side of the channel banks are supported by used car parts and other metal objects. The other side is part of the dirt road bank. Near the eastern project border, the Wash enters into a large flood control basin. The basin controls flow into an existing stormwater conveyance systems located in the urban development area. In the middle of the project, the unnamed blue-line stream traverses from west to east. The unnamed blue-line stream (Unnamed Drainage) becomes a trapezoidal channel near Mangular Avenue and Chase Drive. It flows into Oak Hills flood control basin, which is outside of the project limits. The project as designed should not impact any vegetation found on the banks of either flood control basin. A small detention basin adjacent to Trudy Way has one willow tree and one oak tree. The project area has been impacted by off-road vehicles, bicycles and hikers. Dirt roads and trails criss-cross the project area, providing access for illegal trash disposal and off-road usage.

TABLE 1

ACREAGE OF DIRECT IMPACTS TO HABITAT TYPES ON THE PROJECT SITE

Habitat	Acreages on Project Site	Impact Acreages
Mulefat Scrub Alliance	0.14	0.14
Disturbed	0.07	0.07
Eucalyptus/Pepper	1.05	0.19
Mulefat	0.88	0
Chaparral	175.73	152.48
Sage Scrub	89.21	63.53
Grassland	0.28	0.28
Coast Live Oak	1.6	1.6
Sycamore Alliance	0.09	0.09
Willow Alliance	0.1	0.1
Streambed	1.76	1.76
Total Acreage	**270.91**	**220.24**

Annexation Areas

Annexation properties contain a similar mix of habitats to those of the proposed project site. Noted during our surveys were disturbed (graded, landscaped, agricultural, and developed), chaparral, and sage scrub alliances. Please see Figure 14.

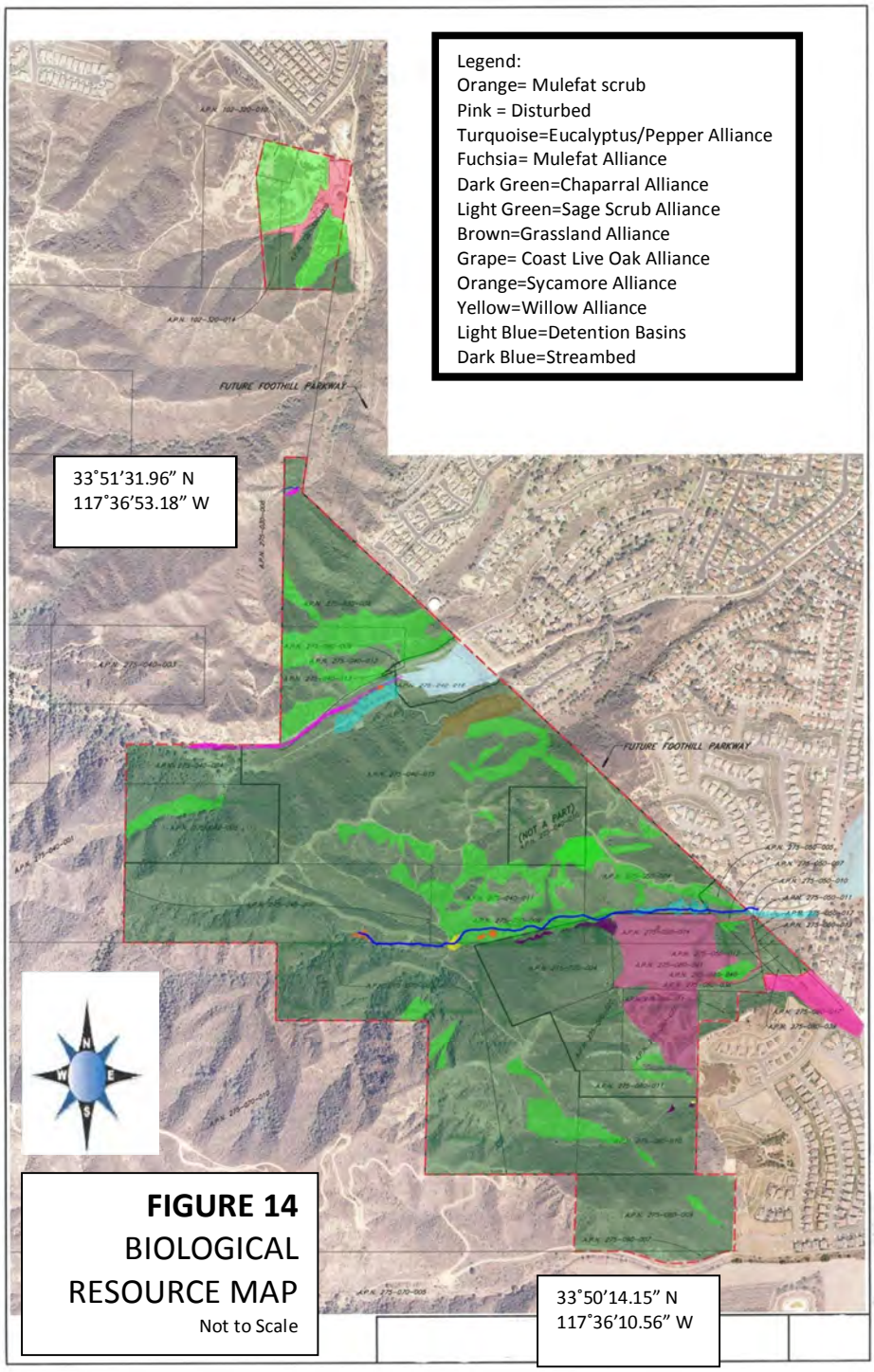


FIGURE 14
BIOLOGICAL RESOURCE MAP
Not to Scale

V. METHODOLOGY

For the development of this document, a systematic approach was taken to identify and characterize biological resources, including vegetation community types, and special status plant and animal species in the project area. The biological resource study area is defined as the area either directly or indirectly impacted by the project. Records of known occurrences were reviewed to identify those plant and wildlife species that may occur in the project area. Those records were then compared with federal or state listed threatened, endangered, or special status species. General biological surveys; vegetation mapping; and surveys for special status wildlife and plant species for the project were conducted. Methods that were used during these surveys are summarized by resource type in the following sections.

Records Search

Preliminary investigations included review of information obtained from the USFWS, and CDFW; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. A list of special status species was compiled, including all species in the project area that were:

- Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
- Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
- Included in one of the CDFG publications on species of special concern;
- "Fully protected" by the State of California;
- Included in the CNPS compilation ; or
- Identified as plants meeting the definition of rare or endangered under CEQA.

The information provided by these agencies included both regional and site-specific data on sensitive species. These species are listed in Table 2.

Biological Surveys

Baseline biological studies of the proposed project were conducted in April 2013. Existing biological data was collected using Personal Computers (PCs) and Geographic Positioning System (GPS). This allowed for data to be collected in real time. Data layers uploaded onto these PCs included recent aerial photography, and topographic contours. Biological data was mapped onto the aerial photograph layers as polygon, line, and point attributes.

Checklists of biological information were uploaded onto the PCs, which allowed us to accurately label all data points, ensure consistency, and keep a running electronic account of all species encountered during the surveys. Finally, these checklists allowed for the inclusion of supplemental field notes, most notably, ranking of the quality of the various habitats including dominant and associate species for each vegetation polygon; assessing habitats for the potential presence of sensitive species not observed during the surveys; and identifying areas that would

require protocol-level sensitive species surveys (i.e., USFWS protocol-level surveys for federal threatened and endangered species.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Wildlife Survey and Habitat Assessment Methods

General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plant, wildlife, and aquatic species. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements. The surveys coincided with the period during which many wildlife species, including migratory species, would have been most detectable. A faunal inventory of all species observed during the course of the surveys was also prepared.

Special Status Wildlife Species Survey Methods

Prior to conducting habitat assessment surveys, the CNDDB and other sources were reviewed for the records of special status wildlife species potentially occurring in the project area. General reconnaissance and habitat assessment surveys were conducted to assess the presence of special status wildlife species habitats within the project area. Maps depicting all known sensitive wildlife species locations within the regional vicinity of the project were produced to aid in determining the target species to survey.

All wildlife species encountered during surveys were documented. Any specific areas (e.g., potential nesting, breeding, and foraging habitat) encountered during the surveys that have a high probability for supporting sensitive wildlife were documented. The likelihood of these species occurrence (not expected, low, moderate, and high, expected) was also assessed.

General habitat assessments and focused protocol-level surveys for other species including, but not limited to, burrowing owl (*Athene cunicularia*), were also conducted. General habitat assessments involved evaluating the specific vegetation communities encountered and their potential to support these sensitive species (expected, high, moderate, low, not expected).

Surveys

Based on the findings of the biological surveys, focused habitat assessment and species-specific surveys were conducted for burrowing owl (*Athene cunicularia*) to determine presence of sensitive, listed, and covered species within the project area. Burrowing owl habitat surveys were conducted on April 21, 2013. The habitat assessment and focused surveys followed the California Burrowing Owl Consortium Burrowing Owl Survey Protocol and Mitigation Guidelines[1] and Riverside County Burrowing Owl Survey Instructions[2].

[1] The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. 15 pgs.
[2] Riverside County. 2006. Burrowing Owl Instructions for the Western Riverside MSHCP. 4 pgs

VI. ASSESSMENT AND FOCUSED SURVEY

Assessment

The habitat assessment followed the BURROWING OWL SURVEY INSTRUCTIONS for the Western Riverside Multiple Species Habitat Conservation Plan Area, dated March 29, 2006 per Section 6.3.2. Of the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP).

The habitat assessment was performed to determine the Site's suitability to support burrowing owl. Several key indicators were used in determining the Site's potential to support burrowing owl. Key indicators included the presence of low-growing vegetation within grassland, desert, and scrublands, small fossorial mammals, and isolated features such as cement or wood debris piles, and/or cement culverts.

The Site exhibited multiple key indicators of suitable burrowing owl habitat. The following indicators observed on-site were:

- Disturbed low-growing vegetation, as described in the Vegetation section;
- Fossorial mammals; and
- Debris piles

Additional wildlife observed during surveys is listed in Appendix, *Animal and Plant Compendium.*

The results of the habitat assessment concluded that the Site contained suitable burrowing owl habitat. As a result, Focused Burrowing Owl Burrow Survey was warranted.

Focused Burrowing Owl Burrow Survey

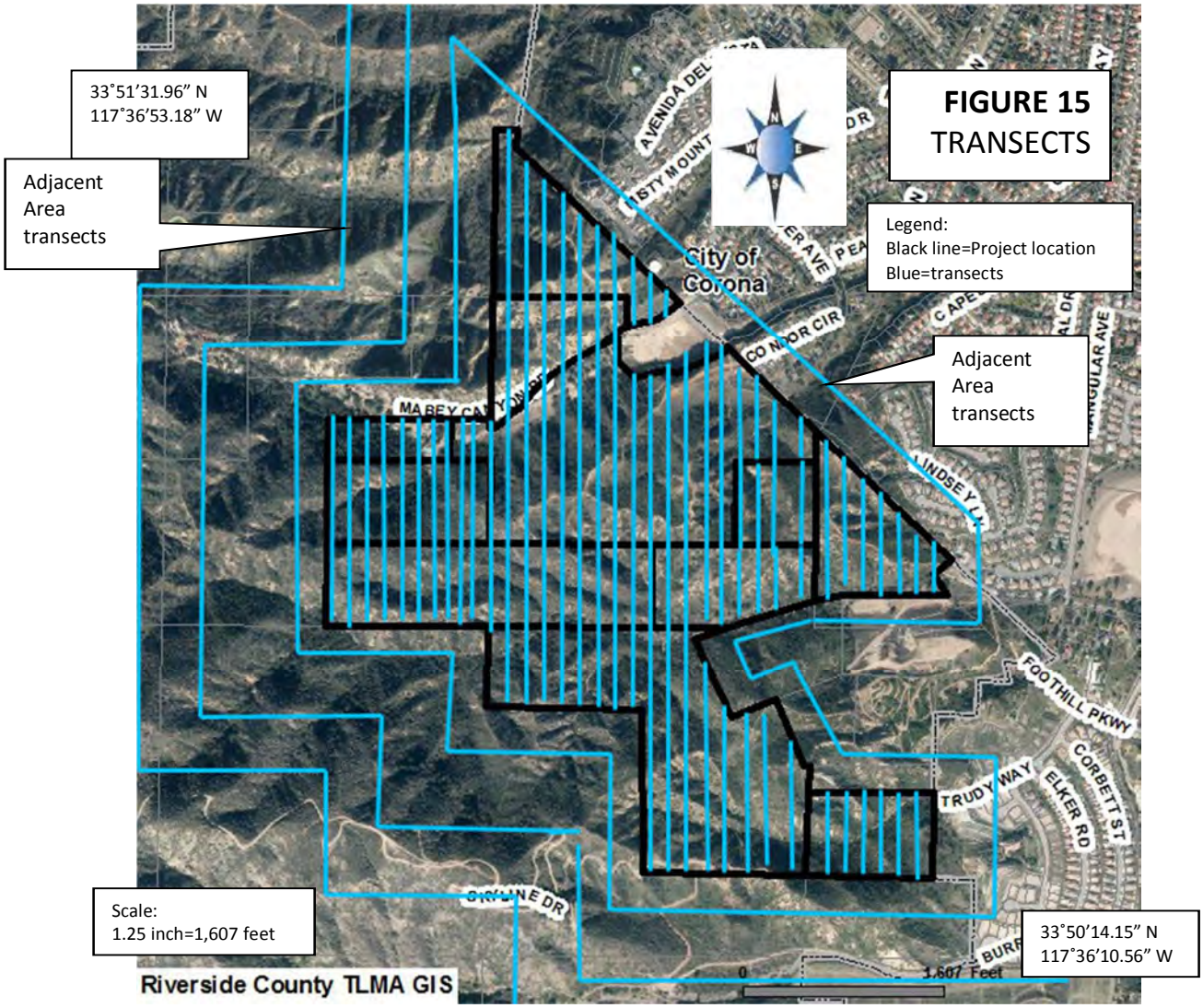
Immediately after the habitat assessment, a burrow survey was conducted on the Site to determine if any of the debris piles contained evidence of burrowing owl. Surveys were conducted by Teresa Gonzales and Paul Gonzales. Surveys consisted of slowly walking the Site and the 150-meter buffer zone that was previously delineated for the habitat assessment. All existing fossorial mammal burrows were thoroughly examined for evidence of burrowing owl, including molting feathers, prey remains, cast pellets, eggshell fragments, and excrement.

The schedule and field conditions during the visits are summarized below.

TABLE 2

SURVEY SUMMARY

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time-Duration
April 21, 2013	62-78	0-5	Clear	None	6 AM- 4 PM/10 hours
May 12, 2013	56-78	0-4	Clear	None	6 AM – 4 PM/ 10 hours
May 19, 2013	64-73	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
May 26, 2013	51-75	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 2, 2013	52-72	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 3, 2013	50-70	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 9, 2013	55-85	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 16, 2013	59-85	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
June 23, 2013	59-80	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
June 30, 2013	67-88	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 5, 2013	61-85	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 13, 2013	59-89	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 20, 2013	64-86	0-1	Clear	None	5:30 AM-4 PM/10.5 hours
July 26, 2013	64-89	0-1	Clear	None	5:30 AM-4 PM/10.5 hours
July 28, 2013	73-78	0-1	Clear	None	5:30 AM-4 PM/10.5 hours


33˚51’31.96” N
117˚36’53.18” W
Adjacent Area transects
FIGURE 15
TRANSECTS
Legend:
Black line=Project location
Blue=transects
City of Corona
Adjacent Area transects
FOOTHILL PKWY
TRUDY WAY
ELKER RD
CORBETT ST
Scale:
1.25 inch=1,607 feet
33˚50’14.15” N
117˚36’10.56” W
Riverside County TLMA GIS
0
1,607 Feet

Focused Burrowing Owl Burrow Survey Results

Results of the surveys found no owl burrows or burrowing owls on the proposed project site or in adjacent areas.

VII. RESULTS

GEC conducted assessment and Focused Burrowing Owl Burrow Survey as outlined by The California Burrowing Owl Consortium and Burrowing Owl Instructions for the Western Riverside MSHCP. Task 1 of the survey identified suitable burrowing owl habitat on-site with the presence of low-growing vegetation, and fossorial mammal burrows. **Results of the surveys found no owl burrows or burrowing owls on the proposed project site or in adjacent areas.**

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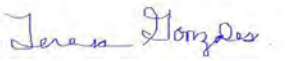
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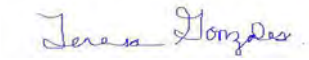
X. CERTIFICATION

CERTIFICATION*: "I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project."*

DATE: April 23, 2014 SIGNED: 

1) Teresa Gonzales

1) Fieldwork Performed By:



Teresa Gonzales

Check here _____ If Adding any additional Names/Signatures, below or on other side of page.

Appendix A
Plant and Animal Compendium

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	DIVISION ANTHOPHYTA	**FLOWERING PLANTS**			
	Class Dicotyledones	**Dicots**			
	FAMILY ADOXACEAE	**ELDERBERRY FAMILY**			
	Sambucus nigra ssp. caerulea	Blue Elderberry	U/R	U/R	FACU
	FAMILY ANACARDIACEAE	**SUMAC FAMILY**			
	Malosma laurina	Laurel Sumac	U/R	U/R	
	Rhus integrifolia	Lemonadeberry	U	U	---
	Rhus ovata	Sugarbush	U/R	U/R	---
X	*Schinus molle*	Peruvian Pepper Tree	U	U	---
	Toxicodendron diversilobum	Poison Oak	U/R	U/R	---
	FAMILY PINACEAE	**PINE FAMILY**			
X**	*Pinus jeffreyi*	Jeffrey Pine	U	U	---
	FAMILY AMARANTHACEAE	**AMARANTH FAMILY**			
X	*Amaranthus albus*	Tumbleweed	U/R	U	FACU
	FAMILY APIACEAE	**CARROT FAMILY**			
X	*Foeniculum vulgare*	Sweet fennel			---
	FAMILY APOCYNACEAE	**MILKWEED FAMILY**			
	Asclepias fascicularis	Narrow-leaf Milkweed	U/R	---	FAC
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**			
	Ambrosia acanthicarpa	Annual Bur-sage	U/R	U/R	---
	Ambrosia confertiflora	Burrweed	U/R	U/R	---
	Ambrosia psilostachya	Western Ragweed	R	---	FACU
	Artemisia californica	California Sagebrush	U	U	---
	Baccharis pilularis	Chaparral Broom	R	R	---
	Baccharis salicifolia	Mule Fat	R	R	FAC
X	*Centaurea melitensis*	Tocalote	U	U/R	---
X	*Cirsium vulgare*	Bull Thistle	U/R	U/R	FACU
	Corethrogyne filaginifolia	Common Sandaster	U	R	---
	Deinandra fasciculata	Clustered Moonshine-Daisy	U	U	FACU
	Encelia californica	California Brittlebush	U/R	U/R	---
X	*Erigeron bonariensis*	Flax-leaved Horseweed	R	---	---
	Erigeron canadensis	Horseweed	U/R	U/R	FAC
X	*Hedypnois cretica*	Hedyponois	U/R	U/R	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	Helianthus annuus	Common Sunflower	U/R	U	FACU
	Heterotheca grandiflora	Telegraph Weed	U	U	---
	Solidago californica	Oreja de liebre	U	U	---
	FAMILY BORAGINACEAE	**BORAGE FAMILY**			
	Amsinckia intermedia	Common Fiddleneck	U	U	---
	Amsinckia menziesii	Small Flowered Fiddleneck	U	U	---
	Cryptantha intermedia	Cryptantha	U	U	---
	Eriodictyon crassifolium	Thick-leaved Yerba Santa	U	U	---
	Phacelia cicutaria	Caterpillar Phacelia	U	U	---
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**			
	Brassica nigra	Black Mustard	---	U	---
	Brassica rapa	Field Mustard	---	R	FACU
X	*Hirschfeldia incana*	Short-pod Mustard	U/R	U/R	---
X	*Sisymbrium irio*	London Rocket	U		---
	FAMILY CACTACEAE	**CACTUS FAMILY**			
	Cylindropuntia californica	California Cholla	U	U	---
	Opuntia littoralis	Western Prickly Pear	U	U	---
	FAMILY CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**			
	Lonicera subpicata	Southern Honeysuckle	U	U	---
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**			
X	*Atriplex semibaccata*	Australian Saltbush	U	---	FAC
X	*Chenopodium album*	Pigweed	U	U	FACU
X	*Salsola tragus*	Prickly Russian Thistle	U/R	U/R	FACU
	FAMILY CONVOLVULACEAE	**MORNING-GLORY FAMILY**			
X	*Convolvulus arvensis*	Bindweed	U/R	---	---
	Cuscuta californica	Chaparral Dodder	U	U	---
	FAMILY CRASSULACEAE	**STONECROP FAMILY**			
	Crassula connata	Sand Pygmyweed	U	U	FAC
	FAMILY CUCURBITACEAE	**SQUASHES, MELONS & GOURDS FAMILY**			
	Cucurbita palmata	Coyote Gourd	U	---	---
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**			
	Chamaesyce albomarginata	Rattlesnake Weed	U	U	---
X	*Chamaesyce maculata*	Spotted Spurge	U	U	UPL
	Croton setigerus	Dove Weed	U	---	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
X	*Ricinus communis*	Castor Bean	R	R	FACU
	FAMILY FABACEAE	**PEA FAMILY**			
	Acmispon glaber	Deerweed	U	U	---
	Lupinus truncatus	Collared Annual Lupine	U	U	---
	Lathyrus vestitus var. *alefeldii*	San Diego Pea	U	U	---
X	*Medicago sativa*	Alfalfa	---	U	---
X	*Melilotus albus*	White Sweetclover	U	U	---
X	*Melilotus indicus*	Annual Yellow Sweetclover	U	U	FACU
	FAMILY FAGACEAE	**OAK FAMILY**			
	Quercus agrifolia	Coast Live Oak	U/R	U/R	---
	FAMILY GERANIACEAE	**GERANIUM FAMILY**			
X	*Erodium botrys*	Long-beaked Filaree	U	U	---
X	*Erodium cicutarium*	Red-stemmed Filaree	U	U/R	---
	FAMILY GROSSULARIACEAE	**CURRANT FAMILY**	U/R	U/R	---
	Ribes speciosum	Fushia-flowered Gooseberry			
	FAMILY LAMIACEAE	**MINT FAMILY**			
X	*Marrubium vulgare*	Horehound	U	U/R	FACU
	Salvia apiana	White Sage	U/R	U/R	---
	Salvia columbariae	Chia Sage	U	U	---
	Salvia leucophylla	Purple Sage	U/R	U/R	---
	Salvia mellifera	Black Sage	U/R	U/R	---
	FAMILY MALVACEAE	**MALLOW FAMILY**			
X	*Malacothamnus densiflorus*	Yellow Bushmallow	U/R	U	---
	FAMILY MELANTHIACEAE	**PERENNIAL LILY FAMILY**			
	Toxicoscordion fremontii	Fremont's Star Lily	U	U	---
	FAMILY MONTIACEAE	**PURSLANE FAMILY**			
	Calandrinia ciliata	Red Maids	U	U	FACU
	Claytonia perfoliata	Miner's Lettuce	U	U	FAC
	FAMILY MYRTACEAE	**MYRTLE FAMILY**			
X	*Eucalyptus citriodora*	Lemon Scented Gum	R/U	R/U	---
X	*Eucalyptus polyanthemos*	Silver Dollar Gum	R	R	---
X	*Eucalyptus rudis*	Desert Gum	U	U	---
	FAMILY OLEACEAE	**OLIVE FAMILY**			
	Fraxinus velutina	Velvet Ash	R	R	FAC

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**			
	Epilobium canum	California Fuchsia	R	R	---
	FAMILY PAPAVERACEAE	**POPPY FAMILY**			
	Eschscholzia californica	California Poppy	U/R	U/R	---
	Romneya coulteri	Coulters Matilija Poppy***	U/R	U/R	---
	FAMILY PHRYMACEAE	**LOPSEED FAMILY**			
	Mimulus aurantiacus	Bush Monkeyflower	U	U	
	FAMILY PLATANACEAE	**SYCAMORE FAMILY**			
	Platanus racemosa	California Sycamore	R	R	FACW
	FAMILY POLEMONIACEAE	**PHLOX FAMILY**			
	Gilia angelensis	Angel Gilia	U	U	---
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**			
	Eriogonum fasciculatum	California Buckwheat	U	U	---
	FAMILY RANUNCULACEAE	**CLEMATIS FAMILY**			
	Clematis lasiantha	Chaparral clematis	U	U	---
	FAMILY RHAMNACEAE	**BUCKTHORN FAMILY**			
	Frangula californica	California Coffeeberry	U/R	U/R	---
	FAMILY ROSACEAE	**ROSE FAMILY**			
	Adenostoma fasciculatum	Chamise	U	U	---
	Heteromeles arbutifolia	Toyon	U	U	---
	FAMILY SALICACEAE	**WILLOW FAMILY**			
	Populus fremontii	Fremont Cottonwood	---	R	FAC
	Salix gooddingii	Goodding's Willow	---	R	FACW
	Salix lasiandra	Pacific Willow	R	R	FACW
	Salix lasiolepis	Arroyo Willow	R	R	FACW
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**			
	Datura wrightii	Jimson Weed	R	U/R	UPL
X	*Nicotiana glauca*	Tree Tobacco	R	R	FAC
	Solanum douglasii	Douglas' Nightshade	R	R	FAC
	FAMILY URTICACEAE	**NETTLE FAMILY**			
	Urtica dioica ssp. *holosericea*	Hoary Nettle	R	R	FAC
	Class Monocotyledones	**Monocots**			
	FAMILY AGAVACEAE	**AGAVE FAMILY**			
	Hesperoyucca whipplei	Chaparral Yucca	U	U	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY LILIACEAE	**LILY FAMILY**			
	Calocortus splendens	Splendid Mariposa Lily	---	U	---
	FAMILY POACEAE	**GRASS FAMILY**			
X	*Avena barbata*	Slender Wild Oat	U	U	---
X	*Avena fatua*	Common Wild Oats	U/R	U/R	---
X	*Bromus diandrus*	Ripgut Grass	U	U	---
X	*Bromus hordeaceus*	Soft Chess	U	U	FACU
X	*Bromus madritensis* ssp. *rubens*	Foxtail Chess	U	U	---
X	*Echinochloa crus-galli*	Common Barnyard-grass	U	U	FAC
	Elymus condensatus	Giant Wild Rye	U	U	---
X	*Festuca myuros*	Rattail	U	U	---
X	*Hordeum murinum ssp. leporinum*	Hare Barley	U	U	FACU
	Leptochloa fusca	Mexican Sprangletop	R	R	FACW
	Melica imperfecta	Coast Range Melic	U	U	---
	Muhlenbergia rigens	Deergrass	U	U	---
X	*Schismus barbatus*	Mediterranean Schismus	U	U	---
	Stipa coronata	Crested Needle grass	U	U	---
	Stipa lepida	Foothill Needle grass	U	U	---
	FAMILY THEMIDACEAE	**BRODIAEA FAMILY**			
	Dichelostemma capitatum	Wild Hyacinth	---	U/R	---

* = U- Upland habitats (chaparral, sage scrub, grasslands); R-Riparian Habitats (oak woodland, willow, sycamore, mulefat).
** = Surveys conducted by GEC in past years
*** = Rare plant
X** = Native used as landscape species

Wetland Indicator Status:

The following symbols are used to indicate the wetland indicator status of plant species identified onsite, if any.

OBL Obligate: under natural conditions, occurs almost always (estimated probability > 99%) in wetlands.

FACW Facultative Wetland: usually occurs in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.

FAC Facultative: equally likely to occur (estimated probability 34-66%) in wetlands or non-wetlands.

FACU Facultative Upland: usually occur in non-wetlands but occasionally (estimated probability 1-33%) found in wetlands.

UPL Obligate Upland: occur in wetlands in another region, but occur almost always (estimated probability > 99%) under natural conditions in non-wetlands in the region specified.

NI or --- No Indicator Status: was recorded for those species for which sufficient information was not available to determine an indicator status or that were not considered by the Regional Panel.

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (2)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	---
FAMILY PHRYNOSOMATIDAE	**SPINY LIZARD FAMILY**			
Sceloporus occidentalis longipes	Great Basin fence lizard	X	X	---
CLASS AVES	**BIRDS (62)**			
FAMILY ODONTOPHORIDAE	**QUAIL**			
Callipepla californica	California Quail	X	X	
FAMILY ACCIPITRIDAE	**BUTEOS, KITES AND HAWKS**			
Accipiter cooperii	Cooper's Hawk	X	X	CSC
Buteo jamaicensis	Red-tailed Hawk	X	X	--
FAMILY COLUMBIDAE	**DOVES AND PIGEONS**			
Columba livia	*Rock Pigeon	X		--
Zenaida asiatica	White-winged Dove	X		--
Zenaida macroura	Mourning Dove	X	X	--
FAMILY TYTONIDAE	**BARN AND BAY OWLS**			
Tyto alba	Barn owl	X	X	--
FAMILY STRIGIDAE	**TRUE OWLS**			
Megascops kennicottii	Western Screech-Owl	X	X	--
Bubo virginianus	Great Horned Owl	X	X	--
FAMILY APODIDAE	**SWIFTS**			
Chaetura vauxi	Vaux's Swift	X	---	
Aeronautes saxatalis	White-throated Swift	X	---	
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	Black-chinned Hummingbird	X		--
Calypte anna	Anna's Hummingbird	X	X	--
Calypte costae	Costa's Hummingbird	X		--

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY CUCULIDAE	**CUCKOOS, ANIS AND ROADRUNNERS**			
Geococcyx californianus	Greater roadrunner	X	X	
FAMILY PICIDAE	**WOODPECKERS AND FLICKERS**			
Picoides nuttallii	Nuttall's Woodpecker	X		
Picoides pubescens	Downy Woodpecker	---	X	
Colaptes auratus	Northern Flicker	X	---	
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	X	X	
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific-slope Flycatcher	---	X	
Myiarchus cinerascens	Ash-throated Flycatcher	X	---	
Sayornis nigricans	Black Phoebe	X	X	
Sayornis saya	Say's Phoebe	X	X	
Tyrannus verticalis	Western Kingbird	X	---	
Tyrannus vociferans	Cassin's Kingbird	X	X	
FAMILY CORVIDAE	**CROWS AND RAVENS**			
Corvus brachyrhynchos	American Crow	---	X	
Corvus corax	Common Raven	X	---	
Aphelocoma californica	Western Scrub Jay	X	X	
FAMILY ALAUDIDAE	**LARKS**			
Eremophila alpestris	Horned Lark	X	---	WL
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Hirundo rustica	Barn Swallow	---	X	
Petrochelidon pyrrhonota	Cliff Swallow	---	X	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	X	---	
Tachycineta bicolor	Tree Swallow	---	X	
Tachycineta thalassina	Violet-green Swallow	---	X	
FAMILY PARIDAE	**CHICKADEE**			
Baeolophus inornatus	Oak Titmouse	---	X	
FAMILY AEGITHALIDAE	**BUSHTITS AND LONG-TAILED TITS**			
Psaltriparus minimus	Bushtit	X	X	
FAMILY TROGLODYTIDAE	**WRENS**			
Salpinctes obsoletus	Rock Wren	X	X	
Thryomanes bewickii	Bewick's Wren	X	X	

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY SYLVIIDAE	**OLD WORLD WARBLERS**			
Chamaea fasciata	Wrentit			
FAMILY TURDIDAE	**THRUSHS, SOLITAIRES AND BLUEBIRDS**			
Sialia mexicana	Western Bluebird	X	X	
FAMILY MIMIDAE	**MIMIC THRUSHES, OR MIMIDS**			
Mimus polyglottos	Northern Mockingbird	X	X	
Toxostoma redivivum	California Thrasher	X	X	
FAMILY STURNIDAE	**STARLINGS AND ALLIES**			
Sturnus vulgaris	*European Starling	X	X	
FAMILY PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens	Phainopepla	X	X	
FAMILY PARULIDAE	**WARBLERS**			
Geothlypis tolmiei	MacGillivray's Warbler	X	X	
Oreothlypis celata	Orange-crowned Warbler	---	X	
FAMILY EMBERIZIDAE	**SPARROWS AND TOWHEES**			
Aimophila ruficeps	Rufous-crowned Sparrow	---	X	
Chondestes grammacus	Lark Sparrow	---	X	
Melozone crissalis	California Towhee	X	X	
Melospiza melodia	Song Sparrow	X	X	
Pipilo maculatus	Spotted Towhee	---	X	
Spizella atrogularis	Black-chinned Sparrow	---	X	
Zonotrichia leucophrys	White-crowned Sparrow	X	X	
FAMILY CARDINALIDAE	**CARDINALS AND BUNTINGS**			
Passerina amoena	Lazuli Bunting	X	X	
Piranga ludoviciana	Western Tanager	X	X	
FAMILY ICTERIDAE	**BLACKBIRDS AND ALLIES**			
Agelaius phoeniceus	Red-winged Blackbird	---	X	
Icterus cucullatus	Hooded Oriole	---	X	
Molothrus ater	Brown-headed Cowbird	---	X	
FAMILY FRINGILLIDAE	**NEW WORLD SEEDEATERS**			
Haemorhous mexicanus	House Finch	X	X	
Spinus lawrencei	Lawrence's Goldfinch	X	X	
Spinus tristis	American Goldfinch	X		
FAMILY PASSERIDAE	**OLD WORLD SPARROWS**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Passer domesticus	*House Sparrow	X	X	
CLASS MAMMALIA	**MAMMALS (12)**			
FAMILY DIDELPHIDAE	**OPOSSUM**			
Didelphis virginiana	Virginia Opossum	X	---	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**			
Canis latrans	Coyote	X	X	
Canis lupus familiaris	Domestic Dog	X	X	
Urocyon cinereoargenteus	Gray Fox	X	---	
FAMILY PROCYONIDAE	**RACCOONS AND RINGTAILS**			
Procyon lotor	Raccoon	X	---	
FAMILY SCIURIDAE	**SQUIRRELS**			
Spermophilus beecheyi	California Ground Squirrel	X	X	
FAMILY GEOMYIDAE	**POCKET GOPHERS**			
Thomomys bottae	Southern Pocket Gopher	---	X	
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	---	X	CSC
Sylvilagus audubonii	Cottontail	X	X	
FAMILY FELIDAE	**CATS**			
Felis catus	Domestic cat	X	---	
Lynx rufus	Bobcat	X	---	
Puma concolor	Mountain Lion	X	---	
INVERTEBRATES				
CLASS INSECTA	**INSECTS (22)**			
FAMILY CERCOPOIDEA	**SPITTLE BUGS**			
Prosapia bicincta	Two-Lined Spittle Bug	X	X	
FAMILY APIDAE	**HONEY BEES**			
Apis mellifera	Honey Bee	---	X	
FAMILY RIODININAE	**METALMARKS**			
Apodemia virgulti	Mormon Metalmark	X	X	
FAMILY POLYOMMATINAE	**BLUE GOSSAMER-WINGED BUTTERFLIES**			
Brephidium exilis	Pygmy Blue Butterfly	---	X	
FAMILY PENTATOMIDAE	**STINK BUGS**			
Chlorochroa sayi	Say's Stinking Bug	---	X	
FAMILY COLIADINAE	**SULPHER BUTTERFLIES**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Colias eurytheme	Orange Sulpher	---	X	
FAMILY SCARABAEIDAE	**SCARAB BEETLE**			
Cotinus mutabilis	Green Fruit Beetle	X	X	
FAMILY TENEBRIONIDAE	**DARKLING BEETLES**			
Eleodes acutus	Stink beetle	X	X	
FAMILY APHIDIDAE	**APHIDS**			
Toxoptera aurantii	Aphids	---	X	
FAMILY CULICIDAE	**MOSQUITOES**			
Culex quinquefasciatus	Mosquito	---	X	
FAMILY FORFICULIDAE	**EARWIGS**			
Forficula auricularia	European Earwigs	---	X	
FAMILY BOMBYLIIDAE	**ROBBER FLIES**			
Mallophora fautrix	Robber fly	X	X	
FAMILY MUSCIDAE	**HOUSE FLY**			
Musca domestica	Common House Fly	X	X	
FAMILY PAPILIONIDAE	**SWALLOWTAIL**			
Papilio rutulus	Western Tiger Swallowtail Butterfly	---	X	
FAMILY POMPILIDAE	**SPIDER WASPS**			
Pepsis chrysothymus	Tarantula Hawk	X	X	
FAMILY PIERIDAE	**CABBAGE BUTTERFLIES**			
Pieris protodice	Common White Butterfly	X	X	
Pieris rapae	Cabbage White		X	
FAMILY FORMICIDAE	**HARVESTER ANT**			
Pogonomyrmex californicus	California Harvester Ant	X	X	
FAMILY VESPIDAE	**SOCIAL WASP**			
Polistes excaimans	Paper wasp	---	X	
FAMILY ACRIDIDAE	**COMMON GRASSHOPPER**			
Trimerotropis pallidipennis	Pallid Band-wing	---	X	
FAMILY NYMPHALIDAE	**PAINTED LADY'S**			
Vanessa cardui	Painted Lady	X	X	
CLASS ARACHNIDA	**SPIDERS, MITES, TICKS AND SCORPIONS (1)**			
FAMILY CTENIZIDAE	**TRAP DOOR SPIDER**			
Bothriocyrtum californicum	California Trapdoor Spider	X	X	

APPENDIX F

GEC Report: Habitat Assessment and Rare Plant Surveys

HABITAT ASSESSMENT & RARE PLANT SURVEY FOR SPECIAL STATUS PLANTS

TTM 36544

APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006

In the

City of Corona

Riverside County, CA

USGS 7.5-minute topographic Black Star & Corona South Quadrangles

Township 4 South, Range 7 West, portions of Sections 3, 4 and 9



Prepared For:

Richland Developers, Inc.
3161 Michelson Drive,
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Prepared By and Principal Investigator:

GONZALES
ENVIRONMENTAL CONSULTING, LLC

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La Quinta, CA 92253
(760) 777-1621

Report Date: August 1, 2013
Revised: April 23, 2014

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VI. POTENTIAL IMPACTS & AVOIDANCE RECOMMENDATIONS 47

VII. REFERENCES 48

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

Date: April 23, 2014

Signed: 

TITLE PAGE

A. **Date report prepared**: April 23, 2014

B. **Report Title:** Habitat Assessment and Rare Plant Surveys for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA

C. Project site location: USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3, 4 and 9, Township 4 South, Range 7 West

D. Location(s): Mabey Canyon Wash, Wardlow Wash and Unnamed drainages

E. Owner/Applicant:
Richland Developers, Inc.
3161 Michelson Drive,
Suite 425
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949-383-4137

F. Principal Investigator(s): Teresa Gonzales and Paul Gonzales
Address: 51842 Avenida Diaz
La Quinta, CA 92253
Phone: 760.777-1621

G. Name and phone number of person preparing report and of all persons who performed fieldwork on the site

Name of Person	Phone Number	Role on project
Teresa Gonzales	760.777-1621	Prepared report and performed fieldwork
Paul Gonzales	760.777-1621	Performed fieldwork

This document should be cited as:
Gonzales Environmental Consulting, LLC. 2013. Habitat Assessment and Rare Plant Surveys for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA; USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3,4 and 9, Township 4 South, Range 7 West. April 23, 2014, La Quinta, California. Prepared for Richland Developers, Inc.

SUMMARY

In April, May, June and July 2013, Teresa Gonzales and Paul Gonzales of Gonzales Environmental Consulting, LLC (GEC) conducted focused botanical surveys of the project site.

The project is located in southwest Corona, adjacent to Cleveland National Forest and what will be the continuance of Foothill Boulevard.

The site consists of seven vegetation communities, characterized as *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances. Portions of the project site have been subject to anthropogenic disturbances.

Coulter's Matilija poppy (*Romneya coulteri*), a California Native Plant Society (CNPS) List 4.2 species (plants of limited distribution), was found on the project site.

The site is within the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP).

I. PROJECT DESCRIPTION

This report summarizes the findings of focused surveys to determine presence or absence of sensitive vegetation on the Skyline project site.

Property Description

The project is located south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive in the Corona area of Riverside County, California. Regional and location maps are provided as Figures 1 and 2.

Proposed Project Area

Corona, also called "The Circle City," was founded in 1886 by Robert Taylor and members of the south Riverside Land and Water Company. Mr. Taylor, along with an engineer, H. Clay Kellogg, decided to build the city around a central point. This central point is known as Grand Blvd. They lined it with pepper trees and began developing what we know as Corona. Most early homes and businesses were located around this large circle. The businesses were located near the center at 6th and Main St., while the residences were more out towards the perimeter. Citrus groves were planted to the south. Industrial and fruit packing plants were built to the north near the railroad tracks (Usacitiesonline).

Proposed Project Site

The site is located within San Bernardino Meridian in portions of Sections 3, 4 and 9, Township 4 South, Range 7 West in Riverside County, California (Figures 1, 2 and 3). This location is shown on the Corona South and Black Star Canyon**,** California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Corona South and Black Star Canyon 1979); page 772 Blocks G1, G2, G3, H2, H3 and J3 of the Riverside County Street Guide and Directory (Thomas Brothers Maps Design 2013). The approximate center of the site is located at the center of the project area is 33°50’39.72”N/117°36’41.11”W.

The proposed project site is sloping to the north and east, depending on the location in the landscape. It occurs at an elevation between 1,160 and 1,420 feet below mean sea level.

Portions of the project site have been disturbed by anthropogenic disturbances. Vegetation has been disturbed by fire roads, illegal access and adjacent land uses. During our many site visits we personally observed hikers, runners and mountain bikers utilizing the proposed project site. Additional disturbance to the drainage area has occurred since our 2008 visits. Fire roads and trails now impact a great portion of the drainage.

Land immediately adjacent to the site's northern, eastern, and western boundaries contain single-family residences, or areas that have been graded for lots. The land to the south is part of the Cleveland National Forest.

Similar to many of the other open areas in the area, the site shows signs of off-road vehicle, mountain biking, and anthropogenic use. Vehicle tracks and roads traverse the site, degrading plant and animal habitat.

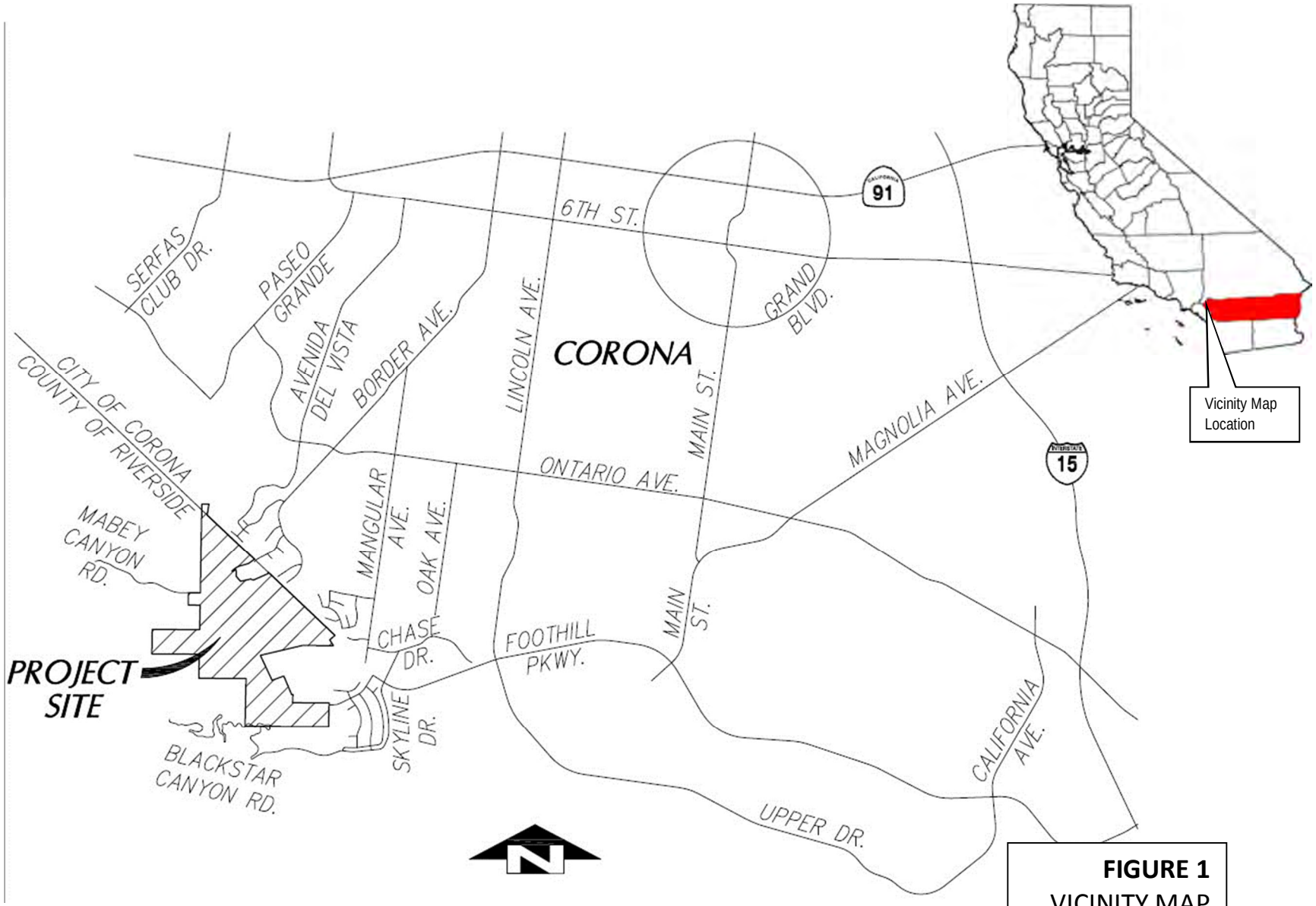


FIGURE 1
VICINITY MAP

Source: KWC Engineers. Not to scale.

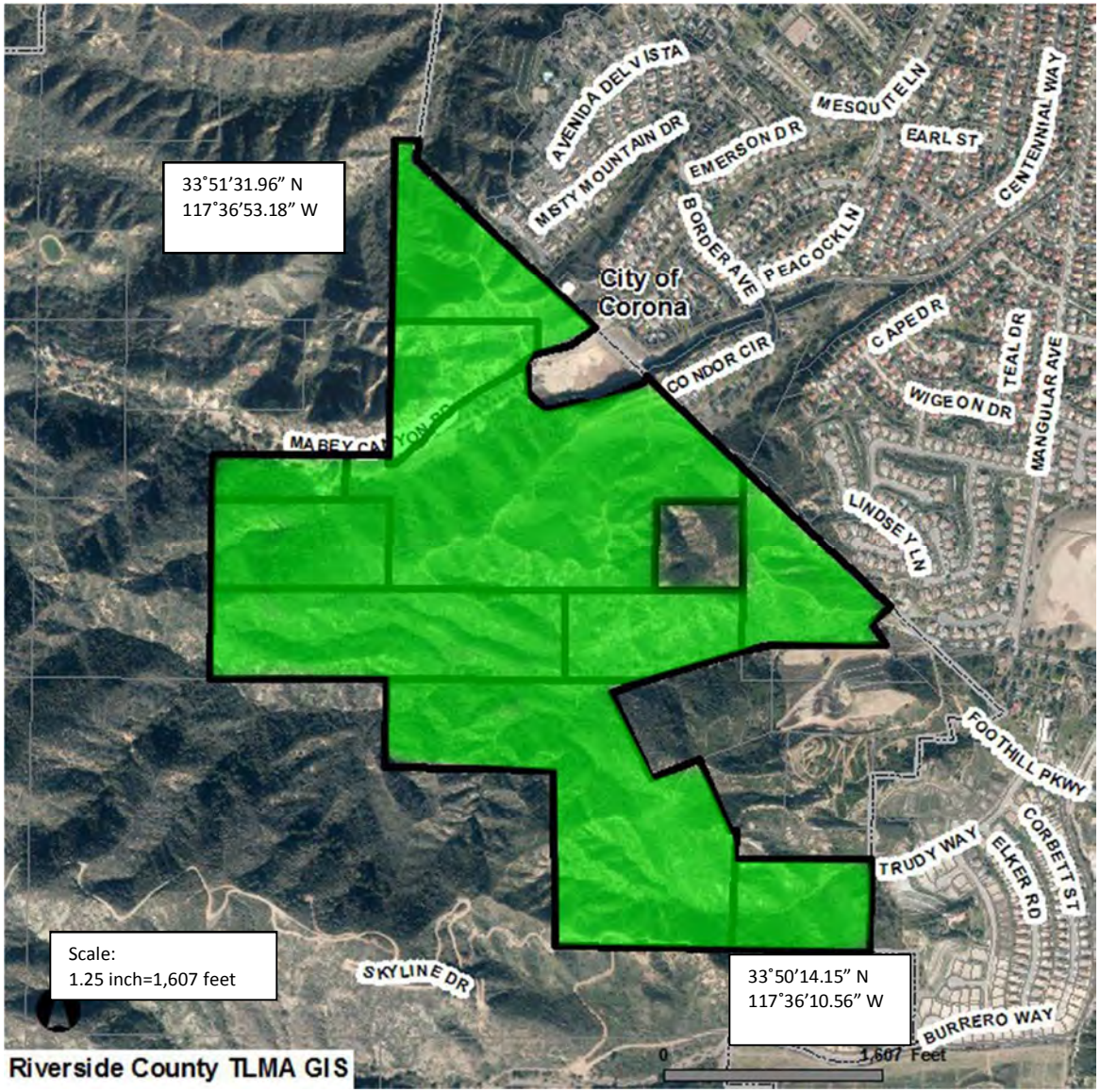


FIGURE 2
LOCATION MAP

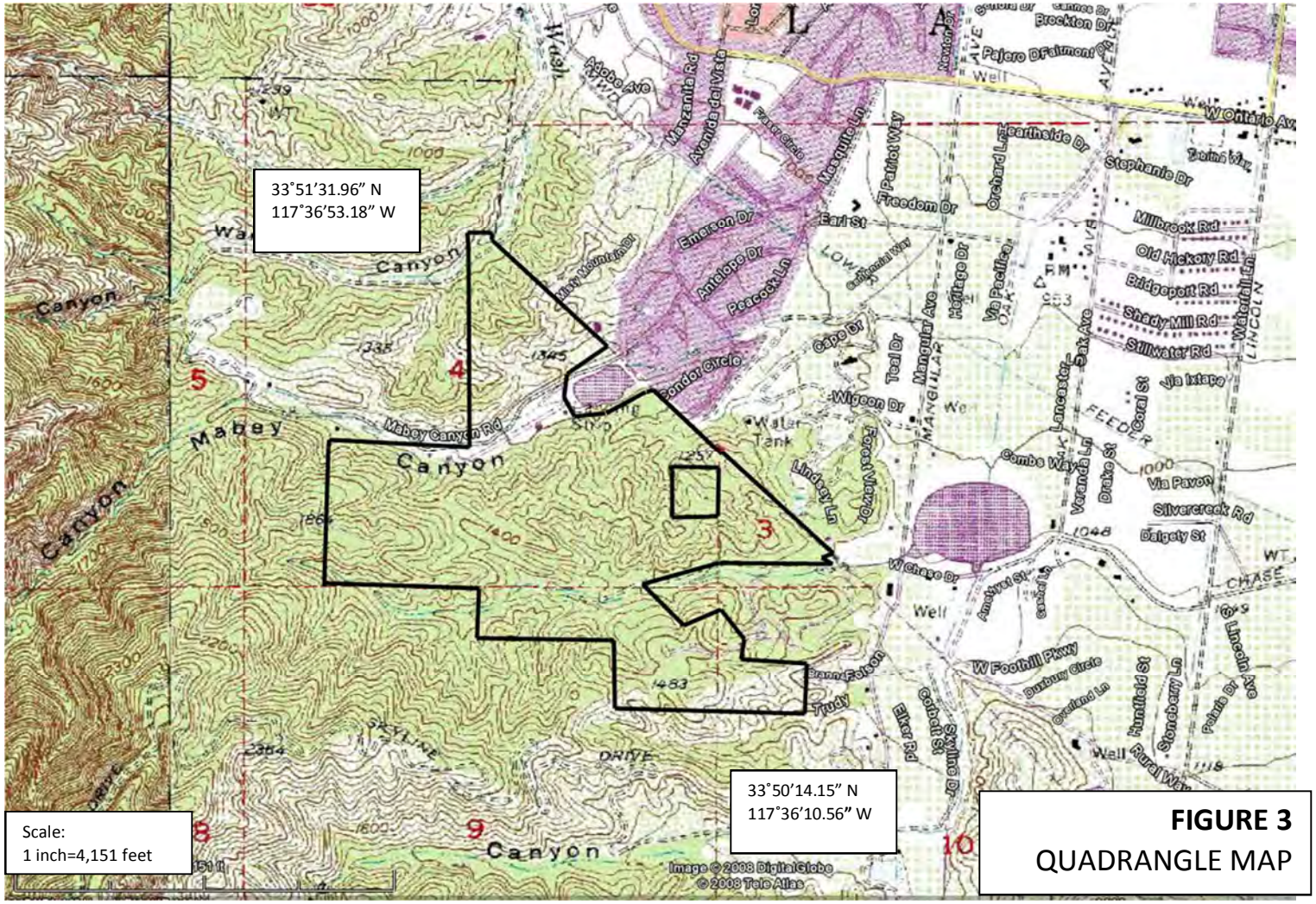


FIGURE 3
QUADRANGLE MAP

Source: Black Star Canyon and Corona South quadrangle 7.5 topographical map. July 1, 1988. Please note that this is a locality map, and should not be used for calculations.

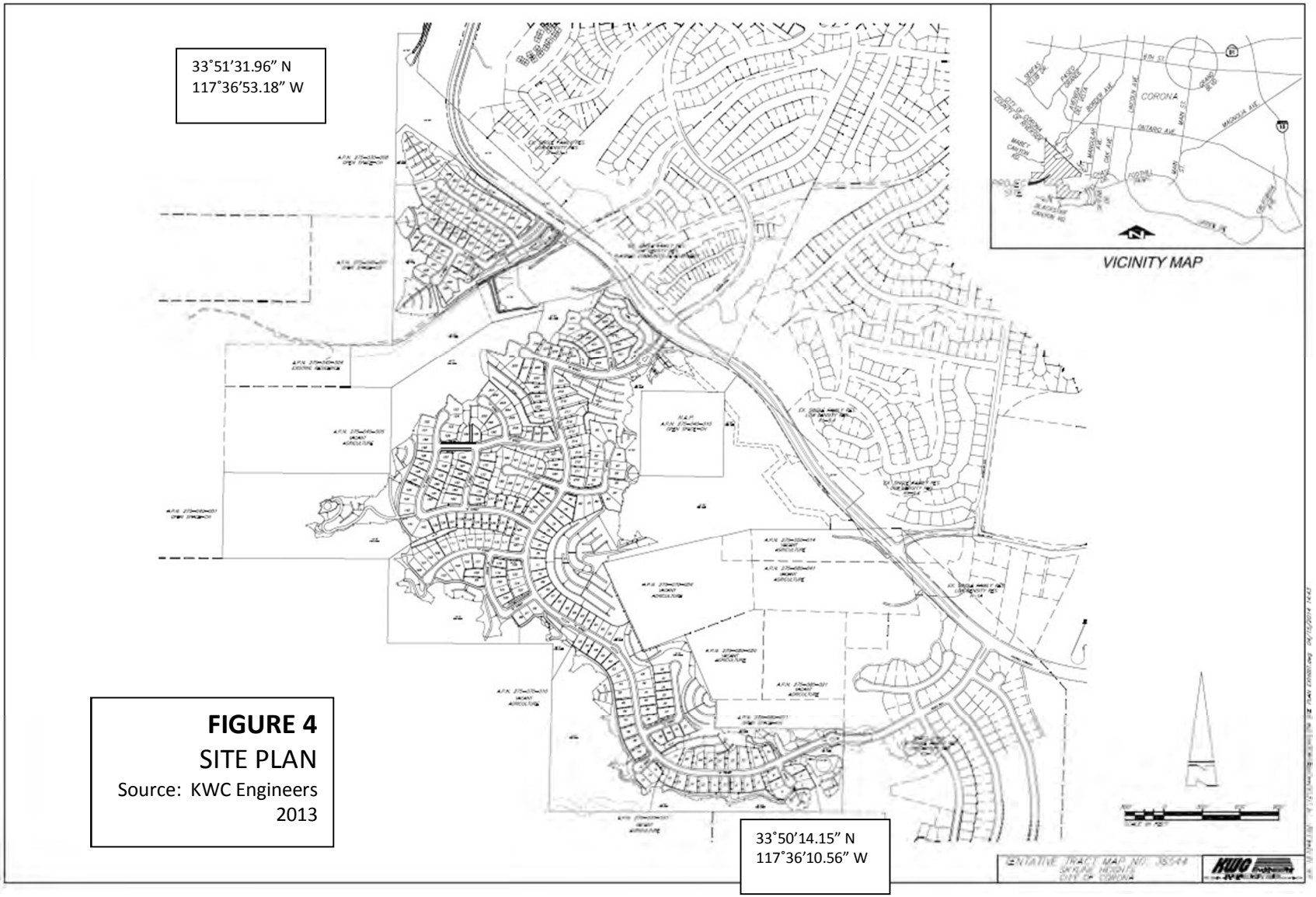


FIGURE 4
SITE PLAN
Source: KWC Engineers 2013

Proposed Project Description

Overview

The Skyline Heights (TTM 36544) project is comprised of 270.9 acres vacant land situated in the hills to the southwest of the City of Corona in Western Riverside County, California adjacent to Foothill Parkway. The project area includes the area to be acquired by RCTC/City of Corona for the construction of the future Foothill Parkway westerly extension and Mabey Canyon Debris Basin. The site is located approximately 3 miles south of the 71 and 91 Freeways and approximately 4 miles west of Interstate 15 (I-15). The site is within the City of Corona's Sphere of Influence and is proposed to be annexed to the City during the entitlement process. The City of Corona is currently processing the Capital Improvement Project for the Foothill Parkway Westerly Extension between Green River Road and Trudy Way. Construction is planned to be completed in the next few years. Foothill Parkway will border the eastern portion of the project and will be the primary access to the site.

The Skyline Heights project is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels. Within the general boundaries of the project is an undeveloped 10.0-acre parcel which is considered "Not a Part" and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded forest service access road, is located just to the south of the project. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.

The project site consists of sparsely vegetated and otherwise undeveloped land with the exception of dirt roads. The site is characterized by steep topography, generally increasing in elevation from the northeast to the southwest. Several canyons and ravines are present which will convey natural drainage across the project site.

Zoning and Land Use/Site Plan

The existing General Plan Land Use designation for this site is Agriculture and the existing Zoning is Rural Residential I (0.2-0.5 du/ac). The project will be processing a GPA and Zone Change for the property through the City of Corona. The proposed General Plan designation will be Low Density Residential (3-6 du/ac). The proposed Zoning for this project will be designated as R-1-7.2 Single Family Residential with 7,200 square feet minimum lots.

A Conceptual Site Plan has been prepared for the project and will consist of two (2) graded areas. The area north of Mabey Canyon is proposing 45 Single Family lots and the area to the south will be 247 Single Family lots. This totals to 292 Single Family Low Density Residential lots for a project density of 1.08 du/ac.

The project will be developed in three map recording phases. The proposed development requires the construction of Foothill Parkway and infrastructure improvements along the

project frontage as proposed by the City of Corona's Foothill Parkway Westerly Extension Capital Improvement Project. The anticipated completion date of this section of Foothill Parkway is 2015. This development assumes that Foothill Parkway is in place prior to the construction of the project.

Site Plan Layout, Circulation and Access

The primary access to the site is from the future westerly extension of Foothill Parkway proposed by the City of Corona. Foothill Parkway is designated as a Secondary Highway with 72 feet of pavement within a 103 foot right-of-way. This regional thoroughfare is anticipated to be constructed in the next few years and is targeted to be completed by 2015. Area 1 proposes a single point public roadway access off of Foothill Parkway just north of Mabey Canyon Debris Basin. This public roadway is 88 foot wide with a 16 foot wide raised median. A 28 foot wide emergency fire and existing residents' access road will also be proposed for emergency purposes to connect to the existing dirt access along Mabey Canyon south of the proposed roadway. The new access road is proposed to become the primary access route for the existing residents west of the project site. Area 2 proposes a 68 foot private local collector roadway section that extends into the project site from the intersection of Border Avenue and future Foothill Parkway. A 60 foot private roadway section will connect and continue this spine local roadway southerly to connect with existing 68 foot wide Trudy Way (Tract 31955).

In addition to these proposed roadways, other local private roadways are proposed throughout the project site. These proposed roadways are designed with 36 foot wide pavement within a 56 foot right-of-way or 36 foot wide pavement within a 60 foot right-of-way. The parkways are 10 foot wide or 12 foot wide with 4 foot sidewalks (not curb adjacent).

Grading, Construction and Phasing

Although an exact construction schedule is not known at this time, grading for the Skyline Heights Project is anticipated to begin about first Quarter 2015.

The site will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the project development. The anticipated maximum cuts and fills depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor.

Drainage Facilities

There are several existing canyons and ravines that run across the project site. Three of the canyons are shown as blue line streams according to the USGS Quad Maps. Wardlow Wash and Mabey Canyon Wash are two of those blue lined streams and are located in the northerly portion of the project. The tributary drainage to Wardlow Wash is approximately 975 acres and currently drains directly to the Santa Ana River. The tributary drainage to Mabey Canyon Wash is approximately 930 acres and currently drains to the existing Mabey Canyon Debris

Basin. The project site is not proposing to grade or alter the Mabey Canyon streambed, with the exception of increasing the spillway and construction of an access road. The other blue line stream is un-named (D-1) and is located in the central portion of the project site. The tributary drainage to this stream is approximately 311 acres and currently drains to the Kroonen Canyon Channel and Oak Street Creek Reservoir located near Chase Drive and Mangular Avenue. D-1 is proposed to be filled in across the project site and a 72-inch storm drain system is proposed to convey the storm water runoff underground and discharge back to the existing stream at the easterly terminus of the project site. D-2 is an unnamed non-jurisdictional swell in the southern portion of the project site. Several other smaller non-jurisdictional tributaries are also being filled in within the development. A system of storm drain pipes are proposed to convey the runoff across the site to the designated discharge points. Three detention basins are proposed within the project site to detain the increased runoff flows from the project development and are identified on Tentative Tract Map 36544.

The project hydrology and storm drain system will be designed in accordance with recent City of Corona and Riverside County Flood Control & Water Conservation District's design requirements. The onsite storm drain pipes, laterals, catch basins, and inlet and outlet structures are to be publicly maintained by the City of Corona. The proposed detention basins are designated to be publicly maintained by the City of Corona.

Project Utilities

The City of Corona Department of Water and Power will be the water, sewer, and reclaimed water service purveyor to the proposed Skyline Heights Development.

Water: The proposed onsite water facilities will include an intermediate water pressure Zone 6A Water Reservoir site, a Zone 6A Booster Pump Station site, and a network of Zone 5 (1380' HWL) and Zone 6A (1560' HWL) water distribution pipelines. The water supply to the project will be provided by a connection to the City's transmission water system in future Foothill Parkway and to the distribution water system in Trudy Way. Approximately 58 lots will be serviced by the existing Zone 5 (1380' HWL) water pressure system. The minimum and maximum pad elevations served will be 1185 and 1227, respectively. This will yield a static water pressure between 66 psi and 84 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. The remainder of the project will be serviced by the proposed intermediate Zone 6A (1560' HWL) water system. The proposed above ground DN Type 1 (prestressed concrete) tank water reservoir will be sized to accommodate the operational, emergency, and fire storage for the project as required by the City of Corona Department of Water and Power. The estimated reservoir capacity is approximately 0.6 MG and is sized to accommodate storage for 247 lots. The minimum and maximum pad elevations served will be 1220 and 1416, respectively. This will yield a static water pressure between 62 psi and 147 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. Pressure regulators will be required for lots having pressures greater than 80 psi. The proposed Booster Pump Station has a firm pumping capacity to provide the required flows and pressures using one (1) duty pump and one (1) standby pump at 500 gpm each and one 1500 gpm fire flow pump.

Sewer: The proposed onsite sewer facilities will include a system of 8-inch gravity sewer pipelines. Sewer Area 1 consisting of 55 tributary lots will be routed to a connection point at the intersection of Mabey Canyon Road and Falcon Circle. Sewer Area 2, which consists of 197 tributary lots, will drain by gravity to an existing gravity sewer system located at the intersection of Border Avenue and Condor Circle. The remaining portion in Sewer Area 3 consisting of 50 tributary lots will also drain by gravity to an existing gravity sewer system in Trudy Way. The downstream sewer system will be analyzed to determine impacts to the system and recommended mitigation measures.

Recycled Water: The proposed onsite private recycled water facilities will include a system of onsite private recycled water pipelines that will connect with the recycled water facilities in future Foothill Parkway. The City of Corona Department of Water and Power will identify the proposed recycled water facilities to be constructed to enhance the City's reclaimed water system. The project's HOA landscaped areas will be serve by two zones, the existing Zone 3 (1380' HWL) and the proposed Zone 3A (1625' HWL) water system. The project site will have two main connection point locations to the City's existing recycled water system. The first location at the intersection of Foothill Parkway and Border Avenue where it is proposed to construct a 12-inch pipeline from an existing 12-inch line in Foothill Parkway. This provides the water supply from Zone 3 recycled water system into the project site to serve the proposed Zone 3A HOA landscaped areas via a proposed Zone 3A Booster Pump Station having a firm pumping capacity of 1150 gpm. The booster pumps shall be a variable frequency drive type to decrease the wear and tear of the pumps and extend the life of the pumps. The second connection point is located north of Mabey Canyon Road which will serve the HOA landscaped areas north of Mabey Canyon (KWC Engineers).

Annexation Properties

Several properties, not part of the project described in this report, are part of the general plan amendment/annexation or study area. As part of the process the City of Corona requested that technical reports address additional properties within the annexation boundary. Annexation properties include: JHB Colony Investments (APN 275030006, 275040006, 275040011, 275040012, 275040015, 275050004, 275070003, and 275080010), Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009). According to the City of Corona no immediate development is planned for Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009) at this time.

II. STUDY AREA CONDITIONS

The following sections summarize the study area conditions. For purposes of this report, the term study area includes the proposed project construction limits and a surrounding 1,300-foot buffer (Figure 2).

Physical Conditions

Elevation of the assessment area ranges from a from a low of 1338± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1483± feet above msl in the southeastern portion of the assessment area. This represents an elevational change across the assessment area of 55± feet. The elevational change occurs between tops of steep hills and the bottoms of intervening drainages. Wardlow Wash, Mabey Canyon Wash and Unnamed Blue line stream channel flows west to northeast or west to east depending on the location in the landscape. Portions of the project site have been disturbed by past land uses. Adjacent land uses include residential housing to the north, east and west, with open space to the south.

The primary plant communities in the project area are characterized as Quercus agrifolia Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances.

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Definitions

Vegetation Communities

Vegetation habitats or communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within the community and the associated flora. The nomenclature for vegetation communities follows CDFW Vegetation Alliances of Western Riverside County, California.

Wildlife Habitats

Wildlife habitats differ from vegetation communities in that a wildlife habitat may contain several vegetation communities that are similar in structure but different in the plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat to impacts. In addition, the interaction of various wildlife species occurs between many different wildlife habitats. This becomes more evident where these habitats overlap in areas known as ecotones. These ecotones support a combination of species from two or more adjoining habitats that generally increases the number and diversity of species within these areas. Wildlife habitats encountered on the project site approximate the vegetation communities discussed is this report.

Vegetation

The project encompasses several vegetation community types. Vegetation communities currently present are characterized as Quercus agrifolia Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. The locations of the native plant communities have been generally the same over the years. The existing plant communities are described in more detail below.

Quercus agrifolia (Coast live oak woodland) Alliance

Coast live oak occurs as the dominant tree in the canopy. Poison oak is the dominant shrub in the understory. It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 5
Quercus agrifolia ON-SITE

California Sycamore Woodland Alliance

This riparian community on the proposed project site is composed primarily of sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Sycamores have well developed vegetative reproduction, giving the woodland a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in Mabey Canyon Wash.



FIGURE 6
CALIFORNIA SYCAMORE ON-SITE

Salix lasiolepis Alliance

This riparian community on the proposed project site is composed primarily of arroyo willow (*Salix lasiolepis*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Willows have well developed vegetative reproduction, giving the islands of habitat a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 7
SALIX LASIOLEPIS ON-SITE

***Baccharis salicifolia* (Mulefat thickets) Alliance**

A depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This early serial community is maintained by frequent flooding. Found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland, especially under heavy grazing. Mulefat scrub often occurs in pure stands. Secondary species vary regionally. This community is very limited on the project site, existing only in small areas of unnamed drainage, Mabey Canyon Wash and Wardlow Canyon Wash.



FIGURE 8
BACCHARIS SALICIFOLIA ON-SITE

Sage Scrub Alliances

California sage brush-purple sage

This series is often considered part of the coastal scrub, which is better thought of as a collection of series. This approach allows stands of composition, which can be considered, regardless of geographic location. Stands of this series differ from the California buckwheat series and White sage series in that California buckwheat and white sage are equally important. In addition, more chaparral species occur in stands of this series than in stands of the California buckwheat series or White sage series. Other sage scrub alliances noted on site: *Encelia californica* (California brittle bush scrub) Alliance, Artemisia californica - Eriogonum fasciculatum (California sagebrush – California buckwheat scrub) Alliance, and *Eriogonum fasciculatum* (California buckwheat scrub) Alliance.



FIGURE 9
SAGE SCRUB
ALLIANCES ON-SITE

Chaparral Alliances

Chamise-California buckwheat- white sage

Chamise occurs in many chaparral, coastal scrub, and tree series. Chamise cover is 30-60% and white sage cover is 30-60%. In some areas, stands of chamise mix with stands of coastal scrub forming a mosaic of different series [Black sage series, California buckwheat series, California sagebrush series, mixed sage series, Purple sage series, and White sage series]. Other chaparral alliances noted on site: *Rhus ovata* (Sugarbush chaparral) Alliance.



FIGURE 10
CHAPARRAL
ALLIANCES ON-SITE

California Annual Grassland Alliance

This habitat alliance consists of a dense to sparse cover of annual grasses with flowering culms .2-.5 m high. This habitat is often associated with numerous species of showy-flowered, native annual forbs, especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. This extensive series is composed of many alien and native annual species; composition varies among stands.



FIGURE 11
CALIFORNIA ANNUAL GRASSLAND ALLIANCE ON-SITE

***Eucalyptus* spp. Alliance (Eucalyptus)**

Non-native landscape species (Eucalyptus) are located immediately adjacent to the unnamed drainage and Mabey Canyon Wash proposed project area.

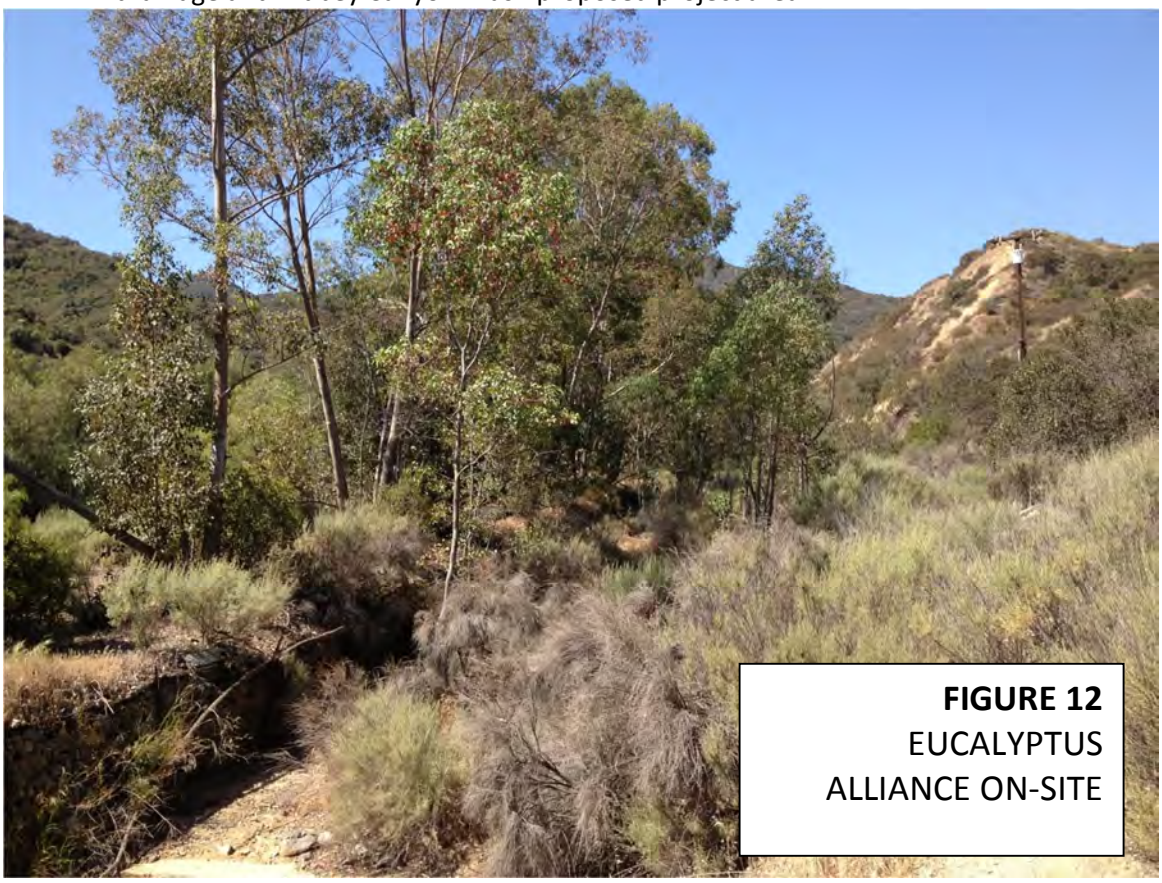


FIGURE 12
EUCALYPTUS
ALLIANCE ON-SITE

***Schinus* spp. Alliance (Pepper)**

Non-native landscape species (Pepper) are located immediately adjacent to Mabey Canyon Wash proposed project area.



FIGURE 13
SCHINUS ALLIANCE
ON-SITE

The major plant communities in the survey area are chaparral, sage scrub, and nonnative grasslands alliances. Adjacent to the urban areas, landscape species (Eucalyptus and Pepper trees) dominate. Habitat consists of dense chaparral (*Rhus ovata, Quercus agrifolia, Frangula californica*) on the northern slopes and coastal sage scrub (*Artemisia californica*, *Salvia mellifera, Salvia leucophylla*) on the dry south facing slopes. Scattered areas of sage scrub including California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), brittlebush (*Encelia farinosa*) and white sage (*Salvia apiana*) occur on the slopes and in the wash. Grasslands composed primarily of non-native species bromes *(Bromus* spp.), short-podded mustard (*Hirschfeldia incana*)*,* filaree (*Erodium* spp.), Russian thistle (*Salsola tragus*)*,* doveweed *(Croton setigerus*)*,* and deer weed (*Acmispon glaber*) occur throughout the project area. Drainage swells traverse the slopes. At the base of the swells, small tertiary drainages braid the area. Habitat within these drainages consists of chaparral and sage scrub species. No evidence of channel, bed, or banks exists in these areas.

The very northern tip of the project intersects with Wardlow Wash (blue-line stream). Most of the area in the northern portion drains towards Mabey Canyon Wash (blue-line stream). Mabey Canyon Wash, as it exists within the project area, is constrained into a 12' wide channel. One side of the channel banks are supported by used car parts and other metal objects. The other side is part of the dirt road bank. Near the eastern project border, the Wash enters into a large flood control basin. The basin controls flow into an existing stormwater conveyance systems located in the urban development area. In the middle of the project, the unnamed blue-line stream traverses from west to east. The unnamed blue-line stream (Unnamed Drainage) becomes a trapezoidal channel near Mangular Avenue and Chase Drive. It flows into Oak Hills flood control basin, which is outside of the project limits. The project as designed should not impact any vegetation found on the banks of either flood control basin. A small detention basin adjacent to Trudy Way has one willow tree and one oak tree. The project area has been impacted by off-road vehicles, bicycles and hikers. Dirt roads and trails criss-cross the project area, providing access for illegal trash disposal and off-road usage.

TABLE 1
HABITAT TYPE, ACREAGES AND IMPACTS

Habitat	Acreages on Project Site	Impact Acreages
Mulefat Scrub Alliance	0.14	0.14
Disturbed	0.07	0.07
Eucalyptus/Pepper	1.05	0.19
Mulefat	0.88	0
Chaparral	175.73	152.48
Sage Scrub	89.21	63.53
Grassland	0.28	0.28
Coast Live Oak	1.6	1.6
Sycamore Alliance	0.09	0.09
Willow Alliance	0.1	0.1
Streambed	1.76	1.76
Total Acreage	**270.91**	**220.24**

Annexation Areas

Annexation properties contain a similar mix of habitats to those of the proposed project site. Noted during our surveys were disturbed (graded, landscaped, agricultural, and developed), chaparral, and sage scrub alliances. Please see Figure 14.

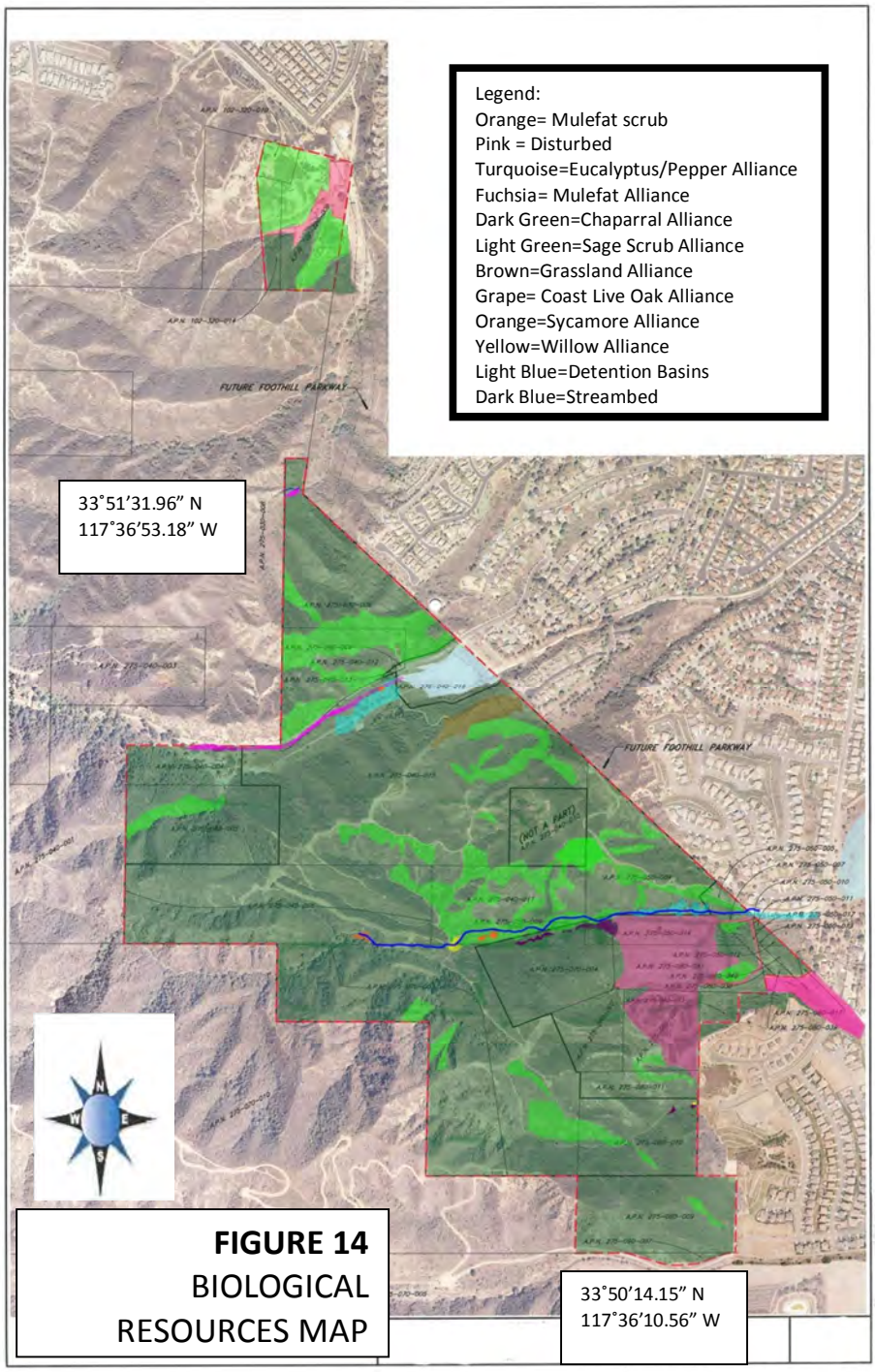


FIGURE 14
BIOLOGICAL RESOURCES MAP

III. FOCUSED PLANT SURVEYS

Plant Background

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2013), CNDDB (CNDDB 2013), and CalFlora (CalFlora 2013). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Sensitive plant surveys of the project area were conducted in April, May, June, and July 2013. This time period corresponds to the time during which most ephemeral spring annuals and herbaceous perennials, especially sensitive plant species, in Riverside County would be most detectable. Focused rare plant level surveys were conducted, and no sensitive plant species were located. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed.

A floral inventory of all species observed during the course of the surveys was also documented. Table 1 includes the special-status plant species in the Black Star Canyon and Corona South quadrangles.

TABLE 2

RARE, THREATENED OR ENDANGERED PLANTS IN BLACK STAR CANYON AND CORONA SOUTH QUADRANGLES

Scientific Name	Common Name	Fed Status	State Status	CNPS List
Pentachaeta aurea ssp. allenii	Allen's pentachaeta	None	None	1B.1
Astragalus brauntonii	Braunton's milk-vetch	Endangered	None	1B.1
Penstemon californicus	California beardtongue	None	None	1B.2
Nolina cismontana	chaparral nolina	None	None	1B.2
Abronia villosa var. aurita	chaparral sand-verbena	None	None	1B.1
Lepechinia cardiophylla	heart-leaved pitcher sage	None	None	1B.2
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	None	1B.2
Monardella hypoleuca ssp. intermedia	intermediate monardella	None	None	1B.3
Chorizanthe polygonoides var. longispina	long-spined spineflower	None	None	1B.2
Baccharis malibuensis	Malibu baccharis	None	None	1B.1
Dudleya multicaulis	many-stemmed dudleya	None	None	1B.2
Calochortus plummerae	Plummer's mariposa-lily	None	None	4.2
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None	None	4.3
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Candidate	Endangered	1B.1
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered	Endangered	1B.1
Phacelia keckii	Santiago Peak phacelia	None	None	1B.3
Hesperocyparis forbesii	Tecate cypress	None	None	1B.1
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	None	2.2

Legend

FE: Federally-listed as endangered
FT: Federally-listed as threatened
SCE: State candidate for listing as endangered
C: Candidate
SE: State-listed as endangered
ST: State-listed as threatened
SR: State rare

CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
CNPS 2= Rare or Endangered in California, More Common Elsewhere
CNPS 3= Need More Information
CNPS 4= Plants of Limited Distribution
CNPS New Threat Code extensions and their meanings: .1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened) .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

Table 2 documents the special-status plant species and their likelihood of occurrence on the proposed project site. Focused surveys were completed on April 21; May 12, 19, and 26; June 2, 9, 16, 23, 30; July 5, 13, 20, 26 and 28, 2013.

TABLE 3

SPECIAL STATUS PLANT SPECIES AND THEIR LIKIHOOD OF OCCURENCE

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/ Life Form	Status Onsite or Potential to Occur
Pentachaeta aurea ssp. allenii	Allen's pentachaeta	None	1B.1	Coastal scrub, Valley and foothill grassland	Suitable habitat; No potential found only in Orange County
Astragalus brauntonii	Braunton's milk-vetch	FE	1B.1	Chaparral, Closed-cone coniferous forest, Coastal scrub, Limestone, Valley and foothill grassland	Suitable habitat; Low potential
Penstemon californicus	California beardtongue	None	1B.2	Chaparral, Lower montane coniferous forest, Piñon and juniper woodlands	Suitable habitat; No potential
Nolina cismontana	chaparral nolina	None	1B.2	Chaparral, Coastal scrub	Suitable habitat; Medium potential
Abronia villosa var. aurita	chaparral sand-verbena	None	1B.1	Chaparral	Suitable habitat; Low potential
Lepechinia cardiophylla	heart-leaved pitcher sage	None	1B.2	Chaparral, Cismontane woodland, Closed-cone coniferous forest	Suitable habitat; Low potential
Calochortus weedii var. intermedius	intermediate mariposa-lily	None	1B.2	Chaparral, Coastal scrub, Valley and foothill grassland	Suitable habitat; High potential
Monardella hypoleuca ssp. intermedia	intermediate monardella	None	1B.3	Chaparral, Lower montane coniferous forest	Suitable habitat; Low potential
Chorizanthe polygonoides var. longispina	long-spined spineflower	None	1B.2	Chaparral, Coastal scrub, Meadow and seep, Ultramafic, Valley and foothill grassland	Suitable habitat; Low potential
Baccharis malibuensis	Malibu baccharis	None	1B.1	Chaparral, Cismontane woodland, Coastal scrub	Suitable habitat; No potential
Dudleya multicaulis	many-stemmed dudleya	None	1B.2	Chaparral, Coastal scrub, Valley and foothill grassland	Suitable habitat; Low potential
Calochortus plummerae	Plummer's mariposa-lily	None	4.2	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland	Suitable habitat; Low potential

Scientific Name	Common Name	Status Federal/ State	CNPS List	Primary Habitat Associations/ Life Form	Status Onsite or Potential to Occur
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	None	4.3	Chaparral, Coastal scrub	Suitable habitat; Low potential
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	C/SE	1B.1	Coastal scrub	Suitable habitat; Low potential
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	FE/SE	1B.1	Chaparral, Coastal scrub	Suitable habitat; Low potential
Phacelia keckii	Santiago Peak phacelia	None	1B.3	Chaparral, Closed-cone Pine Forest	Outside elevational range; No potential
Hesperocyparis forbesii	Tecate cypress	None	1B.1	Chaparral, Closed-cone coniferous forest	Outside elevational range; No potential
Pseudognaphalium leucocephalum	white rabbit-tobacco	None	2.2	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland	Suitable habitat; Medium potential
Romneya coulteri	Coulter's matilija poppy	None	4.2	Chaparral, Coastal scrub, Valley and foothill grassland	Suitable habitat; Present

Legend

FE: Federally-listed as endangered
FT: Federally-listed as threatened
SCE: State candidate for listing as endangered
C: Candidate
SE: State-listed as endangered
ST: State-listed as threatened
SR: State rare

CNPS List= California Native Plant Society
CNPS 1B= Rare or Endangered In California and Elsewhere
CNPS 2= Rare or Endangered in California, More Common Elsewhere
CNPS 3= Need More Information
CNPS 4= Plants of Limited Distribution
CNPS New Threat Code extensions and their meanings:
.1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Fairly endangered in California (20-80% occurrences threatened)
.3 – Not very endangered in California (<20% of occurrences threatened or no current threats known)

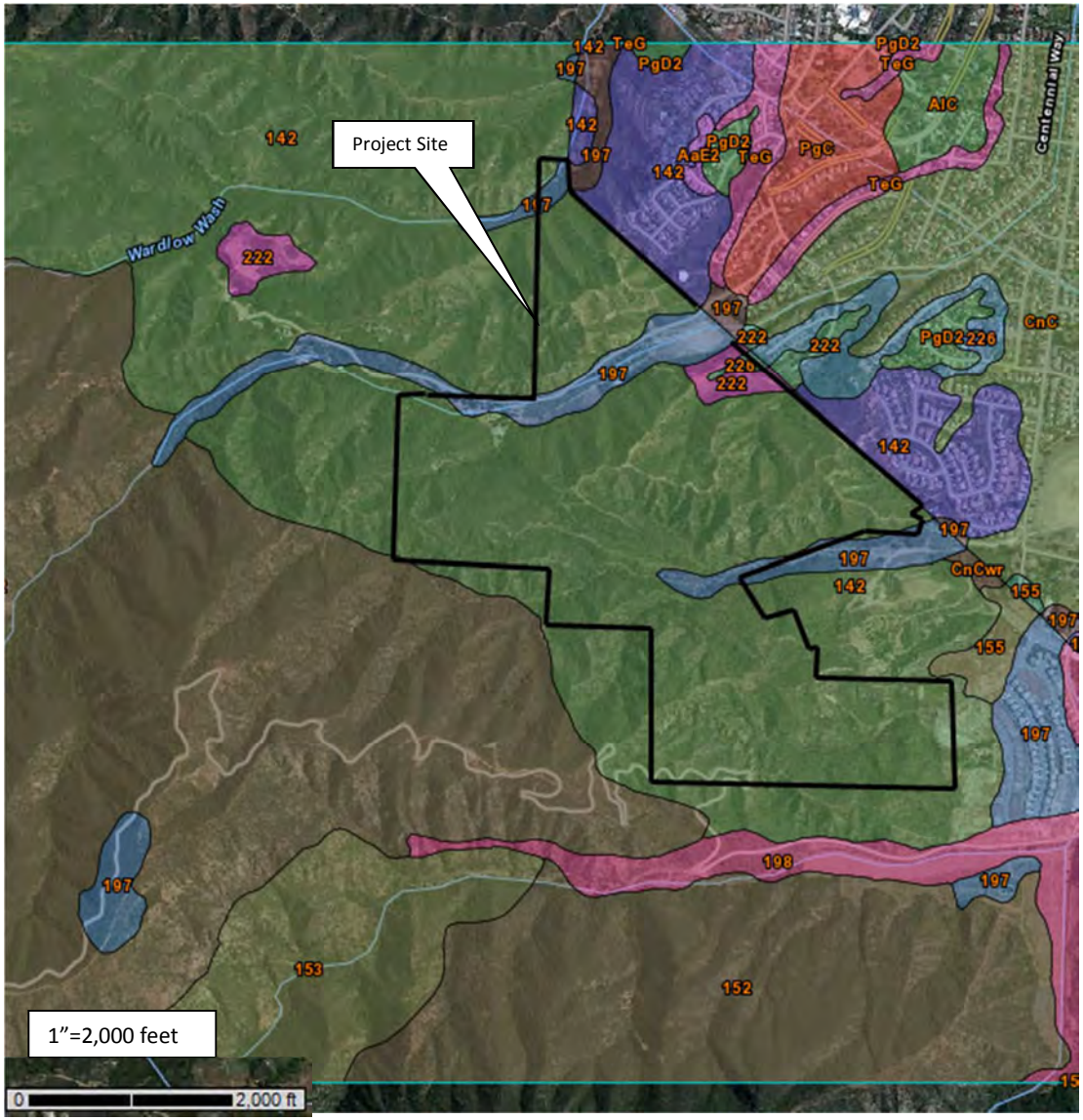
Soils

The soil series mapped for the area are described in Table 3. The soils found are similar in texture and color to those mapped, but were highly disturbed from grading activities. The soils were compacted and unstratified over the majority of the project site. The soils at soil pit locations did not meet the NTCHS criteria for hydric soils within project boundaries.

TABLE 3

SOIL SERIES MAPPED FOR THE AREA

Symbol	Name	Description
142	Cieneba sandy loam, 30-75% slopes, eroded	Steep to very steep soil consisting of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 30-75% eroded. Elevations range from 200-4000 ft. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mainly brush.
197	Soboba gravelly loamy sand, 0-5% slopes	Nearly level to gently sloping soil generally occurs as long, narrow areas along stream channels. Slopes are 0-5%. Elevations range from 50-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs cactus, brush and some trees.
222	Yorba gravelly sandy loam, 9-15% slopes	Strongly sloping soil generally occurs on terraces. Slopes are 9-15%. Elevations range from 100-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs, cactus, and some sagebrush.
226	Yorba cobbly sandy loam, 30-50% slopes	Strongly sloping soil generally occurs on terraces. Slopes are 30-50%. Elevations range from 100-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs, cactus, and some sagebrush.



Legend:
Pink- 222
Blue- 197
Dark Green- 226
Green- 142

FIGURE 15
SOILS MAP
Source: NRCS. 2013. Web Soil Survey

PLANT COMMUNITIES

Habitat Assessment

Gonzales Environmental Consulting LLC (GEC) conducted a habitat assessment for the species listed above. The approximate 270-acre site, plus a 600-foot buffer zone around the perimeter, was surveyed in 2005, 2006 and again in 2008. Focused surveys were completed in 2013, see Table 4. Surveys were conducted when the winds were less than 10 miles/hour, and when it was not raining.

TABLE 4
SURVEY SUMMARY

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time-Duration
April 21, 2013	62-78	0-5	Clear	None	6 AM- 4 PM/10 hours
May 12, 2013	56-78	0-4	Clear	None	6 AM – 4 PM/ 10 hours
May 19, 2013	64-73	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
May 26, 2013	51-75	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 2, 2013	52-72	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 3, 2013	50-70	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 9, 2013	55-85	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
June 16, 2013	59-85	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
June 23, 2013	59-80	0-4	Clear	None	5:30 AM-4 PM/10.5 hours
June 30, 2013	67-88	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 5, 2013	61-85	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 13, 2013	59-89	0-5	Clear	None	5:30 AM-4 PM/10.5 hours
July 20, 2013	64-86	0-1	Clear	None	5:30 AM-4 PM/10.5 hours
July 26, 2013	64-89	0-1	Clear	None	5:30 AM-4 PM/10.5 hours
July 28, 2013	73-78	0-1	Clear	None	5:30 AM-4 PM/10.5 hours

The habitat assessment followed the recommendations of the California Native Plant Society (Nelson 1994). The habitat assessment was performed to determine the Site's suitability to support the species listed above. Several key indicators were used in determining the Site's potential to support the species. Key indicators included the presence of suitable habitat, moisture and soil conditions.

The following indicators observed on-site were:

- Appropriate habitat
- Appropriate moisture conditions (2008 only)

The results of the habitat assessment concluded that the Site contains suitable habitat for Braunton's milk-vetch, Chaparral nolina, Chaparral sand-verbena, Intermediate mariposa-lily, Intermediate monardella, Long-spined spineflower, Many-stemmed dudleya, Plummer's mariposa lily, Robinson's pepper-grass, San Fernando Valley spineflower and White rabbit-tobacco.
In addition, not listed in the CNDDB sensitive plant species is Coulter's Matilija poppy (*Romneya coulteri*) a CNPS 4.2 plant.

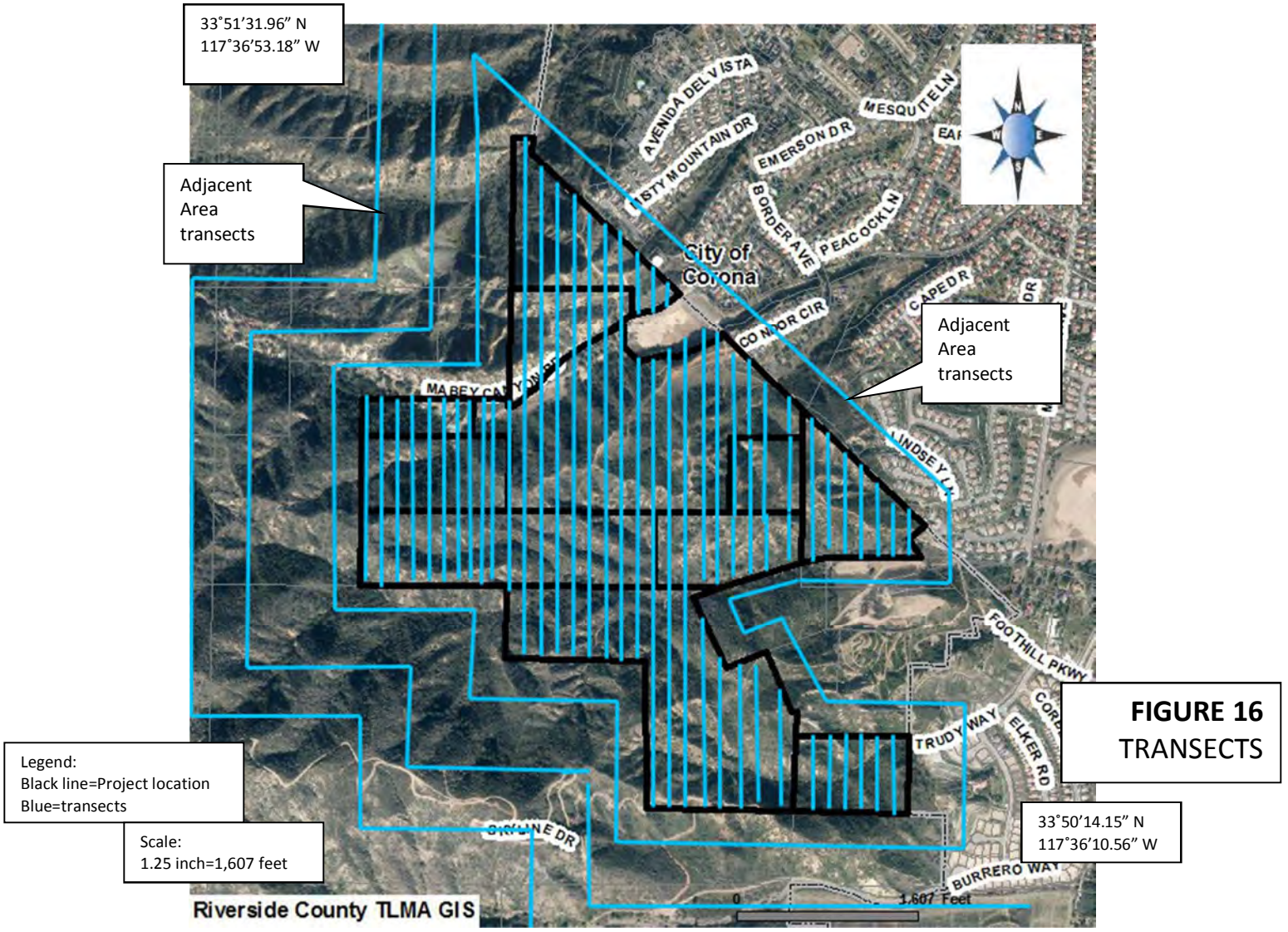


FIGURE 16
TRANSECTS

Please note that this is an approximate locality map, and should not be used for calculations

IV. SURVEY METHODLOGY

For the development of this document, a systematic approach was taken to identify and characterize biological resources, including vegetation community types, and special status plant species in the project area. The biological resource study area is defined as the area either directly or indirectly impacted by the project. Records of known occurrences were reviewed to identify those plant and wildlife species that may occur in the project area. Those records were then compared with federal or state listed threatened, endangered, or special status species. Vegetation mapping; and surveys for special status plant species for the project were conducted. Methods that were used during these surveys are summarized by resource type in the following sections.

Records Search

Preliminary investigations included review of information obtained from the USFWS, and CDFG; literature searches; examination of aerial photographs; and database searches including California Native Plant Society (CNPS), the California Natural Diversity Data Base (CNDDB) records, and sensitive species accounts for Riverside County. Reviewed environmental documents included Environmental Impact Reports prepared for other projects in the vicinity. A list of special status species was compiled, including all species in the project area that were:

Listed as endangered or threatened, proposed for listing, or candidates for listing under the Federal Endangered Species Act (FESA);
Listed as endangered or threatened, or candidates for listing under the California Endangered Species Act (CESA);
Included in one of the CDFG publications on species of special concern;
"Fully protected" by the State of California;
Included in the CNPS compilation; or
Identified as plants meeting the definition of rare or endangered under CEQA.

The information provided by these agencies included both regional and site-specific data on sensitive species.

Biological Surveys

Existing biological data was collected using Personal Computers (PCs) and Geographic Positioning System (GPS). This allowed for data to be collected in real time. Data layers uploaded onto these PCs included recent aerial photography, and topographic contours. Biological data was mapped onto the aerial photograph layers as polygon, line, and point attributes.

Checklists of biological information were uploaded onto the PCs, which allowed us to accurately label all data points, ensure consistency, and keep a running electronic account of all species encountered during the surveys.

Vegetation Methods

Aerial photography and digital vegetation maps were reviewed to determine potential community types within the project area. Preliminary ground-truthing surveys concurred with digital vegetation maps, and additional surveys were performed to accurately define the community types and boundaries.

Special Status Rare Plant Species Survey Methods

Information on special status rare plant species within the project area was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2013), CNDDB (CNDDB 203), and CalFlora (CalFlora 2013). Maps depicting all known sensitive plant species locations within the project area were produced to aid in determining the target species for survey. General reconnaissance and habitat assessment surveys were completed to determine habitat suitability for listed species and special status plants. Suitable habitat for listed species and special status species was determined by the presence of specific habitat elements.

Sensitive plant surveys of the project area were conducted in April, May, June and July, 2013. This timing corresponds to the time during which most ephemeral spring annuals and herbaceous perennials, especially sensitive plant species, in western Riverside County would be most detectable. Focused rare plant level surveys were conducted, all sensitive plant species encountered were mapped, and a visual estimation (due to the small size of the plant) of their population size was documented. Sensitive species that were not observed due to unusual climate patterns but potentially could occur within the project area were also documented. The likelihood of these species occurrence (expected, high, moderate, low, or not expected) was also assessed.

A floral inventory of all species observed during the course of the surveys was also documented. It should be noted that, 2013 is considered a below normal rainfall year.

Surveys

A complete floristic survey of the project area, as required in a complete CEQA analysis, was conducted in April and May 2013. Focused plant surveys were conducted when most of the plants were blooming in the area. We made repeated trips to the project site to determine the bloom time for the microhabitat in the area, prior to beginning focused surveys. The plant surveys followed protocols recommended in the USFWS, CDFG, and CNPS guidelines for rare plant surveys and would also follow the standards set forth in the Western Riverside MSHCP. All plants encountered would be identified to a level necessary to ensure detection of covered or special status species.

This methodology is consistent with recommendations by the California Native Plant Society (Nelson 1994) because it provides more than a "reasonable coverage" of all habitat types and was "floristic in nature." Systematic field techniques in all habitats of the site (transects) were employed to ensure thorough coverage of potential impact areas that is sufficient to provide comprehensive reporting, All plant species seen were recorded in field notes.

Transects for botanical assessment surveys were conducted to assess the presence of special status wildlife species and habitats within the project area. Please see Figure 16.

Even though suitable habitat for Braunton's milk-vetch, Chaparral nolina, Chaparral sand-verbena, Intermediate mariposa-lily, Intermediate monardella, Long-spined spineflower, Many-stemmed dudleya, Plummer's mariposa lily, Robinson's pepper-grass, San Fernando Valley spineflower and White rabbit-tobacco is located on the project site, we did not find any of these plant species on the site.

Fourteen populations, with numerous subpopulations, of Coulter's Matilija poppy (*Romneya coulteri*) were found on the project site. Results of the surveys in 2008 found approximately 526 Coulter's Matilija poppy plants. The distribution of the plants was found in the high flow level of the active unnamed drainage. Plants were also found on the fire (dirt) road in the middle of the project. The survey year (2008) was considered a low-normal rainfall year.

Table 5
Point Data, Population Estimates, and Areal Extent of *R. Coulteri* 2008

Latitude (N)	Longitude (W)	Location	Population Size	Areal Extent of Population l x w (ft)
33504071	117362028	001ROCOTG	5	100 x 15
33504110	117362284	002ROCOTG	15	25 x 6
33504086	117362439	003ROCOTG	85	55 x 25
33504002	117362641	004ROCOTG	76	200 x 50
33503993	117362781	005ROCOTG	51	200 x 65
33503934	117362918	006ROCOTG	33	125 x 75
33503919	117363148	007ROCOTG	45	150 x 66
33503847	117363307	008ROCOTG	10	100 x 9
33503781	117363519	009ROCOTG	15	150 x 25
33503757	117363674	010ROCOTG	25	300 x 35
33503811	117363613	011ROCOTG	31	75 x 36
33504104	117363735	012ROCOTG	75	185 x 55
33504702	117363793	013ROCOTG	57	225 x 68
33503702	117365536	014ROCOTG	3	20 x 3

Table6

Point Data, Population Estimates, and Areal Extent of *R. Coulteri* 2013

Latitude (N)	Longitude (W)	Location	Population Size	Areal Extent of Population l x w (ft)
33504071	117362028	001ROCOTG	2	100 x 15
33504110	117362284	002ROCOTG	7	25 x 6
33504086	117362439	003ROCOTG	35	55 x 25
33504002	117362641	004ROCOTG	43	200 x 50
33503993	117362781	005ROCOTG	24	200 x 65
33503934	117362918	006ROCOTG	12	125 x 75
33503919	117363148	007ROCOTG	22	150 x 66
33503847	117363307	008ROCOTG	5	100 x 9
33503781	117363519	009ROCOTG	7	150 x 25
33503757	117363674	010ROCOTG	12	300 x 35
33503811	117363613	011ROCOTG	15	75 x 36
33504104	117363735	012ROCOTG	30	185 x 55
33504702	117363793	013ROCOTG	21	225 x 68
33503702	117365536	014ROCOTG	1	20 x 3

Fourteen populations, with numerous subpopulations, of Coulter's Matilija poppy (*Romneya coulteri*) were found on the project site. Results of the surveys in 2013 found approximately 236 Coulter's Matilija poppy plants. The distribution of the plants was found in the high flow level of the active unnamed drainage. Plants were also found on the fire (dirt) road in the middle of the project. The survey year (2013) was considered a low rainfall year.

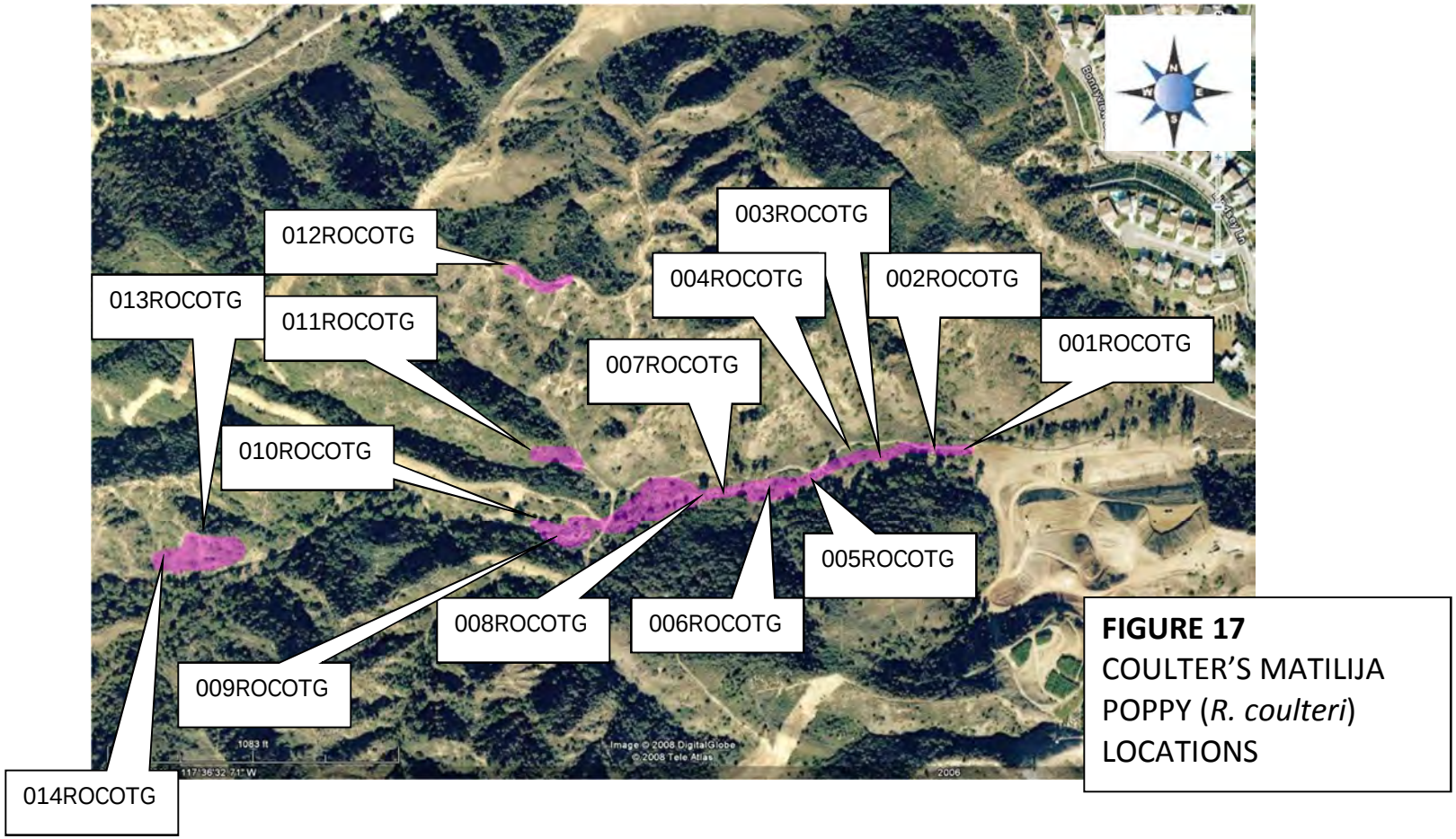


FIGURE 17
COULTER'S MATILIJA POPPY (*R. coulteri*) LOCATIONS

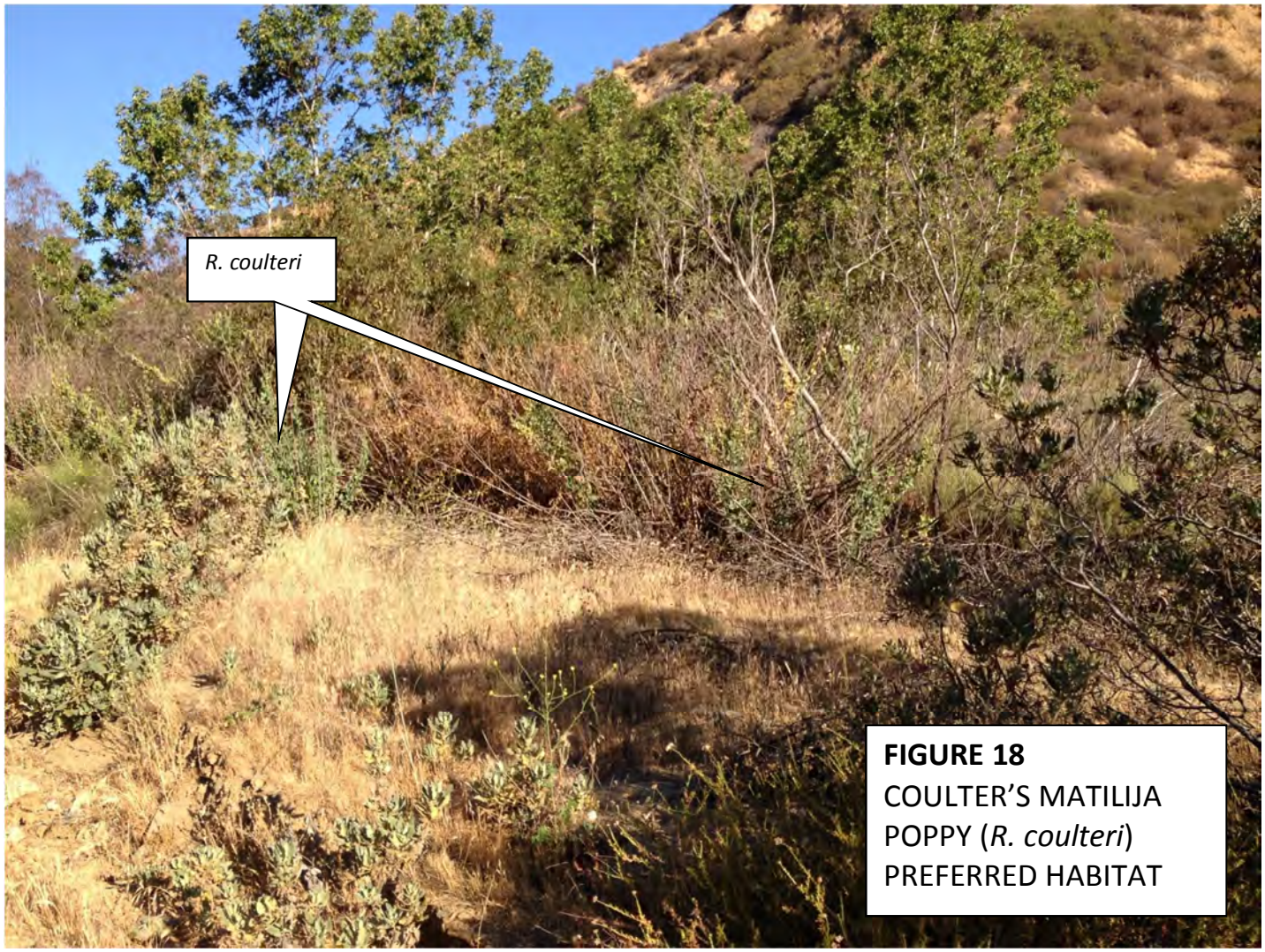


FIGURE 18
COULTER'S MATILIJA POPPY (*R. coulteri*) PREFERRED HABITAT

The type of microhabitats found for R. coulteri have sandy to coarse sandy substrates within high flow level of the active unnamed drainage. All of the R. coulteri found on the project site are located within disturbed areas (either by flow or by fire management).

The purpose of the botanical survey was to determine the presence or absence of sensitive species and to evaluate the effects of the proposed project conceptual design on these resources. This survey for sensitive plants, followed survey methodology recommended by the California Native Plant Society (Nelson 1994) and USFWS (USFWS 1996). In particular, the survey was "floristic in nature" and provided a "reasonable coverage" of all habitat types on the site. The field survey consisted of a series of transects to assure sufficient coverage of habitat types. All species seen were identified in the field or collected for identification or confirmation. This information is required to determine whether and in what ways site development could result in adverse effects upon botanical resources.

No species identified as occurring on the project site are listed as threatened or endangered. GEC has concluded that the proposed action will have low potential to impact threatened or endangered plant species, as the project area may be populated during the interim time between surveys and project construction.

Recommendations

Based on the identified species on the Site and immediately adjacent to the Site, the following mitigation measures are recommended.

Coulter's Matilija Poppy

Impacts on Coulter's Matilija poppy should be avoided, if possible. Any impacts to this species would be considered adverse, however not significant under CEQA due to the large distribution and number of locations of this species.

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Appendix A
Plant and Animal Compendium

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	DIVISION ANTHOPHYTA	**FLOWERING PLANTS**			
	Class Dicotyledones	**Dicots**			
	FAMILY ADOXACEAE	**ELDERBERRY FAMILY**			
	Sambucus nigra ssp. caerulea	Blue Elderberry	U/R	U/R	FACU
	FAMILY ANACARDIACEAE	**SUMAC FAMILY**			
	Malosma laurina	Laurel Sumac	U/R	U/R	
	Rhus integrifolia	Lemonadeberry	U	U	---
	Rhus ovata	Sugarbush	U/R	U/R	---
X	*Schinus molle*	Peruvian Pepper Tree	U	U	---
	Toxicodendron diversilobum	Poison Oak	U/R	U/R	---
	FAMILY PINACEAE	**PINE FAMILY**			
X**	*Pinus jeffreyi*	Jeffrey Pine	U	U	---
	FAMILY AMARANTHACEAE	**AMARANTH FAMILY**			
X	*Amaranthus albus*	Tumbleweed	U/R	U	FACU
	FAMILY APIACEAE	**CARROT FAMILY**			
X	*Foeniculum vulgare*	Sweet fennel			---
	FAMILY APOCYNACEAE	**MILKWEED FAMILY**			
	Asclepias fascicularis	Narrow-leaf Milkweed	U/R	---	FAC
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**			
	Ambrosia acanthicarpa	Annual Bur-sage	U/R	U/R	---
	Ambrosia confertiflora	Burrweed	U/R	U/R	---
	Ambrosia psilostachya	Western Ragweed	R	---	FACU
	Artemisia californica	California Sagebrush	U	U	---
	Baccharis pilularis	Chaparral Broom	R	R	---
	Baccharis salicifolia	Mule Fat	R	R	FAC
X	*Centaurea melitensis*	Tocalote	U	U/R	---
X	*Cirsium vulgare*	Bull Thistle	U/R	U/R	FACU
	Corethrogyne filaginifolia	Common Sandaster	U	R	---
	Deinandra fasciculata	Clustered Moonshine-Daisy	U	U	FACU
	Encelia californica	California Brittlebush	U/R	U/R	---
X	*Erigeron bonariensis*	Flax-leaved Horseweed	R	---	---
	Erigeron canadensis	Horseweed	U/R	U/R	FAC
X	*Hedypnois cretica*	Hedyponois	U/R	U/R	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	Helianthus annuus	Common Sunflower	U/R	U	FACU
	Heterotheca grandiflora	Telegraph Weed	U	U	---
	Solidago californica	Oreja de liebre	U	U	---
	FAMILY BORAGINACEAE	**BORAGE FAMILY**			
	Amsinckia intermedia	Common Fiddleneck	U	U	---
	Amsinckia menziesii	Small Flowered Fiddleneck	U	U	---
	Cryptantha intermedia	Cryptantha	U	U	---
	Eriodictyon crassifolium	Thick-leaved Yerba Santa	U	U	---
	Phacelia cicutaria	Caterpillar Phacelia	U	U	---
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**			
	Brassica nigra	Black Mustard	---	U	---
	Brassica rapa	Field Mustard	---	R	FACU
X	*Hirschfeldia incana*	Short-pod Mustard	U/R	U/R	---
X	*Sisymbrium irio*	London Rocket	U		---
	FAMILY CACTACEAE	**CACTUS FAMILY**			
	Cylindropuntia californica	California Cholla	U	U	---
	Opuntia littoralis	Western Prickly Pear	U	U	---
	FAMILY CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**			
	Lonicera subpicata	Southern Honeysuckle	U	U	---
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**			
X	*Atriplex semibaccata*	Australian Saltbush	U	---	FAC
X	*Chenopodium album*	Pigweed	U	U	FACU
X	*Salsola tragus*	Prickly Russian Thistle	U/R	U/R	FACU
	FAMILY CONVOLVULACEAE	**MORNING-GLORY FAMILY**			
X	*Convolvulus arvensis*	Bindweed	U/R	---	---
	Cuscuta californica	Chaparral Dodder	U	U	---
	FAMILY CRASSULACEAE	**STONECROP FAMILY**			
	Crassula connata	Sand Pygmyweed	U	U	FAC
	FAMILY CUCURBITACEAE	**SQUASHES, MELONS & GOURDS FAMILY**			
	Cucurbita palmata	Coyote Gourd	U	---	---
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**			
	Chamaesyce albomarginata	Rattlesnake Weed	U	U	---
X	*Chamaesyce maculata*	Spotted Spurge	U	U	UPL
	Croton setigerus	Dove Weed	U	---	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
X	*Ricinus communis*	Castor Bean	R	R	FACU
	FAMILY FABACEAE	**PEA FAMILY**			
	Acmispon glaber	Deerweed	U	U	---
	Lupinus truncatus	Collared Annual Lupine	U	U	---
	Lathyrus vestitus var. *alefeldii*	San Diego Pea	U	U	---
X	*Medicago sativa*	Alfalfa	---	U	---
X	*Melilotus albus*	White Sweetclover	U	U	---
X	*Melilotus indicus*	Annual Yellow Sweetclover	U	U	FACU
	FAMILY FAGACEAE	**OAK FAMILY**			
	Quercus agrifolia	Coast Live Oak	U/R	U/R	---
	FAMILY GERANIACEAE	**GERANIUM FAMILY**			
X	*Erodium botrys*	Long-beaked Filaree	U	U	---
X	*Erodium cicutarium*	Red-stemmed Filaree	U	U/R	---
	FAMILY GROSSULARIACEAE	**CURRANT FAMILY**	U/R	U/R	---
	Ribes speciosum	Fushia-flowered Gooseberry			
	FAMILY LAMIACEAE	**MINT FAMILY**			
X	*Marrubium vulgare*	Horehound	U	U/R	FACU
	Salvia apiana	White Sage	U/R	U/R	---
	Salvia columbariae	Chia Sage	U	U	---
	Salvia leucophylla	Purple Sage	U/R	U/R	---
	Salvia mellifera	Black Sage	U/R	U/R	---
	FAMILY MALVACEAE	**MALLOW FAMILY**			
X	*Malacothamnus densiflorus*	Yellow Bushmallow	U/R	U	---
	FAMILY MELANTHIACEAE	**PERENNIAL LILY FAMILY**			
	Toxicoscordion fremontii	Fremont's Star Lily	U	U	---
	FAMILY MONTIACEAE	**PURSLANE FAMILY**			
	Calandrinia ciliata	Red Maids	U	U	FACU
	Claytonia perfoliata	Miner's Lettuce	U	U	FAC
	FAMILY MYRTACEAE	**MYRTLE FAMILY**			
X	*Eucalyptus citriodora*	Lemon Scented Gum	R/U	R/U	---
X	*Eucalyptus polyanthemos*	Silver Dollar Gum	R	R	---
X	*Eucalyptus rudis*	Desert Gum	U	U	---
	FAMILY OLEACEAE	**OLIVE FAMILY**			
	Fraxinus velutina	Velvet Ash	R	R	FAC

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**			
	Epilobium canum	California Fuchsia	R	R	---
	FAMILY PAPAVERACEAE	**POPPY FAMILY**			
	Eschscholzia californica	California Poppy	U/R	U/R	---
	Romneya coulteri	Coulters Matilija Poppy***	U/R	U/R	---
	FAMILY PHRYMACEAE	**LOPSEED FAMILY**			
	Mimulus aurantiacus	Bush Monkeyflower	U	U	
	FAMILY PLATANACEAE	**SYCAMORE FAMILY**			
	Platanus racemosa	California Sycamore	R	R	FACW
	FAMILY POLEMONIACEAE	**PHLOX FAMILY**			
	Gilia angelensis	Angel Gilia	U	U	---
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**			
	Eriogonum fasciculatum	California Buckwheat	U	U	---
	FAMILY RANUNCULACEAE	**CLEMATIS FAMILY**			
	Clematis lasiantha	Chaparral clematis	U	U	---
	FAMILY RHAMNACEAE	**BUCKTHORN FAMILY**			
	Frangula californica	California Coffeeberry	U/R	U/R	---
	FAMILY ROSACEAE	**ROSE FAMILY**			
	Adenostoma fasciculatum	Chamise	U	U	---
	Heteromeles arbutifolia	Toyon	U	U	---
	FAMILY SALICACEAE	**WILLOW FAMILY**			
	Populus fremontii	Fremont Cottonwood	---	R	FAC
	Salix gooddingii	Goodding's Willow	---	R	FACW
	Salix lasiandra	Pacific Willow	R	R	FACW
	Salix lasiolepis	Arroyo Willow	R	R	FACW
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**			
	Datura wrightii	Jimson Weed	R	U/R	UPL
X	*Nicotiana glauca*	Tree Tobacco	R	R	FAC
	Solanum douglasii	Douglas' Nightshade	R	R	FAC
	FAMILY URTICACEAE	**NETTLE FAMILY**			
	Urtica dioica ssp. *holosericea*	Hoary Nettle	R	R	FAC
	Class Monocotyledones	**Monocots**			
	FAMILY AGAVACEAE	**AGAVE FAMILY**			
	Hesperoyucca whipplei	Chaparral Yucca	U	U	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY LILIACEAE	**LILY FAMILY**			
	Calocortus splendens	Splendid Mariposa Lily	---	U	---
	FAMILY POACEAE	**GRASS FAMILY**			
X	*Avena barbata*	Slender Wild Oat	U	U	---
X	*Avena fatua*	Common Wild Oats	U/R	U/R	---
X	*Bromus diandrus*	Ripgut Grass	U	U	---
X	*Bromus hordeaceus*	Soft Chess	U	U	FACU
X	*Bromus madritensis* ssp. *rubens*	Foxtail Chess	U	U	---
X	*Echinochloa crus-galli*	Common Barnyard-grass	U	U	FAC
	Elymus condensatus	Giant Wild Rye	U	U	---
X	*Festuca myuros*	Rattail	U	U	---
X	*Hordeum murinum ssp. leporinum*	Hare Barley	U	U	FACU
	Leptochloa fusca	Mexican Sprangletop	R	R	FACW
	Melica imperfecta	Coast Range Melic	U	U	---
	Muhlenbergia rigens	Deergrass	U	U	---
X	*Schismus barbatus*	Mediterranean Schismus	U	U	---
	Stipa coronata	Crested Needle grass	U	U	---
	Stipa lepida	Foothill Needle grass	U	U	---
	FAMILY THEMIDACEAE	**BRODIAEA FAMILY**			
	Dichelostemma capitatum	Wild Hyacinth	---	U/R	---

* = U- Upland habitats (chaparral, sage scrub, grasslands); R-Riparian Habitats (oak woodland, willow, sycamore, mulefat).
** = Surveys conducted by GEC in past years
*** = Rare plant
X** = Native used as landscape species

Wetland Indicator Status:

The following symbols are used to indicate the wetland indicator status of plant species identified onsite, if any.

OBL Obligate: under natural conditions, occurs almost always (estimated probability > 99%) in wetlands.

FACW Facultative Wetland: usually occurs in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.

FAC Facultative: equally likely to occur (estimated probability 34-66%) in wetlands or non-wetlands.

FACU Facultative Upland: usually occur in non-wetlands but occasionally (estimated probability 1-33%) found in wetlands.

UPL Obligate Upland: occur in wetlands in another region, but occur almost always (estimated probability > 99%) under natural conditions in non-wetlands in the region specified.

NI or --- No Indicator Status: was recorded for those species for which sufficient information was not available to determine an indicator status or that were not considered by the Regional Panel.

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (2)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	---
FAMILY PHRYNOSOMATIDAE	**SPINY LIZARD FAMILY**			
Sceloporus occidentalis longipes	Great Basin fence lizard	X	X	---
CLASS AVES	**BIRDS (62)**			
FAMILY ODONTOPHORIDAE	**QUAIL**			
Callipepla californica	California Quail	X	X	
FAMILY ACCIPITRIDAE	**BUTEOS, KITES AND HAWKS**			
Accipiter cooperii	Cooper's Hawk	X	X	CSC
Buteo jamaicensis	Red-tailed Hawk	X	X	--
FAMILY COLUMBIDAE	**DOVES AND PIGEONS**			
Columba livia	*Rock Pigeon	X		--
Zenaida asiatica	White-winged Dove	X		--
Zenaida macroura	Mourning Dove	X	X	--
FAMILY TYTONIDAE	**BARN AND BAY OWLS**			
Tyto alba	Barn owl	X	X	--
FAMILY STRIGIDAE	**TRUE OWLS**			
Megascops kennicottii	Western Screech-Owl	X	X	--
Bubo virginianus	Great Horned Owl	X	X	--
FAMILY APODIDAE	**SWIFTS**			
Chaetura vauxi	Vaux's Swift	X	---	
Aeronautes saxatalis	White-throated Swift	X	---	
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	Black-chinned Hummingbird	X		--
Calypte anna	Anna's Hummingbird	X	X	--
Calypte costae	Costa's Hummingbird	X		--

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY CUCULIDAE	**CUCKOOS, ANIS AND ROADRUNNERS**			
Geococcyx californianus	Greater roadrunner	X	X	
FAMILY PICIDAE	**WOODPECKERS AND FLICKERS**			
Picoides nuttallii	Nuttall's Woodpecker	X		
Picoides pubescens	Downy Woodpecker	---	X	
Colaptes auratus	Northern Flicker	X	---	
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	X	X	
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific-slope Flycatcher	---	X	
Myiarchus cinerascens	Ash-throated Flycatcher	X	---	
Sayornis nigricans	Black Phoebe	X	X	
Sayornis saya	Say's Phoebe	X	X	
Tyrannus verticalis	Western Kingbird	X	---	
Tyrannus vociferans	Cassin's Kingbird	X	X	
FAMILY CORVIDAE	**CROWS AND RAVENS**			
Corvus brachyrhynchos	American Crow	---	X	
Corvus corax	Common Raven	X	---	
Aphelocoma californica	Western Scrub Jay	X	X	
FAMILY ALAUDIDAE	**LARKS**			
Eremophila alpestris	Horned Lark	X	---	WL
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Hirundo rustica	Barn Swallow	---	X	
Petrochelidon pyrrhonota	Cliff Swallow	---	X	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	X	---	
Tachycineta bicolor	Tree Swallow	---	X	
Tachycineta thalassina	Violet-green Swallow	---	X	
FAMILY PARIDAE	**CHICKADEE**			
Baeolophus inornatus	Oak Titmouse	---	X	
FAMILY AEGITHALIDAE	**BUSHTITS AND LONG-TAILED TITS**			
Psaltriparus minimus	Bushtit	X	X	
FAMILY TROGLODYTIDAE	**WRENS**			
Salpinctes obsoletus	Rock Wren	X	X	
Thryomanes bewickii	Bewick's Wren	X	X	

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY SYLVIIDAE	**OLD WORLD WARBLERS**			
Chamaea fasciata	Wrentit			
FAMILY TURDIDAE	**THRUSHS, SOLITAIRES AND BLUEBIRDS**			
Sialia mexicana	Western Bluebird	X	X	
FAMILY MIMIDAE	**MIMIC THRUSHES, OR MIMIDS**			
Mimus polyglottos	Northern Mockingbird	X	X	
Toxostoma redivivum	California Thrasher	X	X	
FAMILY STURNIDAE	**STARLINGS AND ALLIES**			
Sturnus vulgaris	*European Starling	X	X	
FAMILY PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens	Phainopepla	X	X	
FAMILY PARULIDAE	**WARBLERS**			
Geothlypis tolmiei	MacGillivray's Warbler	X	X	
Oreothlypis celata	Orange-crowned Warbler	---	X	
FAMILY EMBERIZIDAE	**SPARROWS AND TOWHEES**			
Aimophila ruficeps	Rufous-crowned Sparrow	---	X	
Chondestes grammacus	Lark Sparrow	---	X	
Melozone crissalis	California Towhee	X	X	
Melospiza melodia	Song Sparrow	X	X	
Pipilo maculatus	Spotted Towhee	---	X	
Spizella atrogularis	Black-chinned Sparrow	---	X	
Zonotrichia leucophrys	White-crowned Sparrow	X	X	
FAMILY CARDINALIDAE	**CARDINALS AND BUNTINGS**			
Passerina amoena	Lazuli Bunting	X	X	
Piranga ludoviciana	Western Tanager	X	X	
FAMILY ICTERIDAE	**BLACKBIRDS AND ALLIES**			
Agelaius phoeniceus	Red-winged Blackbird	---	X	
Icterus cucullatus	Hooded Oriole	---	X	
Molothrus ater	Brown-headed Cowbird	---	X	
FAMILY FRINGILLIDAE	**NEW WORLD SEEDEATERS**			
Haemorhous mexicanus	House Finch	X	X	
Spinus lawrencei	Lawrence's Goldfinch	X	X	
Spinus tristis	American Goldfinch	X		
FAMILY PASSERIDAE	**OLD WORLD SPARROWS**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Passer domesticus	*House Sparrow	X	X	
CLASS MAMMALIA	**MAMMALS (12)**			
FAMILY DIDELPHIDAE	**OPOSSUM**			
Didelphis virginiana	Virginia Opossum	X	---	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**			
Canis latrans	Coyote	X	X	
Canis lupus familiaris	Domestic Dog	X	X	
Urocyon cinereoargenteus	Gray Fox	X	---	
FAMILY PROCYONIDAE	**RACCOONS AND RINGTAILS**			
Procyon lotor	Raccoon	X	---	
FAMILY SCIURIDAE	**SQUIRRELS**			
Spermophilus beecheyi	California Ground Squirrel	X	X	
FAMILY GEOMYIDAE	**POCKET GOPHERS**			
Thomomys bottae	Southern Pocket Gopher	---	X	
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	---	X	CSC
Sylvilagus audubonii	Cottontail	X	X	
FAMILY FELIDAE	**CATS**			
Felis catus	Domestic cat	X	---	
Lynx rufus	Bobcat	X	---	
Puma concolor	Mountain Lion	X	---	
INVERTEBRATES				
CLASS INSECTA	**INSECTS (22)**			
FAMILY CERCOPOIDEA	**SPITTLE BUGS**			
Prosapia bicincta	Two-Lined Spittle Bug	X	X	
FAMILY APIDAE	**HONEY BEES**			
Apis mellifera	Honey Bee	---	X	
FAMILY RIODININAE	**METALMARKS**			
Apodemia virgulti	Mormon Metalmark	X	X	
FAMILY POLYOMMATINAE	**BLUE GOSSAMER-WINGED BUTTERFLIES**			
Brephidium exilis	Pygmy Blue Butterfly	---	X	
FAMILY PENTATOMIDAE	**STINK BUGS**			
Chlorochroa sayi	Say's Stinking Bug	---	X	
FAMILY COLIADINAE	**SULPHER BUTTERFLIES**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Colias eurytheme	Orange Sulpher	---	X	
FAMILY SCARABAEIDAE	**SCARAB BEETLE**			
Cotinus mutabilis	Green Fruit Beetle	X	X	
FAMILY TENEBRIONIDAE	**DARKLING BEETLES**			
Eleodes acutus	Stink beetle	X	X	
FAMILY APHIDIDAE	**APHIDS**			
Toxoptera aurantii	Aphids	---	X	
FAMILY CULICIDAE	**MOSQUITOES**			
Culex quinquefasciatus	Mosquito	---	X	
FAMILY FORFICULIDAE	**EARWIGS**			
Forficula auricularia	European Earwigs	---	X	
FAMILY BOMBYLIIDAE	**ROBBER FLIES**			
Mallophora fautrix	Robber fly	X	X	
FAMILY MUSCIDAE	**HOUSE FLY**			
Musca domestica	Common House Fly	X	X	
FAMILY PAPILIONIDAE	**SWALLOWTAIL**			
Papilio rutulus	Western Tiger Swallowtail Butterfly	---	X	
FAMILY POMPILIDAE	**SPIDER WASPS**			
Pepsis chrysothymus	Tarantula Hawk	X	X	
FAMILY PIERIDAE	**CABBAGE BUTTERFLIES**			
Pieris protodice	Common White Butterfly	X	X	
Pieris rapae	Cabbage White		X	
FAMILY FORMICIDAE	**HARVESTER ANT**			
Pogonomyrmex californicus	California Harvester Ant	X	X	
FAMILY VESPIDAE	**SOCIAL WASP**			
Polistes excaimans	Paper wasp	---	X	
FAMILY ACRIDIDAE	**COMMON GRASSHOPPER**			
Trimerotropis pallidipennis	Pallid Band-wing	---	X	
FAMILY NYMPHALIDAE	**PAINTED LADY'S**			
Vanessa cardui	Painted Lady	X	X	
CLASS ARACHNIDA	**SPIDERS, MITES, TICKS AND SCORPIONS (1)**			
FAMILY CTENIZIDAE	**TRAP DOOR SPIDER**			
Bothriocyrtum californicum	California Trapdoor Spider	X	X	

APPENDIX G

GEC Report: Habitat Assessment and Surveys for Least Bell's Vireo

HABITAT ASSESSMENT & FOCUSED SURVEYS FOR LEAST BELL'S VIREO
TTM 36544
APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006
In the
City of Corona
Riverside County, CA
USGS 7.5-minute topographic Black Star & Corona South Quadrangles
Township 4 South, Range 7 West, portions of Sections 3, 4 and 9



Prepared For:
Richland Developers, Inc.
3161 Michelson Drive,
Suite 425
Irvine, CA 92612
949-383-4137

Prepared By and Principal Investigator:

GONZALES
ENVIRONMENTAL CONSULTING, LLC

51-842 Avenida Diaz
La Quinta, CA 92253
(760) 777-1621

Report Date: August 1, 2013
Revised: April 23, 2014

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IV. STUDY AREA CONDITIONS 16

V. LEAST BELL'S VIREO FOCUSED SURVEY 31

VI. REFERENCES 34

VII. CERTIFICATION 37

USFWS Certification: I certify that the information in this survey report and attached exhibits fully and accurately represents my work.

Permit #: TE060175-3 Signed: Teresa Gonzales

I. TITLE PAGE

A. Date report prepared: April 23, 2014

B. Report Title: Habitat Assessment and focused Surveys for Least Bell's Vireo APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA

C. Project site location: USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3, 4 and 9, Township 4 South, Range 7 West

D. Location(s): Mabey Canyon Wash, Wardlow Wash and Unnamed drainages

E. Owner/Applicant:
Richland Developers, Inc.
3161 Michelson Drive,
Suite 425
Irvine, CA 92612
949-383-4137

F. Principal Investigator(s): Teresa Gonzales and Paul Gonzales
Address: 51842 Avenida Diaz
La Quinta, CA 92253
Phone: 760.777-1621

G. Name and phone number of person preparing report and of all persons who performed fieldwork on the site

Name of Person	Phone Number	Role on project
Teresa Gonzales	760.777-1621	Prepared report and performed fieldwork
Paul Gonzales	760.777-1621	Performed fieldwork

This document should be cited as:

Gonzales Environmental Consulting, LLC. 2014. Habitat Assessment and Focused Surveys for Least Bell's Vireo APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 In the City of Corona, Riverside County, CA; USGS 7.5-minute topographic Black Star Canyon and Corona South Quadrangle Sections 3,4 and 9, Township 4 South, Range 7 West. March 31, 2014, La Quinta, California. Prepared for Richland Developers, Inc

II. EXECUTIVE SUMMARY

The project site is located in the City of Corona of Riverside County, California. In April, May, June, and July 2013, Teresa Gonzales, Principal Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for Least Bell's vireo, coastal California gnatcatcher and burrowing owl.

The primary vegetation communities characterized as *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed.

The proposed project site is within the Western Riverside Multiple Species Habitat Conservation Plan (WRMSHCP). This area is not within the Santa Ana River Unit of designated critical habitat (50 CFR Part 17) for the recovery of the least Bell's vireo.

In April, May, June and July 2013 Teresa Gonzales, Principal Biologist and Paul Gonzales, Senior Biologist for Gonzales Environmental Consulting, LLC (GEC), conducted focused surveys for least Bell's vireo on the proposed project site. No least Bell's vireo (s) were found during our surveys of the area.

III. PROJECT AND PROPERTY DESCRIPTION

This report summarizes the findings of focused surveys to determine presence or absence of least Bell's vireo (*Vireo bellii pusillus*) on the Skyline project site.

Property Description

The project is located south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive in the Corona area of Riverside County, California. Regional and location maps are provided as Figures 1 and 2.

Proposed Project Area

Corona, also called "The Circle City," was founded in 1886 by Robert Taylor and members of the south Riverside Land and Water Company. Mr. Taylor, along with an engineer, H. Clay Kellogg, decided to build the city around a central point. This central point is known as Grand Blvd. They lined it with pepper trees and began developing what we know as Corona. Most early homes and businesses were located around this large circle. The businesses were located near the center at 6th and Main St., while the residences were more out towards the perimeter. Citrus groves were planted to the south. Industrial and fruit packing plants were built to the north near the railroad tracks (Usacitiesonline).

Proposed Project Site

The site is located within San Bernardino Meridian in portions of Sections 3, 4 and 9, Township 4 South, Range 7 West in Riverside County, California (Figures 1, 2 and 3). This location is shown on the Corona South and Black Star Canyon**,** California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Corona South and Black Star Canyon 1979); page 772 Blocks G1, G2, G3, H2, H3 and J3 of the Riverside County Street Guide and Directory (Thomas Brothers Maps Design 2013). The approximate center of the site is located at the center of the project area is 33°50'39.72"N/117°36'41.11"W.

The proposed project site is sloping to the north and east, depending on the location in the landscape. It occurs at an elevation between 1,160 and 1,420 feet below mean sea level.

Portions of the project site have been disturbed by anthropogenic disturbances. Vegetation has been disturbed by fire roads, illegal access and adjacent land uses. During our many site visits we personally observed hikers, runners and mountain bikers utilizing the proposed project site. Additional disturbance to the drainage area has occurred since our 2008 visits. Fire roads and trails now impact a great portion of the drainage.

Land immediately adjacent to the site's northern, eastern, and western boundaries contain single-family residences, or areas that have been graded for lots. The land to the south is part of the Cleveland National Forest.

Similar to many of the other open areas in the area, the site shows signs of off-road vehicle, mountain biking, and anthropogenic use. Vehicle tracks and roads traverse the site, degrading plant and animal habitat.

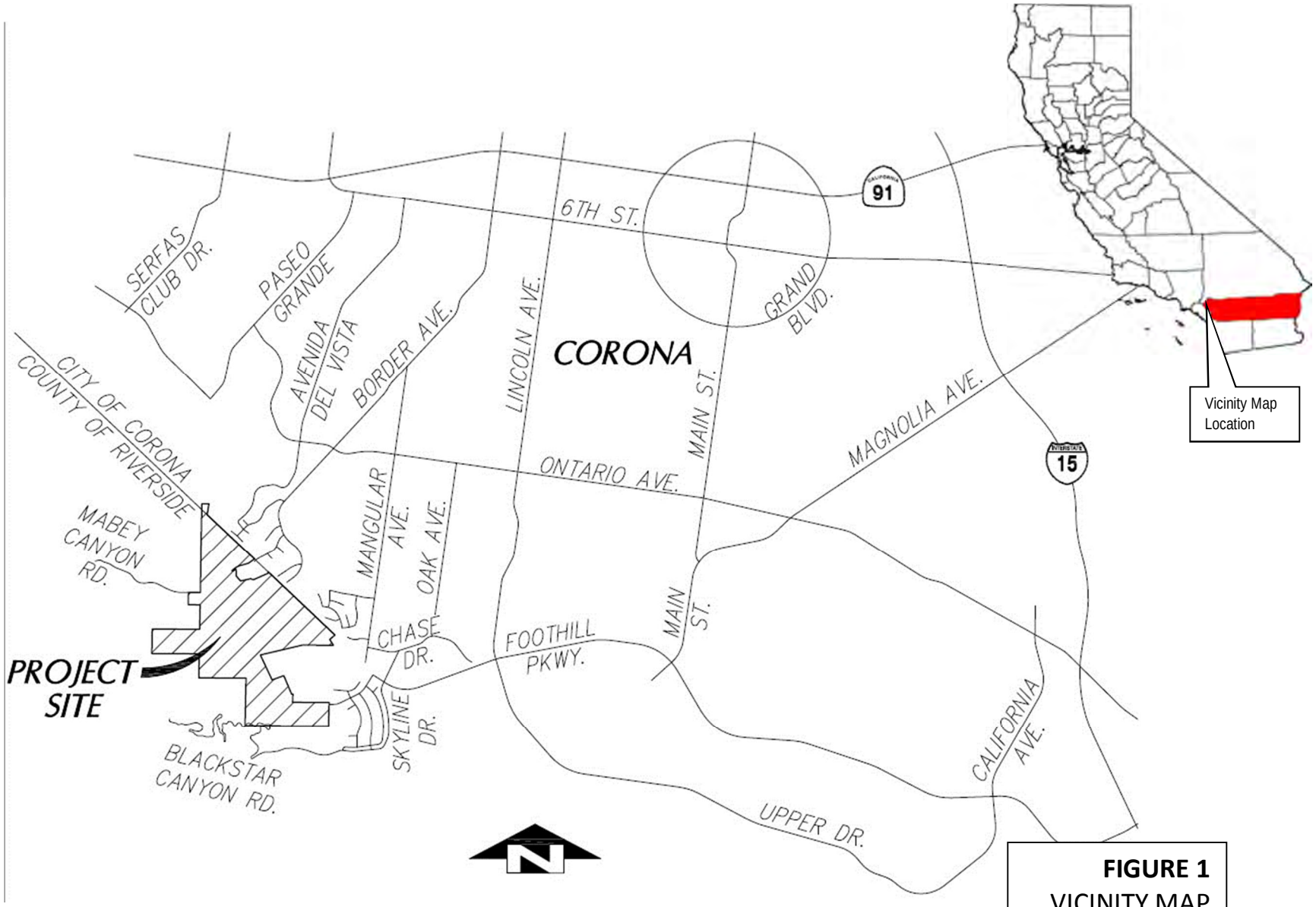


FIGURE 1
VICINITY MAP

Source: KWC Engineers. Not to scale.

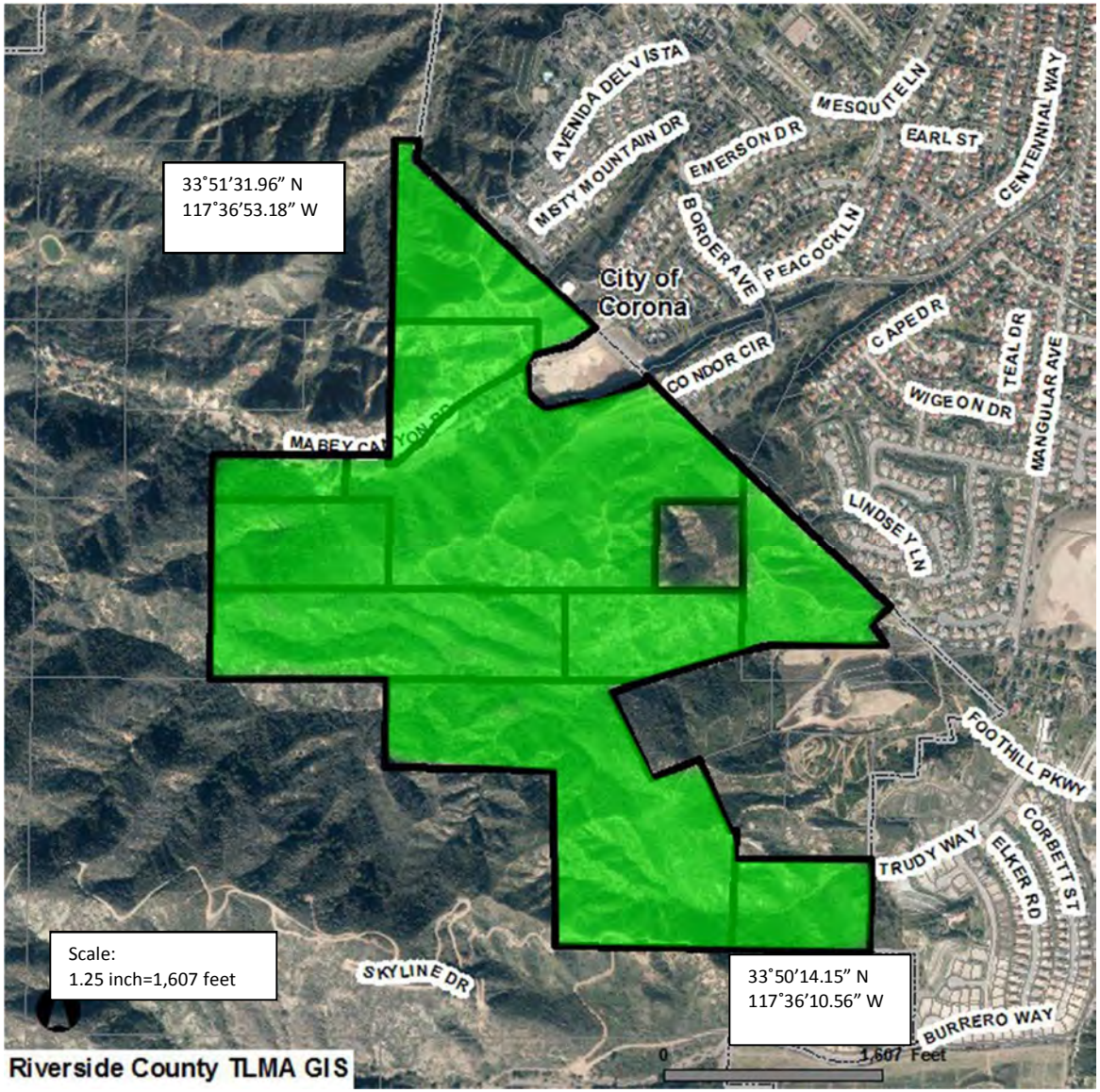


FIGURE 2
LOCATION MAP

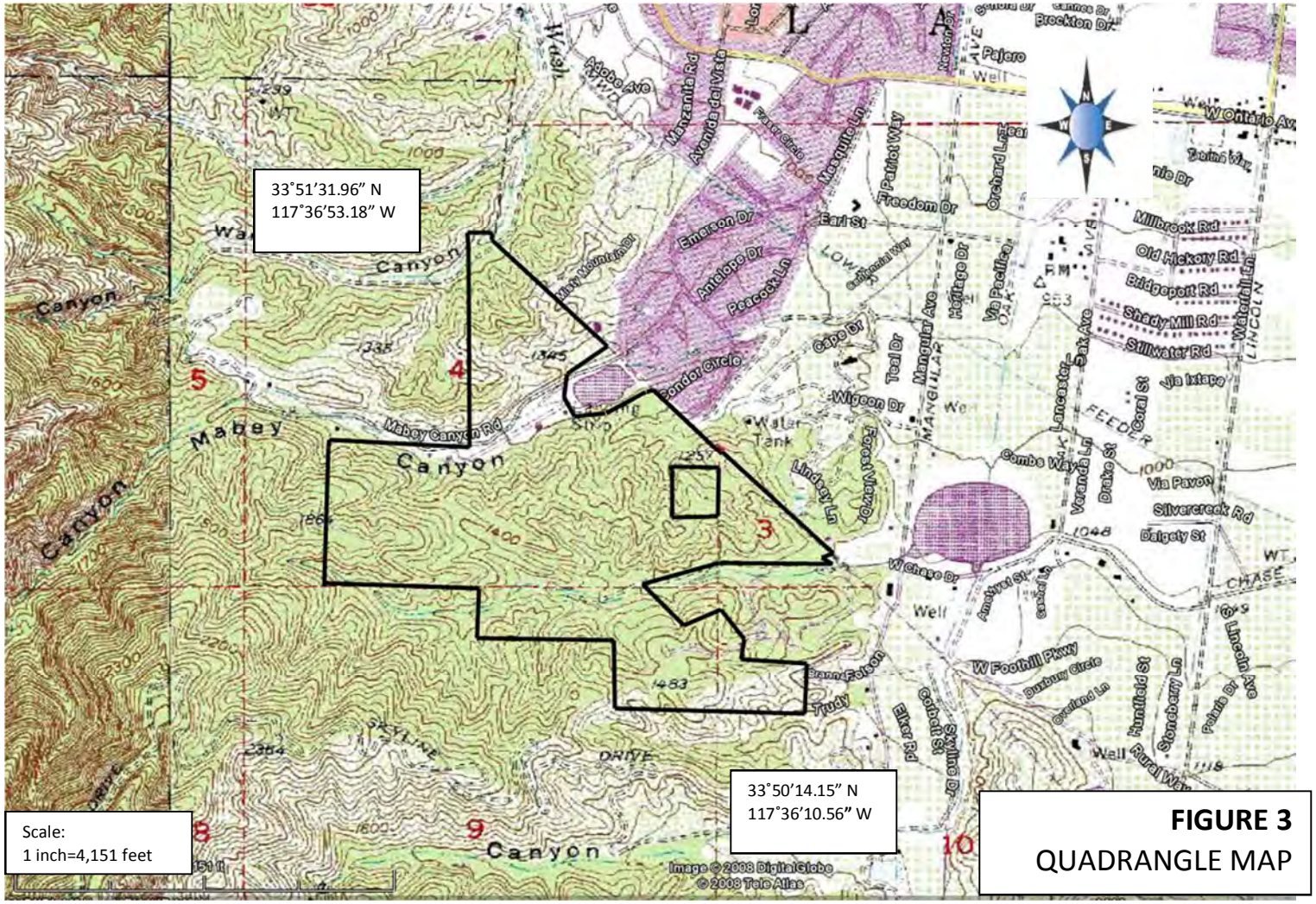


FIGURE 3
QUADRANGLE MAP

Source: Black Star Canyon and Corona South quadrangle 7.5 topographical map. July 1, 1988. Please note that this is a locality map, and should not be used for calculations.

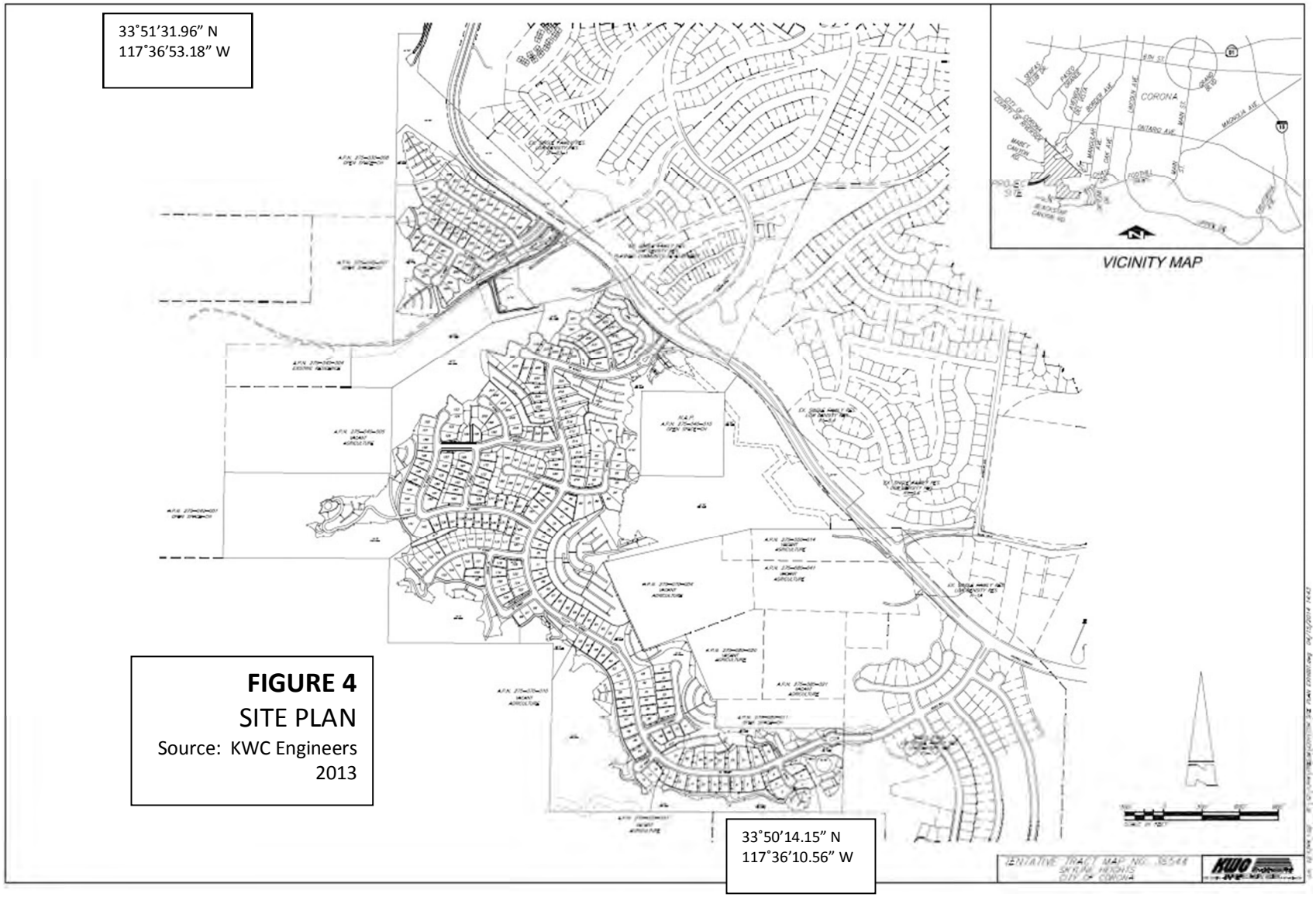


FIGURE 4
SITE PLAN
Source: KWC Engineers 2013

Proposed Project Description

Overview

The Skyline Heights (TTM 36544) project is comprised of 270.9 acres vacant land situated in the hills to the southwest of the City of Corona in Western Riverside County, California adjacent to Foothill Parkway. The project area includes the area to be acquired by RCTC/City of Corona for the construction of the future Foothill Parkway westerly extension and Mabey Canyon Debris Basin. The site is located approximately 3 miles south of the 71 and 91 Freeways and approximately 4 miles west of Interstate 15 (I-15). The site is within the City of Corona's Sphere of Influence and is proposed to be annexed to the City during the entitlement process. The City of Corona is currently processing the Capital Improvement Project for the Foothill Parkway Westerly Extension between Green River Road and Trudy Way. Construction is planned to be completed in the next few years. Foothill Parkway will border the eastern portion of the project and will be the primary access to the site.

The Skyline Heights project is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels. Within the general boundaries of the project is an undeveloped 10.0-acre parcel which is considered "Not a Part" and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded forest service access road, is located just to the south of the project. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.

The project site consists of sparsely vegetated and otherwise undeveloped land with the exception of dirt roads. The site is characterized by steep topography, generally increasing in elevation from the northeast to the southwest. Several canyons and ravines are present which will convey natural drainage across the project site.

Zoning and Land Use/Site Plan

The existing General Plan Land Use designation for this site is Agriculture and the existing Zoning is Rural Residential I (0.2-0.5 du/ac). The project will be processing a GPA and Zone Change for the property through the City of Corona. The proposed General Plan designation will be Low Density Residential (3-6 du/ac). The proposed Zoning for this project will be designated as R-1-7.2 Single Family Residential with 7,200 square feet minimum lots.

A Conceptual Site Plan has been prepared for the project and will consist of two (2) graded areas. The area north of Mabey Canyon is proposing 45 Single Family lots and the area to the south will be 247 Single Family lots. This totals to 292 Single Family Low Density Residential lots for a project density of 1.08 du/ac.

The project will be developed in three map recording phases. The proposed development requires the construction of Foothill Parkway and infrastructure improvements along the project frontage as proposed by the City of Corona's Foothill Parkway Westerly Extension

Capital Improvement Project. The anticipated completion date of this section of Foothill Parkway is 2015. This development assumes that Foothill Parkway is in place prior to the construction of the project.

Site Plan Layout, Circulation and Access

The primary access to the site is from the future westerly extension of Foothill Parkway proposed by the City of Corona. Foothill Parkway is designated as a Secondary Highway with 72 feet of pavement within a 103 foot right-of-way. This regional thoroughfare is anticipated to be constructed in the next few years and is targeted to be completed by 2015. Area 1 proposes a single point public roadway access off of Foothill Parkway just north of Mabey Canyon Debris Basin. This public roadway is 88 foot wide with a 16 foot wide raised median. A 28 foot wide emergency fire and existing residents' access road will also be proposed for emergency purposes to connect to the existing dirt access along Mabey Canyon south of the proposed roadway. The new access road is proposed to become the primary access route for the existing residents west of the project site. Area 2 proposes a 68 foot private local collector roadway section that extends into the project site from the intersection of Border Avenue and future Foothill Parkway. A 60 foot private roadway section will connect and continue this spine local roadway southerly to connect with existing 68 foot wide Trudy Way (Tract 31955).

In addition to these proposed roadways, other local private roadways are proposed throughout the project site. These proposed roadways are designed with 36 foot wide pavement within a 56 foot right-of-way or 36 foot wide pavement within a 60 foot right-of-way. The parkways are 10 foot wide or 12 foot wide with 4 foot sidewalks (not curb adjacent).

Grading, Construction and Phasing

Although an exact construction schedule is not known at this time, grading for the Skyline Heights Project is anticipated to begin about first Quarter 2015.

The site will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the project development. The anticipated maximum cuts and fills depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor.

Drainage Facilities

There are several existing canyons and ravines that run across the project site. Three of the canyons are shown as blue line streams according to the USGS Quad Maps. Wardlow Wash and Mabey Canyon Wash are two of those blue lined streams and are located in the northerly portion of the project. The tributary drainage to Wardlow Wash is approximately 975 acres and currently drains directly to the Santa Ana River. The tributary drainage to Mabey Canyon Wash is approximately 930 acres and currently drains to the existing Mabey Canyon Debris

Basin. The project site is not proposing to grade or alter the Mabey Canyon streambed, with the exception of increasing the spillway and construction of an access road. The other blue line stream is un-named (D-1) and is located in the central portion of the project site. The tributary drainage to this stream is approximately 311 acres and currently drains to the Kroonen Canyon Channel and Oak Street Creek Reservoir located near Chase Drive and Mangular Avenue. D-1 is proposed to be filled in across the project site and a 72-inch storm drain system is proposed to convey the storm water runoff underground and discharge back to the existing stream at the easterly terminus of the project site. D-2 is an unnamed non-jurisdictional swell in the southern portion of the project site. Several other smaller non-jurisdictional tributaries are also being filled in within the development. A system of storm drain pipes are proposed to convey the runoff across the site to the designated discharge points. Three detention basins are proposed within the project site to detain the increased runoff flows from the project development and are identified on Tentative Tract Map 36544.

The project hydrology and storm drain system will be designed in accordance with recent City of Corona and Riverside County Flood Control & Water Conservation District's design requirements. The onsite storm drain pipes, laterals, catch basins, and inlet and outlet structures are to be publicly maintained by the City of Corona. The proposed detention basins are designated to be publicly maintained by the City of Corona.

Project Utilities

The City of Corona Department of Water and Power will be the water, sewer, and reclaimed water service purveyor to the proposed Skyline Heights Development.

Water: The proposed onsite water facilities will include an intermediate water pressure Zone 6A Water Reservoir site, a Zone 6A Booster Pump Station site, and a network of Zone 5 (1380' HWL) and Zone 6A (1560' HWL) water distribution pipelines. The water supply to the project will be provided by a connection to the City's transmission water system in future Foothill Parkway and to the distribution water system in Trudy Way. Approximately 58 lots will be serviced by the existing Zone 5 (1380' HWL) water pressure system. The minimum and maximum pad elevations served will be 1185 and 1227, respectively. This will yield a static water pressure between 66 psi and 84 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. The remainder of the project will be serviced by the proposed intermediate Zone 6A (1560' HWL) water system. The proposed above ground DN Type 1 (prestressed concrete) tank water reservoir will be sized to accommodate the operational, emergency, and fire storage for the project as required by the City of Corona Department of Water and Power. The estimated reservoir capacity is approximately 0.6 MG and is sized to accommodate storage for 247 lots. The minimum and maximum pad elevations served will be 1220 and 1416, respectively. This will yield a static water pressure between 62 psi and 147 psi, which meets the City of Corona's minimum water pressure requirement of 40 psi. Pressure regulators will be required for lots having pressures greater than 80 psi. The proposed Booster Pump Station has a firm pumping capacity to provide the required flows and pressures using one (1) duty pump and one (1) standby pump at 500 gpm each and one 1500 gpm fire flow pump.

Sewer: The proposed onsite sewer facilities will include a system of 8-inch gravity sewer pipelines. Sewer Area 1 consisting of 55 tributary lots will be routed to a connection point at the intersection of Mabey Canyon Road and Falcon Circle. Sewer Area 2, which consists of 197 tributary lots, will drain by gravity to an existing gravity sewer system located at the intersection of Border Avenue and Condor Circle. The remaining portion in Sewer Area 3 consisting of 50 tributary lots will also drain by gravity to an existing gravity sewer system in Trudy Way. The downstream sewer system will be analyzed to determine impacts to the system and recommended mitigation measures.

Recycled Water: The proposed onsite private recycled water facilities will include a system of onsite private recycled water pipelines that will connect with the recycled water facilities in future Foothill Parkway. The City of Corona Department of Water and Power will identify the proposed recycled water facilities to be constructed to enhance the City's reclaimed water system. The project's HOA landscaped areas will be serve by two zones, the existing Zone 3 (1380' HWL) and the proposed Zone 3A (1625' HWL) water system. The project site will have two main connection point locations to the City's existing recycled water system. The first location at the intersection of Foothill Parkway and Border Avenue where it is proposed to construct a 12-inch pipeline from an existing 12-inch line in Foothill Parkway. This provides the water supply from Zone 3 recycled water system into the project site to serve the proposed Zone 3A HOA landscaped areas via a proposed Zone 3A Booster Pump Station having a firm pumping capacity of 1150 gpm. The booster pumps shall be a variable frequency drive type to decrease the wear and tear of the pumps and extend the life of the pumps. The second connection point is located north of Mabey Canyon Road which will serve the HOA landscaped areas north of Mabey Canyon (KWC Engineers).

Annexation Properties

Several properties, not part of the project described in this report, are part of the general plan amendment/annexation or study area. As part of the process the City of Corona requested that technical reports address additional properties within the annexation boundary. Annexation properties include: JHB Colony Investments (APN 275030006, 275040006, 275040011, 275040012, 275040015, 275050004, 275070003, and 275080010), Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016, 275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009). According to the City of Corona no immediate development is planned for Torres (APN 102320010), Stuart (APN 275040004), Lee (APN 275050009, 275070004 and 275080020), City of Corona (APN 275050010, 275050011, 275050013, 275050017, 275080038, 275080039, 102320009 and 102320014), Addison (275050014 and 275080041), Valdez (275080017), Emad (APN 275090007), Brueske/Ford (APN 275040005), Gonzalez (APN 275080021), Sheppard/Pritchard (APN 275050012 and 275080040), RCFCD (APN 275040009, 275040013, 275040016,

275050005 and 275050007), Christopher Enterprises (APN 275090011), and USA 275 (APN 275040010, 275080011, 275080013 and 275080009) at this time.

IV. STUDY AREA CONDITIONS

The following sections summarize the study area conditions. For purposes of this report, the term study area includes the proposed project construction limits and a surrounding 1,300-foot buffer (Figure 2).

Physical Conditions

Elevation of the assessment area ranges from a from a low of 1338± feet above mean sea level (msl) in the northern portion of the assessment area to a high of 1483± feet above msl in the southeastern portion of the assessment area. This represents an elevational change across the assessment area of 55± feet. The elevational change occurs between tops of steep hills and the bottoms of intervening drainages. Wardlow Wash, Mabey Canyon Wash and Unnamed Blue line stream channel flows west to northeast or west to east depending on the location in the landscape. Portions of the project site have been disturbed by past land uses. Adjacent land uses include residential housing to the north, east and west, with open space to the south.

The primary plant communities are characterized as *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Portions of the project site have been subject to anthropogenic disturbances.

Definitions

Vegetation Communities

Vegetation habitats or communities are assemblages of plant species that usually coexist in the same area. The classification of vegetation communities is based upon the life form of the dominant species within the community and the associated flora. The nomenclature for vegetation communities follows CDFW Vegetation Alliances of Western Riverside County, California.

Wildlife Habitats

Wildlife habitats differ from vegetation communities in that a wildlife habitat may contain several vegetation communities that are similar in structure but different in the plant species composition, location, and soil substrate. This distinction becomes an important factor when assessing the sensitivity of a particular wildlife habitat to impacts. In addition, the interaction of various wildlife species occurs between many different wildlife habitats. This becomes more evident where these habitats overlap in areas known as ecotones. These ecotones support a combination of species from two or more adjoining habitats that generally increases the number and diversity of species within these areas. Wildlife habitats encountered on the project site approximate the vegetation communities discussed is this report.

Vegetation

The project encompasses several vegetation community types. Vegetation communities currently present are characterized as Quercus agrifolia Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. The locations of the native plant communities have been generally the same over the years. The existing plant communities are described in more detail below.

***Quercus agrifolia* (Coast live oak woodland) Alliance**

Coast live oak occurs as the dominant tree in the canopy. Poison oak is the dominant shrub in the understory. It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 5
Quercus agrifolia ON-SITE

California Sycamore Woodland Alliance

This riparian community on the proposed project site is composed primarily of sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Sycamores have well developed vegetative reproduction, giving the woodland a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in Mabey Canyon Wash.



FIGURE 6
CALIFORNIA
SYCAMORE ON-SITE

***Salix lasiolepis* Alliance**

This riparian community on the proposed project site is composed primarily of arroyo willow (*Salix lasiolepis*). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Willows have well developed vegetative reproduction, giving the islands of habitat a clumped appearance. This community is very limited on the project site, existing only in limited areas of the unnamed drainage and in one location off of the project site.



FIGURE 7
SALIX LASIOLEPIS ON-SITE

***Baccharis salicifolia* (Mulefat thickets) Alliance**

A depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This early serial community is maintained by frequent flooding. Found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland, especially under heavy grazing. Mulefat scrub often occurs in pure stands. Secondary species vary regionally. This community is very limited on the project site, existing only in small areas of unnamed drainage, Mabey Canyon Wash and Wardlow Canyon Wash.



FIGURE 8
BACCHARIS SALICIFOLIA ON-SITE

Sage Scrub Alliances

California sage brush-purple sage

This series is often considered part of the coastal scrub, which is better thought of as a collection of series. This approach allows stands of composition, which can be considered, regardless of geographic location. Stands of this series differ from the California buckwheat series and White sage series in that California buckwheat and white sage are equally important. In addition, more chaparral species occur in stands of this series than in stands of the California buckwheat series or White sage series. Other sage scrub alliances noted on site: *Encelia californica* (California brittle bush scrub) Alliance, Artemisia californica - Eriogonum fasciculatum (California sagebrush – California buckwheat scrub) Alliance, and *Eriogonum fasciculatum* (California buckwheat scrub) Alliance.



FIGURE 9
SAGE SCRUB
ALLIANCES ON-SITE

Chaparral Alliances

Chamise-California buckwheat- white sage

Chamise occurs in many chaparral, coastal scrub, and tree series. Chamise cover is 30-60% and white sage cover is 30-60%. In some areas, stands of chamise mix with stands of coastal scrub forming a mosaic of different series [Black sage series, California buckwheat series, California sagebrush series, mixed sage series, Purple sage series, and White sage series]. Other chaparral alliances noted on site: *Rhus ovata* (Sugarbush chaparral) Alliance.



FIGURE 10
CHAPARRAL
ALLIANCES ON-SITE

California Annual Grassland Alliance

This habitat alliance consists of a dense to sparse cover of annual grasses with flowering culms .2-.5 m high. This habitat is often associated with numerous species of showy-flowered, native annual forbs, especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. This extensive series is composed of many alien and native annual species; composition varies among stands.



FIGURE 11
CALIFORNIA ANNUAL GRASSLAND ALLIANCE ON-SITE

***Eucalyptus* spp. Alliance (Eucalyptus)**

Non-native landscape species (Eucalyptus) are located immediately adjacent to the unnamed drainage and Mabey Canyon Wash proposed project area.

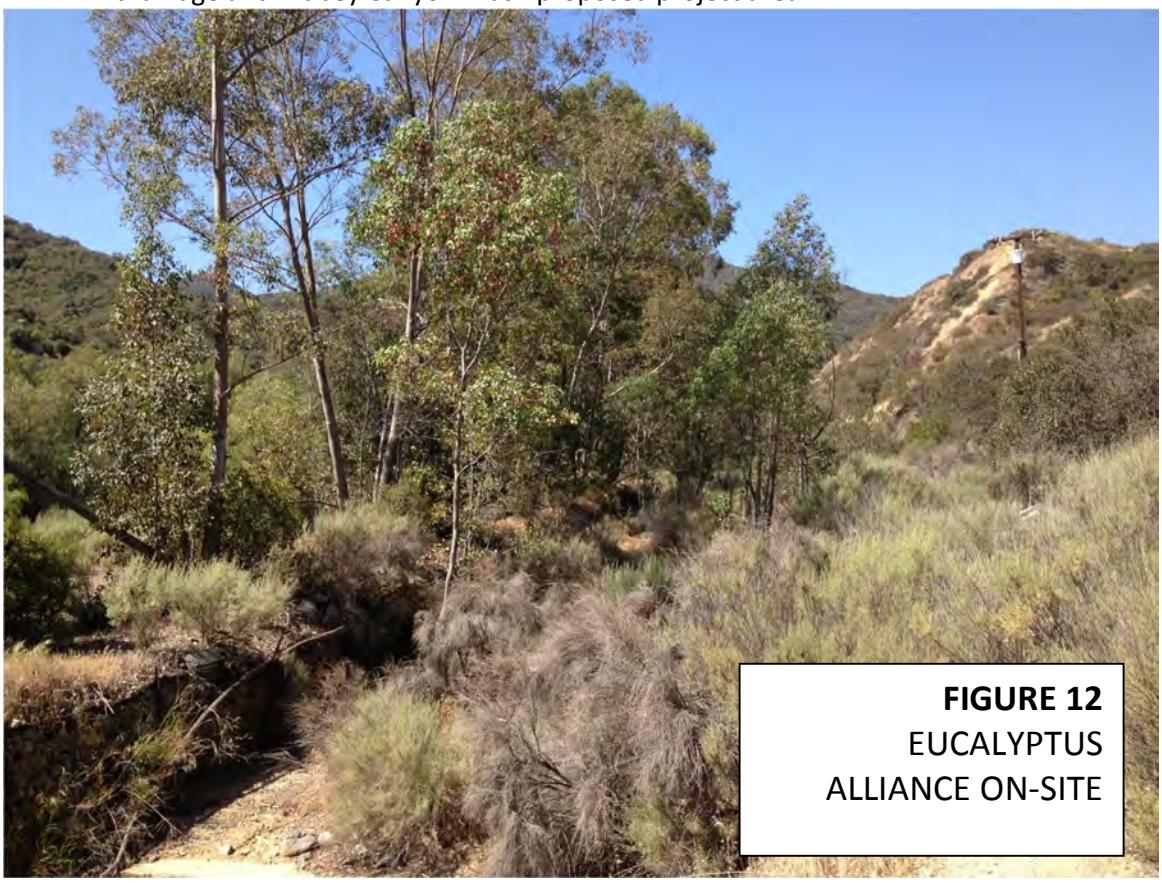


FIGURE 12
EUCALYPTUS
ALLIANCE ON-SITE

***Schinus* spp. Alliance (Pepper)**

Non-native landscape species (Pepper) are located immediately adjacent to Mabey Canyon Wash proposed project area.



FIGURE 13
SCHINUS ALLIANCE
ON-SITE

The major plant communities in the survey area are chaparral, sage scrub, and nonnative grasslands alliances. Adjacent to the urban areas, landscape species (Eucalyptus and Pepper trees) dominate. Habitat consists of dense chaparral (*Rhus ovata, Quercus agrifolia, Frangula californica*) on the northern slopes and coastal sage scrub (*Artemisia californica*, *Salvia mellifera, Salvia leucophylla*) on the dry south facing slopes. Scattered areas of sage scrub including California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), brittlebush (*Encelia farinosa*) and white sage (*Salvia apiana*) occur on the slopes and in the wash. Grasslands composed primarily of non-native species bromes *(Bromus* spp.), short-podded mustard (*Hirschfeldia incana*)*,* filaree (*Erodium* spp.), Russian thistle (*Salsola tragus*)*,* doveweed *(Croton setigerus*)*,* and deer weed (*Acmispon glaber*) occur throughout the project area. Drainage swells traverse the slopes. At the base of the swells, small tertiary drainages braid the area. Habitat within these drainages consists of chaparral and sage scrub species. No evidence of channel, bed, or banks exists in these areas.

The very northern tip of the project intersects with Wardlow Wash (blue-line stream). Most of the area in the northern portion drains towards Mabey Canyon Wash (blue-line stream). Mabey Canyon Wash, as it exists within the project area, is constrained into a 12' wide channel. One side of the channel banks are supported by used car parts and other metal objects. The other side is part of the dirt road bank. Near the eastern project border, the Wash enters into a large flood control basin. The basin controls flow into an existing stormwater conveyance systems located in the urban development area. In the middle of the project, the unnamed blue-line stream traverses from west to east. The unnamed blue-line stream (Unnamed Drainage) becomes a trapezoidal channel near Mangular Avenue and Chase Drive. It flows into Oak Hills flood control basin, which is outside of the project limits. The project as designed should not impact any vegetation found on the banks of either flood control basin. A small detention basin adjacent to Trudy Way has one willow tree and one oak tree. The project area has been impacted by off-road vehicles, bicycles and hikers. Dirt roads and trails criss-cross the project area, providing access for illegal trash disposal and off-road usage.

TABLE 1
ACREAGE OF DIRECT IMPACTS TO HABITAT TYPES ON THE PROJECT SITE

Habitat	Acreages on Project Site	Impact Acreages
Mulefat Scrub Alliance	0.14	0.14
Disturbed	0.07	0.07
Eucalyptus/Pepper	1.05	0.19
Mulefat	0.88	0
Chaparral	175.73	152.48
Sage Scrub	89.21	63.53
Grassland	0.28	0.28
Coast Live Oak	1.6	1.6
Sycamore Alliance	0.09	0.09
Willow Alliance	0.1	0.1
Streambed	1.76	1.76
Total Acreage	**270.91**	**220.24**

Annexation Areas

Annexation properties contain a similar mix of habitats to those of the proposed project site. Noted during our surveys were disturbed (graded, landscaped, agricultural, and developed), chaparral, and sage scrub alliances. Please see Figure 14.

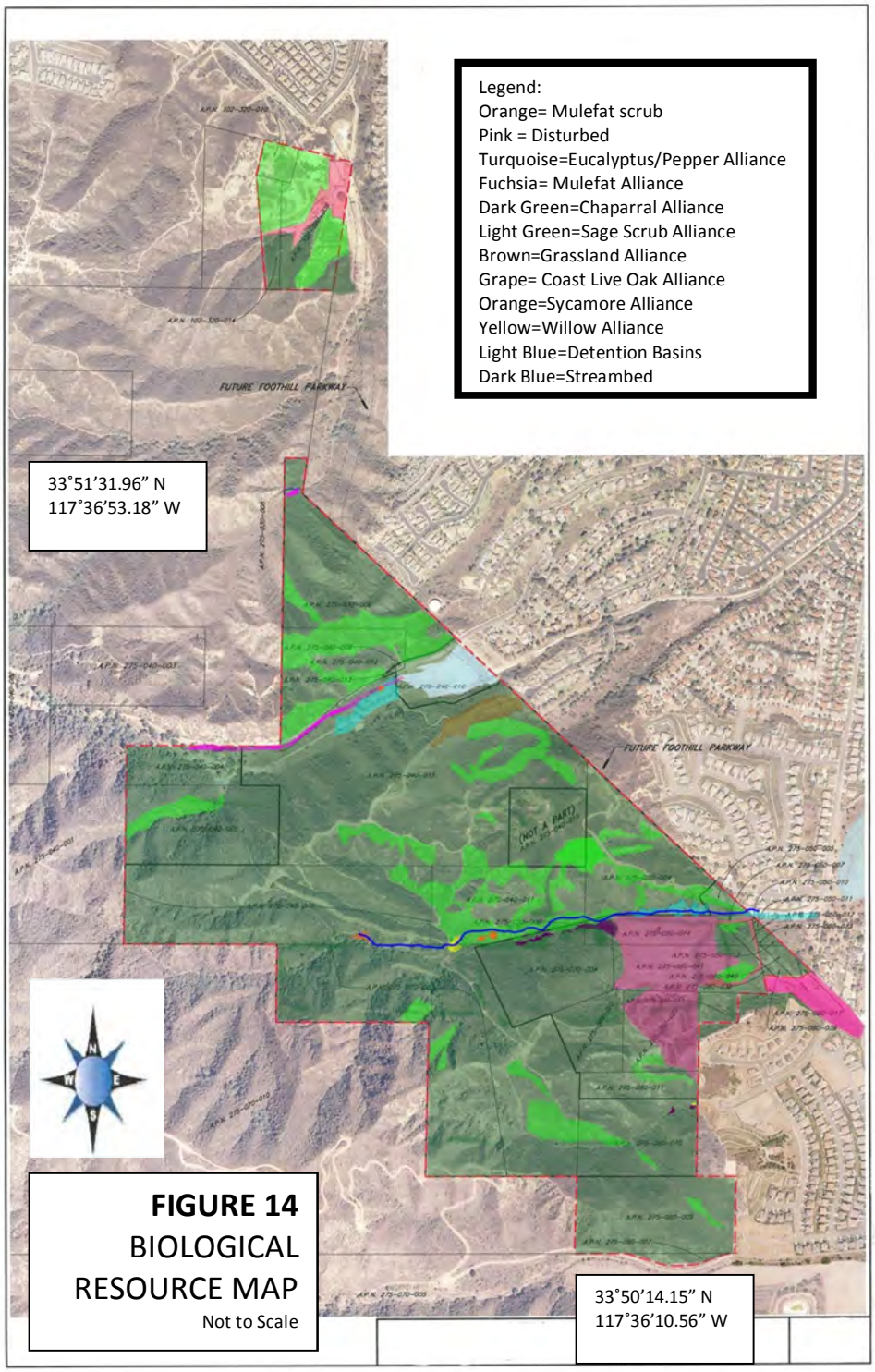


FIGURE 14
BIOLOGICAL RESOURCE MAP
Not to Scale

V. LEAST BELL'S VIREO FOCUSED SURVEY

Background

The least Bell's vireo was formerly widespread and abundant throughout the Central Valley of California and other low-elevation river valleys. They also occurred in the Sierra Nevada foothills and the Coast Ranges. Their range extended from Red Bluff (Tehama County) to northwestern Baja California, including populations in the Owens Valley, Death Valley, and the Mojave Desert. Least Bell's vireo is now thought to be extirpated from Sacramento and San Joaquin valleys. By 1983, nesting was restricted to several localities in the Salinas River Valley (Monterey and San Benito counties), one locality along the Amargosa River (Inyo County), and numerous small populations in southern California south of the Tehachapi Mountains and in northwestern Baja California (Matthews and Moseley 1990), south to at least Mission San Fernando and probably to Catalina. Ehrlich et al. (1992) stated that the northern limit of extant populations is the Santa Ynez River, Santa Barbara County. In 1990, 80 percent of the U.S. population occurred along just five drainages: Santa Margarita River, Sweetwater River, San Luis Rey River, San Diego River, and Santa Ana River (Prado Basin) (Ehrlich et al. 1992).
Least Bell's vireo prefer nesting habitat of dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak, in arid regions but often near water (AOU 1983); moist woodland, bottomlands, woodland edge, scattered cover and hedgerows in cultivated areas; willow-dominated riparian woodlands (Biosystems Analysis 1989); and, open woodland, brush in winter.

Their nest(s) are found in shrub or low trees, usually averaging about 1 m above ground, usually in horizontal or downsloping twig fork, typically near edge of a thicket. Nesting vegetation in California (often willow or rosa) averages 3-5 m in height. LBV usually returns to same nesting territory in successive years (Franzreb 1989).

Due to the threats to the population, USFWS listed the least Bell's vireo as endangered on May 3, 1985 (50 FR 18968 18975) and designated critical habitat on February 2, 1994 (59 FR 4845 4867).

Methods

Gonzales Environmental Consulting (GEC) biologist Teresa Gonzales performed the surveys, which were carried out according to USFWS protocol (USFWS 2000). Ms. Gonzales has a permit (TE-060175-3, expires 15 March 2015) authorized by the USFWS to perform such surveys for the least Bell's vireo.

Surveys included all habitats within the area potentially supporting riparian birds that may be directly or indirectly affected by the impacts of the project. A minimum width of a ¼ mile distance from the project site was surveyed. Methods for the surveys consisted of walking through habitat at the site that is considered appropriate for this species, i.e., Riparian. Simultaneously with walking the habitat, the biologist doing the survey watches and listens for wildlife, observing any indirect signs of species presence. Binoculars (8.5 x 44) were used

to assist in the detection and identification of any sighted wildlife. Information on habitat characteristics, locality and weather conditions were recorded onto field forms and mapped.

The size of the property and the extent of appropriate habitat are such that the site could be surveyed in its entirety during each of the survey visits. As a condition of the federal permit to perform this survey, GEC is required to submit a copy of this report to the USFWS, and the California Department of Fish and Game (CDFG).

Weather conditions during surveys were generally conducive to a high level of bird activity. If weather conditions were not conducive to bird activity surveys were cancelled or not conducted.

The schedule and field conditions during the visits are summarized below.

TABLE 2
SURVEY SUMMARY

Date	Air Temp (F)	Wind Speed (mph)	Cloud Cover	Precipitation	Time-Duration
April 21, 2013	62-78	0-5	Clear	None	6 AM- 12 PM/6 hours
May 12, 2013	56-78	0-4	Clear	None	6 AM – 12 PM/ 6 hours
May 26, 2013	51-75	0-5	Clear	None	5:30 AM-12 PM/6.5 hours
June 3, 2013	50-70	0-5	Clear	None	5:30 AM–11 AM/5.5 hours
June 16, 2013	59-85	0-4	Clear	None	5:30 AM-11 AM/5.5 hours
June 30, 2013	67-88	0-5	Clear	None	5:15 AM– 10:15 AM/5 hours
July 13, 2013	59-89	0-5	Clear	None	5:30 AM– 9 30 AM/4 hours
July 28, 2013	73-78	0-1	Clear	None	5:30 AM– 9 30 AM/4 hours

Results

Least Bell's vireo is restricted to riparian woodlands along streams and rivers with mature, dense stands of willows (*Salix* spp.), cottonwoods (*Populus* spp.) or smaller spring fed or boggy areas with willows or alders (*Alnus* spp.). Riparian habitat provides both breeding and foraging habitat for the species. Early to mid-successional riparian habitat is typically used for nesting by the Least Bell's Vireo because it supports the dense shrub cover required for nest concealment as well as a structurally diverse canopy for foraging. Vegetation characteristics of riparian stands between five to ten years of age are most suitable for nesting Least Bell's Vireo (Goldwasser 1981, Kus 1998, RECON 1989, Fish & Wildlife Service 1998). Restored riparian in the coastal lowlands of southern California has the habitat structure to support breeding vireos within 3-5 years particularly if they are adjacent to established riparian areas (Kus 1998)

Records for the least Bell's vireo within the project vicinity are from 2012 and were recorded approximately 3 miles north of the site on the Wardlow Wash (CNDDB). The resident or migrant status of the bird was unknown but it was detected as singing in late June when migrant vireos are typically no longer moving through the area.

Surveys found no least Bell's vireo on the project site. No other federally and/or state listed threatened or endangered bird species, were observed during surveys on the project site.

Conclusion

Vegetation on the project site does not appear to provide suitable territorial or breeding habitat for the least Bell's vireo. Although willow and cottonwood species are present adjacent to saturated/open water the diversity may not be adequate to support the species. **No least Bell's vireo** we observed on the project site and it is unlikely that LBV would be expected to territorialize or breed on the project site or in immediately adjacent areas.

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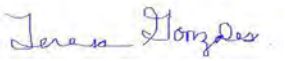
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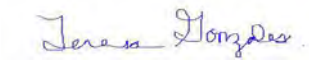
VII. CERTIFICATION

CERTIFICATION*: "I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this assessment was performed by me or under my direct supervision. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project."*

DATE: April 23, 2014 SIGNED: 

1) Teresa Gonzales

1) Fieldwork Performed By:



Teresa Gonzales

Check here _____ If Adding any additional Names/Signatures, below or on other side of page.

Appendix A
Plant and Animal Compendium

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	DIVISION ANTHOPHYTA	**FLOWERING PLANTS**			
	Class Dicotyledones	**Dicots**			
	FAMILY ADOXACEAE	**ELDERBERRY FAMILY**			
	Sambucus nigra ssp. caerulea	Blue Elderberry	U/R	U/R	FACU
	FAMILY ANACARDIACEAE	**SUMAC FAMILY**			
	Malosma laurina	Laurel Sumac	U/R	U/R	
	Rhus integrifolia	Lemonadeberry	U	U	---
	Rhus ovata	Sugarbush	U/R	U/R	---
X	*Schinus molle*	Peruvian Pepper Tree	U	U	---
	Toxicodendron diversilobum	Poison Oak	U/R	U/R	---
	FAMILY PINACEAE	**PINE FAMILY**			
X**	*Pinus jeffreyi*	Jeffrey Pine	U	U	---
	FAMILY AMARANTHACEAE	**AMARANTH FAMILY**			
X	*Amaranthus albus*	Tumbleweed	U/R	U	FACU
	FAMILY APIACEAE	**CARROT FAMILY**			
X	*Foeniculum vulgare*	Sweet fennel			---
	FAMILY APOCYNACEAE	**MILKWEED FAMILY**			
	Asclepias fascicularis	Narrow-leaf Milkweed	U/R	---	FAC
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**			
	Ambrosia acanthicarpa	Annual Bur-sage	U/R	U/R	---
	Ambrosia confertiflora	Burrweed	U/R	U/R	---
	Ambrosia psilostachya	Western Ragweed	R	---	FACU
	Artemisia californica	California Sagebrush	U	U	---
	Baccharis pilularis	Chaparral Broom	R	R	---
	Baccharis salicifolia	Mule Fat	R	R	FAC
X	*Centaurea melitensis*	Tocalote	U	U/R	---
X	*Cirsium vulgare*	Bull Thistle	U/R	U/R	FACU
	Corethrogyne filaginifolia	Common Sandaster	U	R	---
	Deinandra fasciculata	Clustered Moonshine-Daisy	U	U	FACU
	Encelia californica	California Brittlebush	U/R	U/R	---
X	*Erigeron bonariensis*	Flax-leaved Horseweed	R	---	---
	Erigeron canadensis	Horseweed	U/R	U/R	FAC
X	*Hedypnois cretica*	Hedyponois	U/R	U/R	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	Helianthus annuus	Common Sunflower	U/R	U	FACU
	Heterotheca grandiflora	Telegraph Weed	U	U	---
	Solidago californica	Oreja de liebre	U	U	---
	FAMILY BORAGINACEAE	**BORAGE FAMILY**			
	Amsinckia intermedia	Common Fiddleneck	U	U	---
	Amsinckia menziesii	Small Flowered Fiddleneck	U	U	---
	Cryptantha intermedia	Cryptantha	U	U	---
	Eriodictyon crassifolium	Thick-leaved Yerba Santa	U	U	---
	Phacelia cicutaria	Caterpillar Phacelia	U	U	---
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**			
	Brassica nigra	Black Mustard	---	U	---
	Brassica rapa	Field Mustard	---	R	FACU
X	*Hirschfeldia incana*	Short-pod Mustard	U/R	U/R	---
X	*Sisymbrium irio*	London Rocket	U		---
	FAMILY CACTACEAE	**CACTUS FAMILY**			
	Cylindropuntia californica	California Cholla	U	U	---
	Opuntia littoralis	Western Prickly Pear	U	U	---
	FAMILY CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**			
	Lonicera subpicata	Southern Honeysuckle	U	U	---
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**			
X	*Atriplex semibaccata*	Australian Saltbush	U	---	FAC
X	*Chenopodium album*	Pigweed	U	U	FACU
X	*Salsola tragus*	Prickly Russian Thistle	U/R	U/R	FACU
	FAMILY CONVOLVULACEAE	**MORNING-GLORY FAMILY**			
X	*Convolvulus arvensis*	Bindweed	U/R	---	---
	Cuscuta californica	Chaparral Dodder	U	U	---
	FAMILY CRASSULACEAE	**STONECROP FAMILY**			
	Crassula connata	Sand Pygmyweed	U	U	FAC
	FAMILY CUCURBITACEAE	**SQUASHES, MELONS & GOURDS FAMILY**			
	Cucurbita palmata	Coyote Gourd	U	---	---
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**			
	Chamaesyce albomarginata	Rattlesnake Weed	U	U	---
X	*Chamaesyce maculata*	Spotted Spurge	U	U	UPL
	Croton setigerus	Dove Weed	U	---	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
X	*Ricinus communis*	Castor Bean	R	R	FACU
	FAMILY FABACEAE	**PEA FAMILY**			
	Acmispon glaber	Deerweed	U	U	---
	Lupinus truncatus	Collared Annual Lupine	U	U	---
	Lathyrus vestitus var. *alefeldii*	San Diego Pea	U	U	---
X	*Medicago sativa*	Alfalfa	---	U	---
X	*Melilotus albus*	White Sweetclover	U	U	---
X	*Melilotus indicus*	Annual Yellow Sweetclover	U	U	FACU
	FAMILY FAGACEAE	**OAK FAMILY**			
	Quercus agrifolia	Coast Live Oak	U/R	U/R	---
	FAMILY GERANIACEAE	**GERANIUM FAMILY**			
X	*Erodium botrys*	Long-beaked Filaree	U	U	---
X	*Erodium cicutarium*	Red-stemmed Filaree	U	U/R	---
	FAMILY GROSSULARIACEAE	**CURRANT FAMILY**	U/R	U/R	---
	Ribes speciosum	Fushia-flowered Gooseberry			
	FAMILY LAMIACEAE	**MINT FAMILY**			
X	*Marrubium vulgare*	Horehound	U	U/R	FACU
	Salvia apiana	White Sage	U/R	U/R	---
	Salvia columbariae	Chia Sage	U	U	---
	Salvia leucophylla	Purple Sage	U/R	U/R	---
	Salvia mellifera	Black Sage	U/R	U/R	---
	FAMILY MALVACEAE	**MALLOW FAMILY**			
X	*Malacothamnus densiflorus*	Yellow Bushmallow	U/R	U	---
	FAMILY MELANTHIACEAE	**PERENNIAL LILY FAMILY**			
	Toxicoscordion fremontii	Fremont's Star Lily	U	U	---
	FAMILY MONTIACEAE	**PURSLANE FAMILY**			
	Calandrinia ciliata	Red Maids	U	U	FACU
	Claytonia perfoliata	Miner's Lettuce	U	U	FAC
	FAMILY MYRTACEAE	**MYRTLE FAMILY**			
X	*Eucalyptus citriodora*	Lemon Scented Gum	R/U	R/U	---
X	*Eucalyptus polyanthemos*	Silver Dollar Gum	R	R	---
X	*Eucalyptus rudis*	Desert Gum	U	U	---
	FAMILY OLEACEAE	**OLIVE FAMILY**			
	Fraxinus velutina	Velvet Ash	R	R	FAC

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**			
	Epilobium canum	California Fuchsia	R	R	---
	FAMILY PAPAVERACEAE	**POPPY FAMILY**			
	Eschscholzia californica	California Poppy	U/R	U/R	---
	Romneya coulteri	Coulters Matilija Poppy***	U/R	U/R	---
	FAMILY PHRYMACEAE	**LOPSEED FAMILY**			
	Mimulus aurantiacus	Bush Monkeyflower	U	U	
	FAMILY PLATANACEAE	**SYCAMORE FAMILY**			
	Platanus racemosa	California Sycamore	R	R	FACW
	FAMILY POLEMONIACEAE	**PHLOX FAMILY**			
	Gilia angelensis	Angel Gilia	U	U	---
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**			
	Eriogonum fasciculatum	California Buckwheat	U	U	---
	FAMILY RANUNCULACEAE	**CLEMATIS FAMILY**			
	Clematis lasiantha	Chaparral clematis	U	U	---
	FAMILY RHAMNACEAE	**BUCKTHORN FAMILY**			
	Frangula californica	California Coffeeberry	U/R	U/R	---
	FAMILY ROSACEAE	**ROSE FAMILY**			
	Adenostoma fasciculatum	Chamise	U	U	---
	Heteromeles arbutifolia	Toyon	U	U	---
	FAMILY SALICACEAE	**WILLOW FAMILY**			
	Populus fremontii	Fremont Cottonwood	---	R	FAC
	Salix gooddingii	Goodding's Willow	---	R	FACW
	Salix lasiandra	Pacific Willow	R	R	FACW
	Salix lasiolepis	Arroyo Willow	R	R	FACW
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**			
	Datura wrightii	Jimson Weed	R	U/R	UPL
X	*Nicotiana glauca*	Tree Tobacco	R	R	FAC
	Solanum douglasii	Douglas' Nightshade	R	R	FAC
	FAMILY URTICACEAE	**NETTLE FAMILY**			
	Urtica dioica ssp. *holosericea*	Hoary Nettle	R	R	FAC
	Class Monocotyledones	**Monocots**			
	FAMILY AGAVACEAE	**AGAVE FAMILY**			
	Hesperoyucca whipplei	Chaparral Yucca	U	U	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES (122)	GEC Surveys*	Previous Surveys**	California Region "O" or Arid Lands Indicator Status (ACOE, 2012)
	FAMILY LILIACEAE	**LILY FAMILY**			
	Calocortus splendens	Splendid Mariposa Lily	---	U	---
	FAMILY POACEAE	**GRASS FAMILY**			
X	*Avena barbata*	Slender Wild Oat	U	U	---
X	*Avena fatua*	Common Wild Oats	U/R	U/R	---
X	*Bromus diandrus*	Ripgut Grass	U	U	---
X	*Bromus hordeaceus*	Soft Chess	U	U	FACU
X	*Bromus madritensis* ssp. *rubens*	Foxtail Chess	U	U	---
X	*Echinochloa crus-galli*	Common Barnyard-grass	U	U	FAC
	Elymus condensatus	Giant Wild Rye	U	U	---
X	*Festuca myuros*	Rattail	U	U	---
X	*Hordeum murinum ssp. leporinum*	Hare Barley	U	U	FACU
	Leptochloa fusca	Mexican Sprangletop	R	R	FACW
	Melica imperfecta	Coast Range Melic	U	U	---
	Muhlenbergia rigens	Deergrass	U	U	---
X	*Schismus barbatus*	Mediterranean Schismus	U	U	---
	Stipa coronata	Crested Needle grass	U	U	---
	Stipa lepida	Foothill Needle grass	U	U	---
	FAMILY THEMIDACEAE	**BRODIAEA FAMILY**			
	Dichelostemma capitatum	Wild Hyacinth	---	U/R	---

* = U- Upland habitats (chaparral, sage scrub, grasslands); R-Riparian Habitats (oak woodland, willow, sycamore, mulefat).
** = Surveys conducted by GEC in past years
*** = Rare plant
X** = Native used as landscape species

Wetland Indicator Status:

The following symbols are used to indicate the wetland indicator status of plant species identified onsite, if any.

OBL Obligate: under natural conditions, occurs almost always (estimated probability > 99%) in wetlands.

FACW Facultative Wetland: usually occurs in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.

FAC Facultative: equally likely to occur (estimated probability 34-66%) in wetlands or non-wetlands.

FACU Facultative Upland: usually occur in non-wetlands but occasionally (estimated probability 1-33%) found in wetlands.

UPL Obligate Upland: occur in wetlands in another region, but occur almost always (estimated probability > 99%) under natural conditions in non-wetlands in the region specified.

NI or --- No Indicator Status: was recorded for those species for which sufficient information was not available to determine an indicator status or that were not considered by the Regional Panel.

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (2)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	---
FAMILY PHRYNOSOMATIDAE	**SPINY LIZARD FAMILY**			
Sceloporus occidentalis longipes	Great Basin fence lizard	X	X	---
CLASS AVES	**BIRDS (62)**			
FAMILY ODONTOPHORIDAE	**QUAIL**			
Callipepla californica	California Quail	X	X	
FAMILY ACCIPITRIDAE	**BUTEOS, KITES AND HAWKS**			
Accipiter cooperii	Cooper's Hawk	X	X	CSC
Buteo jamaicensis	Red-tailed Hawk	X	X	--
FAMILY COLUMBIDAE	**DOVES AND PIGEONS**			
Columba livia	*Rock Pigeon	X		--
Zenaida asiatica	White-winged Dove	X		--
Zenaida macroura	Mourning Dove	X	X	--
FAMILY TYTONIDAE	**BARN AND BAY OWLS**			
Tyto alba	Barn owl	X	X	--
FAMILY STRIGIDAE	**TRUE OWLS**			
Megascops kennicottii	Western Screech-Owl	X	X	--
Bubo virginianus	Great Horned Owl	X	X	--
FAMILY APODIDAE	**SWIFTS**			
Chaetura vauxi	Vaux's Swift	X	---	
Aeronautes saxatalis	White-throated Swift	X	---	
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	Black-chinned Hummingbird	X		--
Calypte anna	Anna's Hummingbird	X	X	--
Calypte costae	Costa's Hummingbird	X		--

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY CUCULIDAE	**CUCKOOS, ANIS AND ROADRUNNERS**			
Geococcyx californianus	Greater roadrunner	X	X	
FAMILY PICIDAE	**WOODPECKERS AND FLICKERS**			
Picoides nuttallii	Nuttall's Woodpecker	X		
Picoides pubescens	Downy Woodpecker	---	X	
Colaptes auratus	Northern Flicker	X	---	
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	X	X	
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific-slope Flycatcher	---	X	
Myiarchus cinerascens	Ash-throated Flycatcher	X	---	
Sayornis nigricans	Black Phoebe	X	X	
Sayornis saya	Say's Phoebe	X	X	
Tyrannus verticalis	Western Kingbird	X	---	
Tyrannus vociferans	Cassin's Kingbird	X	X	
FAMILY CORVIDAE	**CROWS AND RAVENS**			
Corvus brachyrhynchos	American Crow	---	X	
Corvus corax	Common Raven	X	---	
Aphelocoma californica	Western Scrub Jay	X	X	
FAMILY ALAUDIDAE	**LARKS**			
Eremophila alpestris	Horned Lark	X	---	WL
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Hirundo rustica	Barn Swallow	---	X	
Petrochelidon pyrrhonota	Cliff Swallow	---	X	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	X	---	
Tachycineta bicolor	Tree Swallow	---	X	
Tachycineta thalassina	Violet-green Swallow	---	X	
FAMILY PARIDAE	**CHICKADEE**			
Baeolophus inornatus	Oak Titmouse	---	X	
FAMILY AEGITHALIDAE	**BUSHTITS AND LONG-TAILED TITS**			
Psaltriparus minimus	Bushtit	X	X	
FAMILY TROGLODYTIDAE	**WRENS**			
Salpinctes obsoletus	Rock Wren	X	X	
Thryomanes bewickii	Bewick's Wren	X	X	

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY SYLVIIDAE	**OLD WORLD WARBLERS**			
Chamaea fasciata	Wrentit			
FAMILY TURDIDAE	**THRUSHS, SOLITAIRES AND BLUEBIRDS**			
Sialia mexicana	Western Bluebird	X	X	
FAMILY MIMIDAE	**MIMIC THRUSHES, OR MIMIDS**			
Mimus polyglottos	Northern Mockingbird	X	X	
Toxostoma redivivum	California Thrasher	X	X	
FAMILY STURNIDAE	**STARLINGS AND ALLIES**			
Sturnus vulgaris	*European Starling	X	X	
FAMILY PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens	Phainopepla	X	X	
FAMILY PARULIDAE	**WARBLERS**			
Geothlypis tolmiei	MacGillivray's Warbler	X	X	
Oreothlypis celata	Orange-crowned Warbler	---	X	
FAMILY EMBERIZIDAE	**SPARROWS AND TOWHEES**			
Aimophila ruficeps	Rufous-crowned Sparrow	---	X	
Chondestes grammacus	Lark Sparrow	---	X	
Melozone crissalis	California Towhee	X	X	
Melospiza melodia	Song Sparrow	X	X	
Pipilo maculatus	Spotted Towhee	---	X	
Spizella atrogularis	Black-chinned Sparrow	---	X	
Zonotrichia leucophrys	White-crowned Sparrow	X	X	
FAMILY CARDINALIDAE	**CARDINALS AND BUNTINGS**			
Passerina amoena	Lazuli Bunting	X	X	
Piranga ludoviciana	Western Tanager	X	X	
FAMILY ICTERIDAE	**BLACKBIRDS AND ALLIES**			
Agelaius phoeniceus	Red-winged Blackbird	---	X	
Icterus cucullatus	Hooded Oriole	---	X	
Molothrus ater	Brown-headed Cowbird	---	X	
FAMILY FRINGILLIDAE	**NEW WORLD SEEDEATERS**			
Haemorhous mexicanus	House Finch	X	X	
Spinus lawrencei	Lawrence's Goldfinch	X	X	
Spinus tristis	American Goldfinch	X		
FAMILY PASSERIDAE	**OLD WORLD SPARROWS**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Passer domesticus	*House Sparrow	X	X	
CLASS MAMMALIA	**MAMMALS (12)**			
FAMILY DIDELPHIDAE	**OPOSSUM**			
Didelphis virginiana	Virginia Opossum	X	---	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**			
Canis latrans	Coyote	X	X	
Canis lupus familiaris	Domestic Dog	X	X	
Urocyon cinereoargenteus	Gray Fox	X	---	
FAMILY PROCYONIDAE	**RACCOONS AND RINGTAILS**			
Procyon lotor	Raccoon	X	---	
FAMILY SCIURIDAE	**SQUIRRELS**			
Spermophilus beecheyi	California Ground Squirrel	X	X	
FAMILY GEOMYIDAE	**POCKET GOPHERS**			
Thomomys bottae	Southern Pocket Gopher	---	X	
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	---	X	CSC
Sylvilagus audubonii	Cottontail	X	X	
FAMILY FELIDAE	**CATS**			
Felis catus	Domestic cat	X	---	
Lynx rufus	Bobcat	X	---	
Puma concolor	Mountain Lion	X	---	
INVERTEBRATES				
CLASS INSECTA	**INSECTS (22)**			
FAMILY CERCOPOIDEA	**SPITTLE BUGS**			
Prosapia bicincta	Two-Lined Spittle Bug	X	X	
FAMILY APIDAE	**HONEY BEES**			
Apis mellifera	Honey Bee	---	X	
FAMILY RIODININAE	**METALMARKS**			
Apodemia virgulti	Mormon Metalmark	X	X	
FAMILY POLYOMMATINAE	**BLUE GOSSAMER-WINGED BUTTERFLIES**			
Brephidium exilis	Pygmy Blue Butterfly	---	X	
FAMILY PENTATOMIDAE	**STINK BUGS**			
Chlorochroa sayi	Say's Stinking Bug	---	X	
FAMILY COLIADINAE	**SULPHER BUTTERFLIES**			

SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	Status
Colias eurytheme	Orange Sulpher	---	X	
FAMILY SCARABAEIDAE	**SCARAB BEETLE**			
Cotinus mutabilis	Green Fruit Beetle	X	X	
FAMILY TENEBRIONIDAE	**DARKLING BEETLES**			
Eleodes acutus	Stink beetle	X	X	
FAMILY APHIDIDAE	**APHIDS**			
Toxoptera aurantii	Aphids	---	X	
FAMILY CULICIDAE	**MOSQUITOES**			
Culex quinquefasciatus	Mosquito	---	X	
FAMILY FORFICULIDAE	**EARWIGS**			
Forficula auricularia	European Earwigs	---	X	
FAMILY BOMBYLIIDAE	**ROBBER FLIES**			
Mallophora fautrix	Robber fly	X	X	
FAMILY MUSCIDAE	**HOUSE FLY**			
Musca domestica	Common House Fly	X	X	
FAMILY PAPILIONIDAE	**SWALLOWTAIL**			
Papilio rutulus	Western Tiger Swallowtail Butterfly	---	X	
FAMILY POMPILIDAE	**SPIDER WASPS**			
Pepsis chrysothymus	Tarantula Hawk	X	X	
FAMILY PIERIDAE	**CABBAGE BUTTERFLIES**			
Pieris protodice	Common White Butterfly	X	X	
Pieris rapae	Cabbage White		X	
FAMILY FORMICIDAE	**HARVESTER ANT**			
Pogonomyrmex californicus	California Harvester Ant	X	X	
FAMILY VESPIDAE	**SOCIAL WASP**			
Polistes excaimans	Paper wasp	---	X	
FAMILY ACRIDIDAE	**COMMON GRASSHOPPER**			
Trimerotropis pallidipennis	Pallid Band-wing	---	X	
FAMILY NYMPHALIDAE	**PAINTED LADY'S**			
Vanessa cardui	Painted Lady	X	X	
CLASS ARACHNIDA	**SPIDERS, MITES, TICKS AND SCORPIONS (1)**			
FAMILY CTENIZIDAE	**TRAP DOOR SPIDER**			
Bothriocyrtum californicum	California Trapdoor Spider	X	X	

APPENDIX H

L&L Report: Jurisdictional Delineation

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

JURISDICTIONAL DELINEATION for TTM 36544, AKA SKYLINE HEIGHTS PROJECT CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA

±271 Acre Property, ±271 Acres Surveyed

APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006, County of Riverside, Sections 3, 4, & 9, Township 4 South, Range 7 West, USGS Corona South [1982] 7.5' Topographic Quadrangle Map

Prepared For:

Mike Byer
Richland Communities, LLC
3161 Michelson Drive, Suite 425
Irvine, CA 92612
949-383-4137

Prepared By:

Leslie Irish, Principal & Delineator — lirish@llenviroinc.com
Ann Lopez, Delineator — alopez@llenviroinc.com
Jeffrey Sonnentag, GIS Specialist — jsonnentag@llenviroinc.com

Report Summary:

Jurisdictional areas calculated in the survey area include 10.2 acres of State of California Streambeds Jurisdiction. Within the 10.2 acres, 2.16 acres is considered ACOE non wetland "waters" of the U.S. No Federal wetlands were found in the survey area. Based on the current development plans provided by KWC Engineers the project will impact 6.17 acres of State of California, Department of Fish and Wildlife Jurisdiction and 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS).

The area identified as California Streambeds also qualifies as MSHCP Riparian/Riverine habitat. Therefore, 10.2 acres of Riparian/Riverine habitat is present in the survey area and 6.17 acres are proposed for impacts. Of the 6.17 acers 0.72 acres are considered Riparian.

Delineation Conducted By: Leslie Irish & Ann Lopez
Field Verified On: February 21, 2015
Report Date: March 2015

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MANAGEMENT SUMMARY

At the request of Richland Communities, LLC, L&L Environmental, Inc. (L&L) conducted a third party review and produced an updated Section 404, jurisdictional wetland delineation on Skyline Heights (TTM 36544), a residential development located in the County of Riverside, planned for Annexation into the City of Corona, California.

The purpose of the jurisdictional delineation is to quantify the portion of the project site that is subject to jurisdiction of the U. S. Army Corps of Engineers (ACOE), the California Department of Fish and Wildlife (CDFW), the Regional Water Quality Control Board, and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Section 6.1.2. The jurisdictional determination was performed in order to describe and quantify the project site's wetland and non-wetland waters of the United States and State drainages. This information is required in order to complete the Clean Water Act (CWA) Section 404 permitting process, the Streambed Alteration Agreement and the Water Quality Control Board Certification.

In a Report Dated: August 1, 2013, revised: April 23, 2014 and Updated: 11-23-14, Gonzales Environmental Consulting, LLC (GEC) delineated features and described jurisdiction. Following this L&L conducted a third party review and analysis of the same features via examination of the GEC report, plus aerial photographs, topographical mapping and checking of drainage features within and immediately downstream of the property.

L&L GIS specialist Jeff Sonnentag, and L&L delineators Ann Lopez and Leslie Irish spent approximately 80 person hours evaluating available maps, photos and documents related to the project. Following this, L&L delineators Leslie Irish and Ann Lopez conducted field visits and verified drainages during two separate site visits in the months of December 2014 and February and March 2015, spending approximately 60 person hours at the site.

L&L's evaluation consisted of a review of topographic maps, soils information, and examination of vegetation, soils, and hydrology according to the ACOE three-parameter (vegetation, soils, and hydrology) method of wetland delineation (U. S. Department of the Army 1987).

L&L found seven (7) jurisdictional features containing fifty-six (56) tributaries, for a total of 63 features of which three (3) are USGS mapped blueline streams. The 63 Non-Relatively Permanent Water (Non-RPW) features (i.e., ephemeral carriers of periodic rainfall) were identified within the project footprint during the present survey. Water flow that occurs is not permanent or present seasonally for long periods. Soon after rainfall ends flow ceases (ephemeral) and is absorbed into the sandy soils.

Vegetation in and adjacent to drainages includes *Quercus agrifolia* Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, Schinus Alliance and disturbed. Riparian habitats that were in or adjacent to drainages fell within State jurisdiction.

Jurisdictional areas calculated in the project area include 10.2 acres of State of California Streambeds Jurisdiction. Within the 10.2 acres, 2.16 acres is considered ACOE non wetland "waters" of the U.S. No Federal wetlands were found in the project area. Based on the current development plans provided by KWC Engineers the project will impact 6.17 acres of State of California, Department of Fish and Wildlife Jurisdiction and 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS).

The area identified as California Streambeds also qualifies as MSHCP Riparian or Riverine habitat. Therefore, 10.2 acres of Riparian and/or Riverine habitat is present in the project area and 6.17 acres are proposed for impacts. Of the 6.17 acres 0.72 acres are considered Riparian and State Wetland impacts.

As a result of these findings, L&L advises the client that permits for impacts to federal and state drainages are required for the Skyline project prior to any disturbance to soils or vegetation on the property.

1.0) INTRODUCTION

The following report has been prepared for Richland Communities, LLC by L&L Environmental, Inc. This report was prepared to accompany notifications or applications to the U. S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board, and California Department of Fish and Wildlife (CDFW) for permits or agreements under applicable federal and state laws. The project site, covering APNs 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006, is located immediately adjacent to the southwest of the City of Corona, County of Riverside, California.

This report will also be required under CEQA by the City of Corona and the Wildlife Agencies under the Western Riverside County MSHCP for evaluation of project related impacts to sensitive habitats including the resources defined in Section 6.1.2, Riparian and Riverine Habitats.

Elevation on the site ranges between approximately 1,160 to 1,420 above mean sea level (MSL). Topographic features in the project area include steep topography, generally increasing in elevation from the northeast to the southwest. Canyons and ravines are present on the project site which receive and transmit natural drainage flows downstream, to the Santa Ana River and ultimately the Pacific Ocean.

Project Description

A Conceptual Site Plan has been prepared for the project and will consist of two (2) graded areas. The area north of Mabey Canyon will contain 45 Single Family lots and the area to the south of Mabey Canyon will contain 247 Single Family lots. Combined, a total of 292 Single Family Low Density Residential lots will be constructed with a project density of 1.08 du/ac.

The project will be built in three map recording phases. The primary access to the site is from the future westerly extension of Foothill Parkway proposed by the City of Corona.

Grading for the Skyline Heights Project is anticipated to begin about the first quarter of 2016. The site will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the project development. The anticipated maximum cut and fill depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor. The minimum and maximum pad elevations served will be 1220 and 1416, respectively.

Not a Part

The City of Corona is in the process of building Foothill Parkway and infrastructure improvements along the Skyline project frontage. This City of Corona Foothill Parkway Westerly Extension Capital Improvement Project will impact and construct the extreme eastern portion of the Skyline project. Impacts related to this construction have been considered in a separate document and are not a part of this project report. The Skyline development plan assumes that Foothill Parkway will be constructed prior to the construction of the Skyline project.

A 10 acre US Forest Service owned "not a part" parcel is surrounded by the Skyline Heights Project. This parcel is avoided by the project and similarly will not be considered further in this report (Figures 2 and 3).

Planned Drainage Design Facilities within the Project Footprint

The project design will impact canyons, ravines and drainages that run across the project site including two of the three mapped blue line streams on the property. Mabey Canyon, located in the northern portion of the project near Mabey Canyon Road has a tributary area of approximately 930 acres currently draining to the existing Mabey Canyon Debris Basin. As a part of the avoidance and minimization efforts the project site is not proposing to grade or alter the Mabey Canyon streambed.

Two detention basins are proposed within the project site to detain the increased runoff flows from the project development and are identified on Tentative Tract Map 36544.

The project hydrology and storm drain system will be designed in accordance with recent City of Corona and Riverside County Flood Control & Water Conservation District's design requirements. The onsite storm drain pipes, laterals, catch basins, and inlet and outlet structures are to be publicly maintained by the City of Corona. The proposed detention basins are designated to be publicly maintained by the City of Corona.

Other Facilities and Infrastructure

Portions of other facilities that will impact drainages include infrastructure improvements, water and sewer systems, a ±0.6 MG above ground DN Type 1 (pre-stressed concrete) tank water reservoir, sized to accommodate storage for 247 lots, a Booster Pump station and a recycled water system connecting with improvements in Foothill Parkway.

2.0) Project Location

The Skyline Heights Project is located within the extreme western portion of the County of Riverside (Figure 1), and is planned for annexation into the City of Corona. More specifically the project site is located south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive in the Corona area of Riverside County, California, within parts of Sections 3, 4, & 9, Township 4 South, Range 7 West, USGS Corona South [1982] quadrangle Map (Figure 2). The northwestern property corner is located at 33.855422° N, -117.614709° E and the southeasterly property corner is located at 33.838730° N, -117.602972° E.

The site is generally bounded to the north and east by single-family residences or areas that have been graded for lots and on the south and west by the Cleveland National Forest and large privately owned parcels (Figure 3). Within the general boundaries of the project site is an undeveloped 10.0-acre parcel which is considered “Not a Part” and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded Forest Service access road, is located just to the south of the project site. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.



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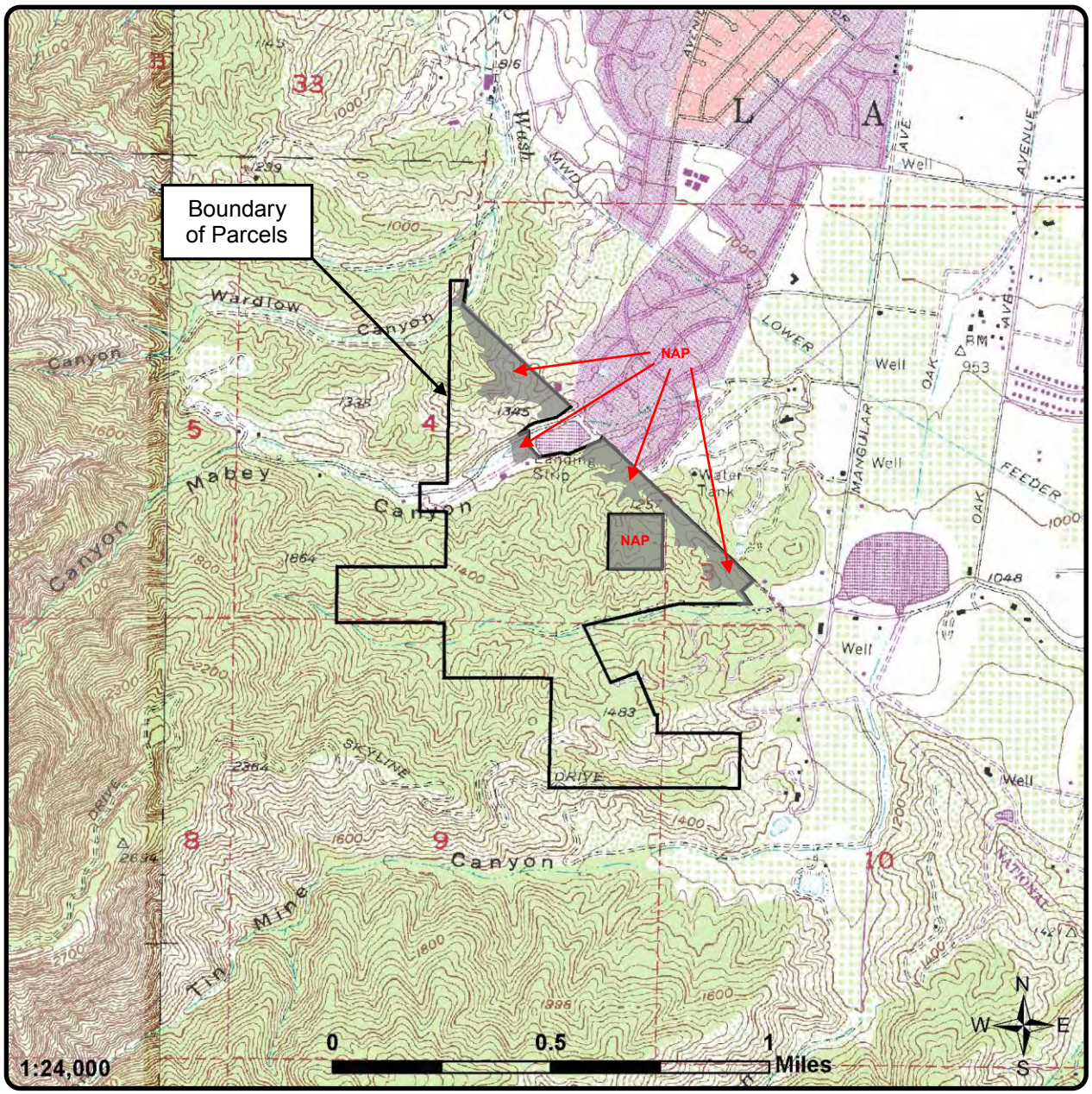
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 1

Project Vicinity Map

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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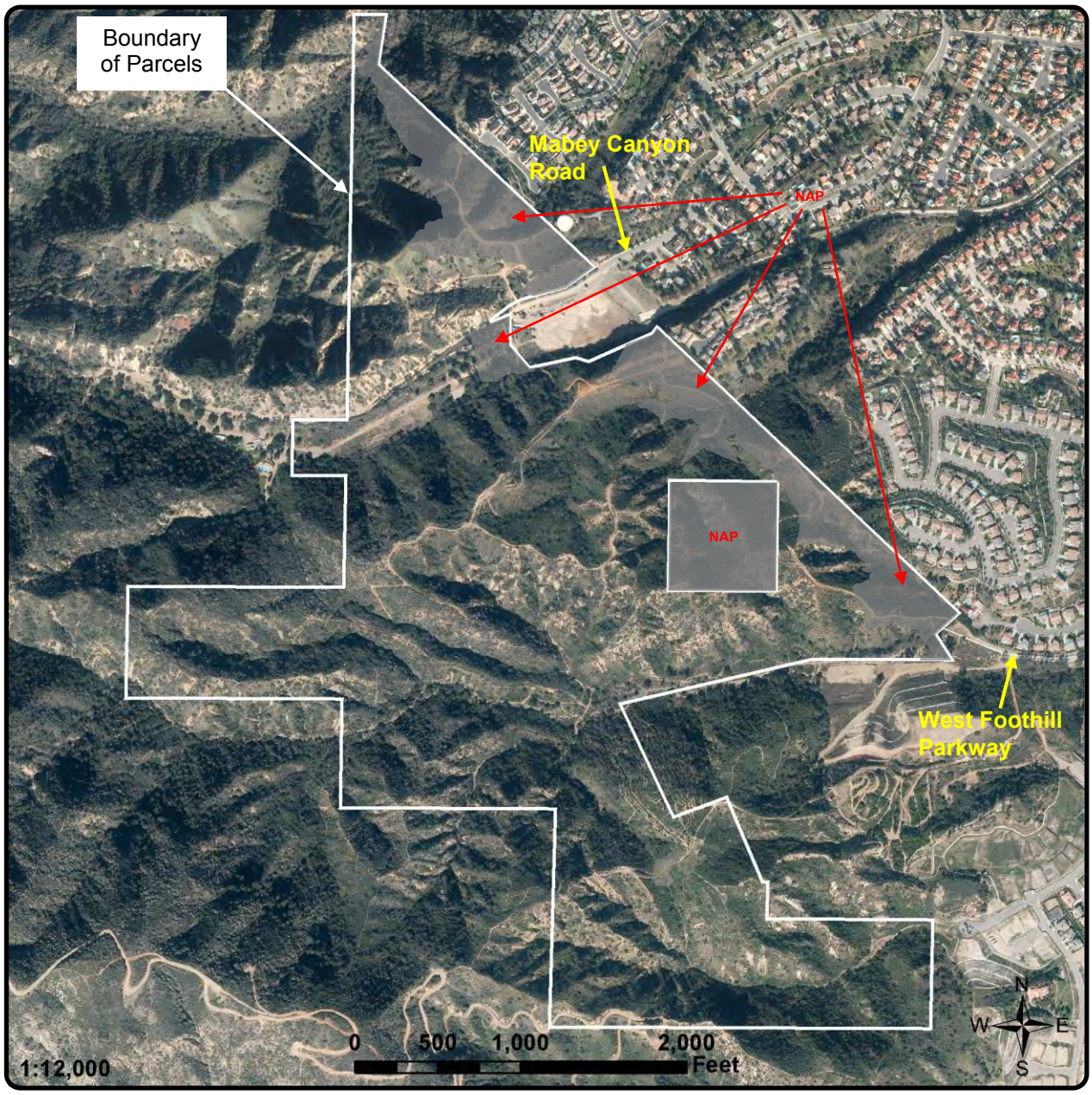
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

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Figure 2

Project Location Map
(USGS Corona South [1982] quadrangle,
Sections 3, 4, 9, & 10, Township 4 South, Range 7 West)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 3

Aerial Photograph
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

3.0) REGULATORY ENVIRONMENT

3.1) Jurisdictional Criteria

Section 404 of the federal Clean Water Act applies to "Waters of the United States" (WoUS). By definition these include waterways, streams, and intermittent streams that could be used for interstate commerce, and their tributaries. In non-tidal waters the limits of jurisdiction are "ordinary high water marks" (OHWM) such as stream banks. Where wetlands occur above high water marks they are considered "adjacent wetlands" and are included within ACOE jurisdiction. The term "interstate commerce" has been broadly interpreted to include use by migratory waterfowl or out-of-state tourists and ACOE jurisdiction has often been extended to wetlands not adjacent to WoUS ("isolated wetlands").

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

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

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

Under MSHCP Volume 1 Section 6.1.2 areas associated with wetland and streambed systems must be evaluated for consideration as riparian/riverine or vernal pool habitat. Riparian/riverine areas are defined within the MSHCP as:

> ". . . lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year." MSHCP Vol. 1, Section 6.1.2.

Vernal pools are defined within the MSHCP as:

> ". . . seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. . . ." MSHCP Vol. 1, Section 6.1.2.

3.2) Evaluation Criteria

According to the Clean Water Act (as amended in 1977) and the Corps of Engineers Wetlands Delineation Manual (1987), a "wetland" is a site that is "inundated or saturated . . . at a frequency and duration sufficient to support . . . vegetation typically adapted for life in saturated soil conditions. . . ." Soil saturation deprives plant roots of oxygen, limiting the types of plants that can grow. Absence of oxygen leads to reducing chemical conditions (rather than oxidizing conditions) and development of unique soil types (hydric soils). The ACOE evaluates wetlands by three criteria: hydrology, soils, and vegetation. Under the federal delineation procedure, a site must normally satisfy all three criteria to be classified as a wetland. At its discretion, CDFW may regard a site as a wetland based on only one listed criterion.

The hydrology criterion evaluates the presence of water based on observed flooding or inundation or on indirect evidence such as high water marks, drift lines, or sediment deposits. The soils criterion is based on "hydric" soil characteristics, such as certain colors and mottling that develop under wetland conditions. (These characteristics generally do not develop in sandy soils found in many southern California streambeds.) The vegetation criterion evaluates plant species growing on a site. Most plants cannot survive extended periods of root saturation and are called "obligate upland" species. Others grow almost exclusively in wetlands habitats, while still others may be found growing in both wetlands and uplands. These are called "obligate wetlands" or "facultative wetlands" species, respectively. While the federal ACOE criteria are used to evaluate the presence or absence of wetlands within the project site, the determination of state wetland status is not based on the combined presence of the three criterion because the state can take jurisdiction of any one of the three: (1) the presence of water open or saturated soils, (2) presence of vegetation including riparian or wetland species and /or (3) water modified or oxygen depleted soils.

Traditional Navigable Waters (TNWs) and Relatively Permanent Waters (RPWs), where water flows for three (3) or more months per year, are jurisdictional by definition; however, for Non-Relatively Permanent Waters (Non-RPWs) data and analysis supporting “significant nexus” must be provided to justify ACOE jurisdiction. Erosional features (i.e., small and large gullies), swales, and excavated roadside ditches are usually not considered jurisdictional.

Significant Nexus for Non-RPWs is determined by evaluating a feature for presence of “more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of TNWs.” According to the “U. S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook” (5/30/2007):

> Ephemeral waters in the arid west that are tributaries may have a significant nexus to a TNW. For example, in some cases they may serve as a critical

transitional area between the upland environment and the traditional navigable waters. Such ephemeral tributaries, with the associated riparian corridor, may provide refugia, foraging and breeding opportunities in areas that may have limited stands of vegetation and water due to the environmental conditions of the arid southwest. During and following precipitation events, ephemeral tributaries collect and transport water or sometimes sediment from the upper reaches of the landscape to the traditional navigable waters. These ephemeral tributaries, and associated riparian corridors, may provide habitat for wildlife and aquatic organisms. These biological and physical processes may further support nutrient cycling, sediment retention and transport, pollutant trapping and filtration, and improvement of water quality, functions that may affect the integrity of a TNW.

. . . Specifically, an evaluation will be made of the frequency, volume, and duration of flow; proximity to the TNW; capacity to transfer nutrients and organic carbon vital to support food webs; habitat services such as providing spawning areas for important aquatic species; functions related to the maintenance of water quality such as sediment trapping; and other relevant factors. In some cases, even tributaries that are relatively distant from a TNW may have a significant nexus with the TNW.

4.0) METHODS

Potential for occurrence of wetlands and WoUS within the project site was evaluated through a literature review and a visit to the property. The literature reviewed included a previous jurisdictional delineation and various other reports and studies conducted GEC, prior to 2015. L&L also reviewed the project topographical mapping provided by KWC Engineers, aerial photography provided by Google Maps and Google Earth or others and soils maps and descriptions (NRCS 1971), topographic maps (USDA Nat. Res. Cons. Serv. SSURGO Data), the list of Hydric Soils by US Department of Agriculture, Soil Conservation Service (USDA SCS, 1985), the list of wetland plants in California (Reed, 1988), and the Arid West Supplement.

Before visiting the project site a detailed topographic map of the property (received from KWC) was studied. All features evident on the map were marked and considered potential WoUS to be evaluated in the field. The feature systems were labeled 1, through 7 for reference in the field and in this report. All features were examined in the field either on foot or from adjacent ridgelines.

Soil maps and descriptions of local soils from the USDA Natural Resources Conservation Service (Soil Survey Geographic [SSURGO] Database - websoilsurvey.nrcs.usda.gov/app/) were evaluated for their properties relating to potential wetlands. Soil conditions onsite were noted during the field visit and discrepancies between observations and SCS descriptions were evaluated using a “Munsell color chart.”

Dominant plant species were listed along with any potential indicators of wetland conditions. The outside dripline of vegetation was incorporated into the jurisdiction if it was considered to be a portion of the drainage system. Where half or more of the dominant plant species on a site are ranked as "obligate wetland," "facultative wetland," or "facultative" species (OBL, FACW, or FAC, respectively, see Table 1) we considered it a State Wetland.

Table 1. Summary of Wetlands Vegetation Criteria

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (Estimated probability 67%-99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (est. probability 34%-66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67%-99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

Riparian/Riverine and Vernal Pools

In conformance with the MSHCP, this report addresses riparian/riverine areas and vernal pools within the feature descriptions of each system. Where riparian vegetation is associated with features (and to the extent that it is native to California) we considered it suitable for a designation as riparian under the MSHCP. Where flows evidence some level of energy, at least ephemerally, we considered them riverine in the broadest sense. To meet the definition of a vernal pool three factors must be addressed: suitable soils and soils conditions, proper hydrology, and one or more indicator species. L&L evaluated the soils maps and the site condition for potential to support fairy shrimp or vernal pool species.

5.0) RESULTS

Current Condition and Uses

During the literature review and site visits L&L determined that portions of the project site have been disturbed by anthropogenic activities including retaining walls and a constructed small plane run-way, etc. A network of dirt roads and tails cross the property and as a result some vegetation has been disturbed by fire roads, human access and various adjacent land uses.

Similar to many other open space areas in the urbanized sections near the Santa Ana Mountains; the area attracts a prodigious amount of off-road vehicle, mountain biking and hiking enthusiasts. At least one paved and a number of unimproved hiking trails feed day walkers to the Skyline project and surrounding lands. Many families enjoy the area with dogs on and off the leash. These frequent visitors have disrupted some of the habitat wildlife in the area.

Areas uphill and away from the existing development are relatively undisturbed or less disturbed and include several assemblages of xeric scrub and facultative communities.

The nearest Traditional Navigable Water (TNW) is the Pacific Ocean, which is located 18.31 miles away. The nearest Relatively Permanent Water (RPW) is the Santa Ana River, which is located 2.25 miles away.

A riparian corridor, in the form of Coastal Live Oak, patches of sycamore and willow and or a narrow band of mulefat, is located within Features 1, 3, 6 and 7. Several debris basins are present at the lower end of the hillside and these areas are capable of slowing and containing large amounts of water resulting in reduction of energy, reduced erosion and increased water quality in hillside runoff.

5.1) Hydrology

L&L identified seven (7) jurisdictional features containing fifty six (56) tributaries, for a total of 63 features of which three (3) are USGS mapped blueline streams. The 63 features are Non-Relatively Permanent Water (Non-RPW) features (i.e., ephemeral carriers of periodic rainfall). Water flow that occurs is not permanent nor is it present seasonally for long periods. Soon after rainfall ends flow ceases (ephemeral) and is absorbed into the sandy soils. Hydrologic indicators that occur periodically in the features include drift lines, sediment deposits and/or water marks.

The drainages were numbered as they occur from south to north. Table 2 summarizes the jurisdictional features on the project site, Table 6 in Appendix A provides data for each individual

feature including the drainage tributaries. Figure 4 shows the location of all of the features including tributaries. The drainage widths are not shown to scale in Figure 4 as they are in Figures 5 and 6, because the minor tributaries become obscured. Figure 12 in Appendix D is shown at a larger scale and is able to include more drainage detail.

Table 2. Drainage Summary.

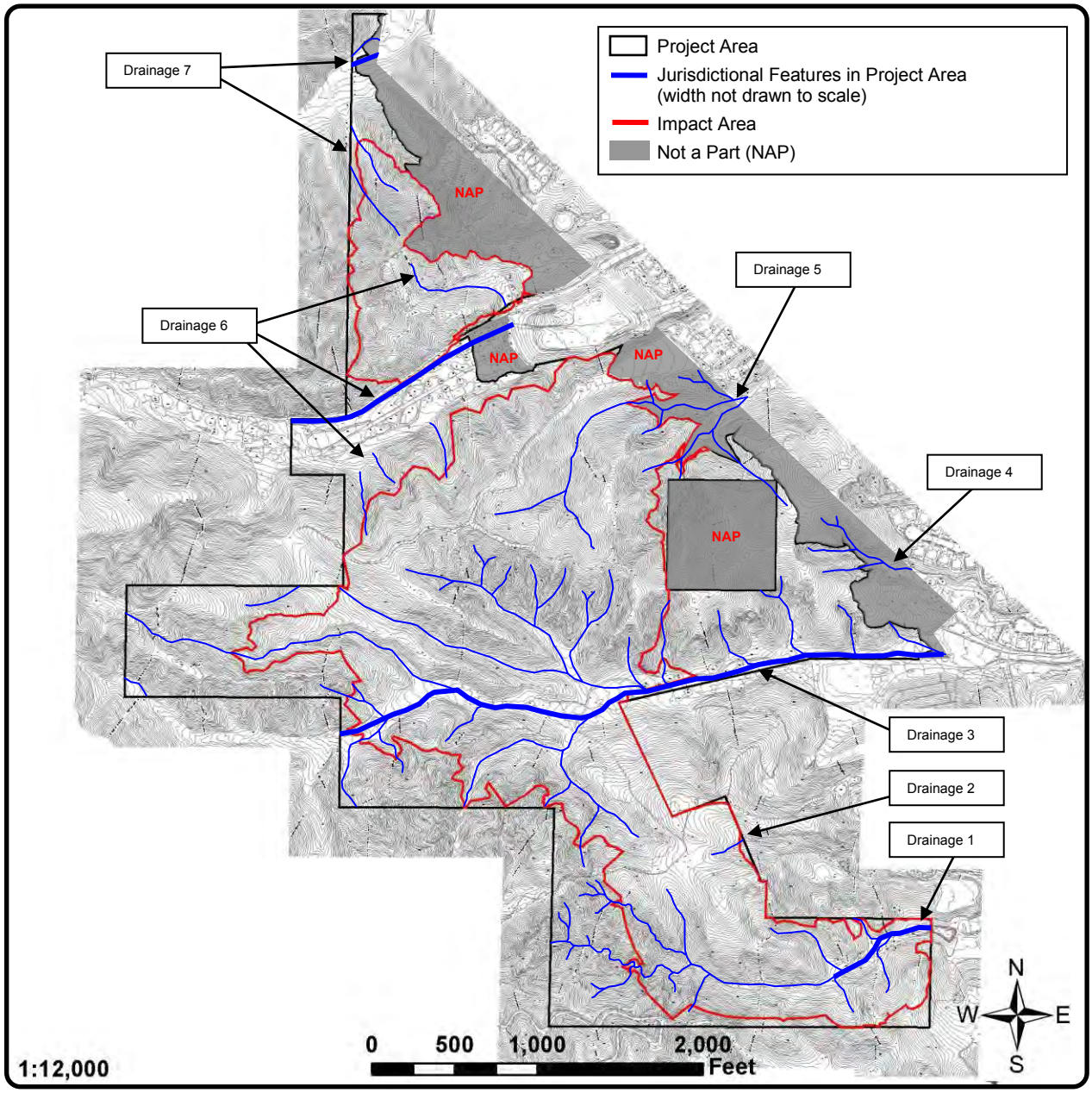
Feature	State Streambeds within the Project Area			Federal Features within the Project Area			MSHCP Rip/Riv Habitat within the Project Area	
(including tributaries)	Sq. ft.	Acres	Length	Sq. ft.	Acres	Length	Sq. ft.	Acres
F-1	51,177	1.17	7416	38605	0.886	6069	51,177	1.17
F-2	232	0.005	211	56	0.001	70	232	0.005
F-3	326,559	7.5	19,781	29,953	0.688	14,840	326,559	7.5
F-4	834	0.019	502	87	0.002	145	834	0.019
F-5	11,652	0.27	2,346	1559	0.036	1537	11,652	0.27
F-6	53,336	1.2	904	23,504	0.54	904	53,336	1.2
F-7	574	0.013	99	376	0.009	99	574	0.013
Total	**444,364**	**10.2ac**	**31,259**	**94,140**	**2.16ac**	**23,664**	**444,364**	**10.2ac**

5.1.1) Feature – 1 (Previously referred to by GEC as D-2)

Feature 1 is located in the southernmost parcel of the survey area. It is composed of a main drainage (F-1), 13 tributaries (F1a – F1m) and seven secondary tributaries. The tributaries are lettered a-m starting in the east and proceeding west along the main drainage line. Feature 1 enters the Property at the western boundary and flows east. After crossing the eastern project boundary the water flow enters into a basin at the terminus of Trudy Way.

Feature 1 supports mostly upland species with two areas of coast live oak woodland at the eastern Property boundary. At the time of the field visit no water was present in the main Feature or its tributaries. All of which were determined to be ephemeral. Portions of F-1 have been disturbed to the point that jurisdiction is difficult to characterize.

The overall length of Feature 1 and its tributaries is 7416 lf. state jurisdiction, 6,069 lf. federal jurisdiction. This feature comprises 51,177 sq. ft. (1.17 acres) of state streambed and 38,605 sq. ft. (0.89 acres) of federal WoUS. The current project design will impact approximately 42,594 sq. ft. (0.98 acres) of state streambeds, and 38,252 sq. ft. (0.88 acres) of federal jurisdiction.



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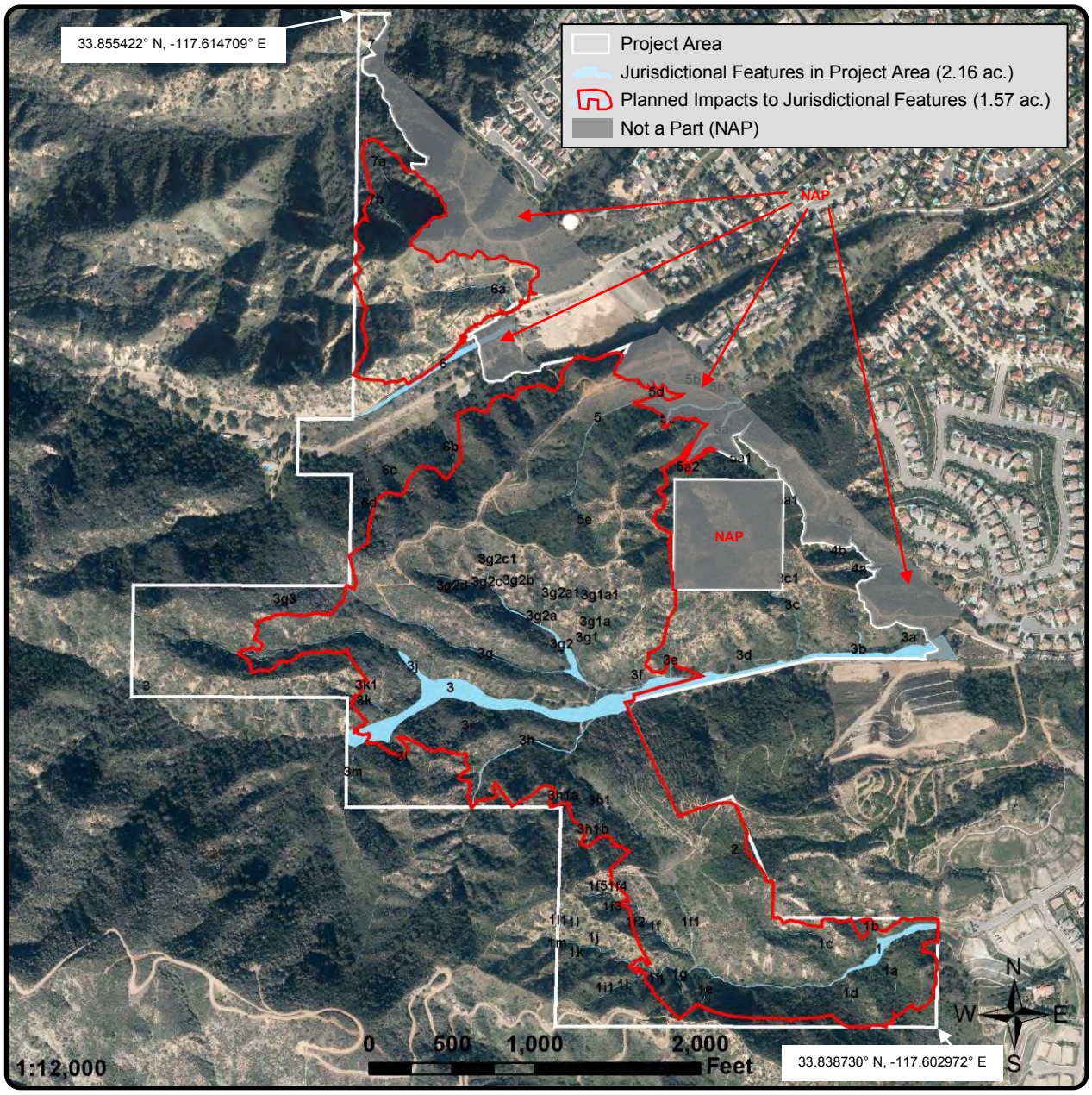
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Figure 4

Jurisdictional Feature Map
(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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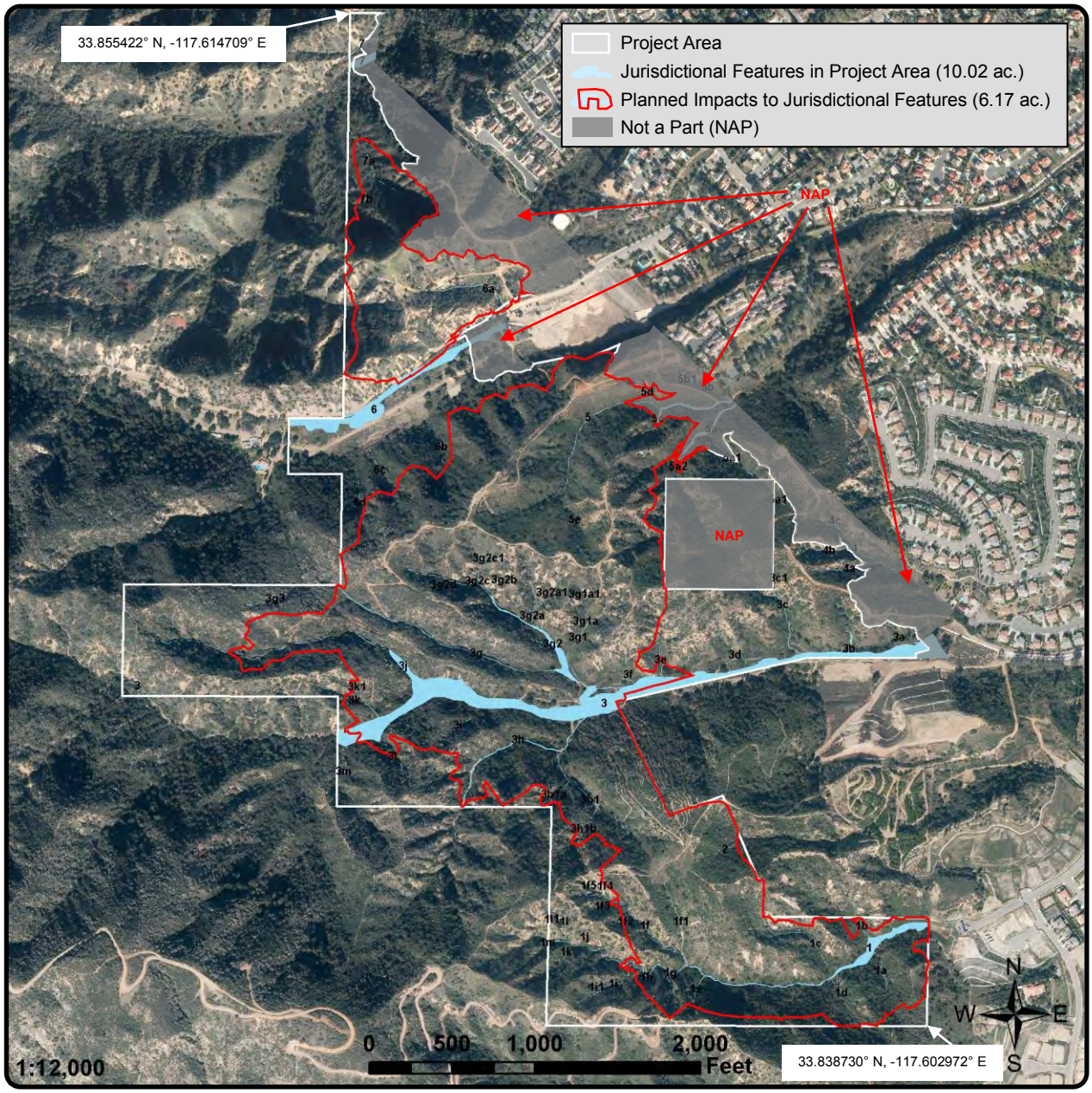
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Figure 5

ACoE Feature Impacts
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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Figure 6

CDFW Feature Impacts
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

5.1.2) Feature 2

Feature 2 is located in the southern portion of the Project site, but north of Feature 1. This feature is comprised of a single drainage with no tributaries. It begins just inside of the eastern Property boundary and flows east. After leaving the property Feature 2 passes through open space into agricultural land and ends near the terminus of the West Foothill Parkway.

Feature 2 supports upland species and at the time of the field visit no water was present. The feature was determined to be ephemeral. The length of Feature 2 is 211 lf. state jurisdiction, 70 lf. federal jurisdiction. It comprises 232 sq. ft. (0.005 acres) of state streambed and 56 sq. ft. (0.001 acres) of federal WoUS. The current project design will impact approximately 191 sq. ft. (0.004 acres) of state streambeds, and 56 sq. ft. (0.001 acres) of federal jurisdiction.

5.1.3) Feature 3 (Previously referred to by GEC as D-1)

Feature 3 is an unnamed blue line stream. It is composed of a main drainage (F-3), 13 tributaries (F3a – F3m) and 16 secondary tributaries. The tributaries are lettered a-m starting in the east and proceeding west along the main drainage line. Feature 3 is located close to the center of the survey area. It enters the Property at the western boundary and flows east, before being funneled into a drainage which leads to Oak Hills flood control facility.

Feature 3 supports islands of coast live oak Alliance, willow Alliance, sycamore Alliance and Eucalyptus and Pepper Alliance, but they are not contiguous and are generally small in size. The remainder of the feature is vegetated by upland species. At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral. The overall length of Feature 3 and its tributaries is 19,781 lf. state jurisdiction and 14,840 lf. federal jurisdiction. The feature comprises 326,559 sq. ft. (7.5 acres) of state streambed and 29,953 sq. ft. (0.69 acres) of federal WoUS. The current project design will impact approximately 219,064 sq. ft. (5.03 acres) of state streambeds, and 28,825 sq. ft. (0.66 acres) of federal jurisdiction.

5.1.4) Feature 4

Feature 4 is located east of the 10 acre Public/Quasi Public Land parcel that the survey area surrounds, but that is not a part of the Project. Feature 4 is composed of a main drainage (F-4) and 3 tributaries (F4a – F4c). The tributaries are lettered a-c starting in the east and proceeding west along the main drainage line. The feature starts onsite and flows east. It leaves the survey area near the terminus of Meadow Crest Circle.

Feature 4 supports upland species within the survey area. At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral. The overall length of Feature 4 and its tributaries is 502 lf. state jurisdiction, 145 lf. federal jurisdiction. This feature comprises 834 sq. ft. (0.019 acres) of state streambed and 145 sq. ft. (0.003 acres) of federal WoUS. The main drainage of Feature 4 (F-4) and tributary 4c fall outside of the Skyline Heights project boundary in the Foothill Parkway impact area. The current project design will not impact any portion of Feature 4.

5.1.5) Feature 5

Feature 5 is located north of the 10 acre Public/Quasi Public parcel the survey area surrounds, but that is not a part of the project. It is composed of a main drainage (F-5), 5 tributaries (F5a – F5e) and three secondary tributaries. The tributaries are lettered a-e starting in the east and proceeding west along the main drainage line. The feature starts onsite and flows east. It leaves the Project site south of the terminus of Border Avenue.

Feature 5 supports upland species within the survey area. At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral. The overall length of Feature 5 and its tributaries is 2346 lf. state jurisdiction, 1537 lf. federal jurisdiction. This feature comprises 11,652 sq. ft. (0.27 acres) of state streambed and 1559 sq. ft. (0.04 acres) of federal WoUS. Feature 5b and 5b1 fall outside of the Skyline Heights project boundary in the Foothill Parkway impact area. The current project design will impact approximately 3298 sq. ft. (0.08 acres) of state streambeds, and 1427 sq. ft. (0.03 acres) of federal jurisdiction within Feature 5.

5.1.6) Feature 6 (aka Mabey Canyon Wash)

Feature 6 is located at the northern half of the project site. This feature is a blue-line stream also known as Mabey Canyon Wash. It is composed of a main drainage (F-6) and three tributaries (F6a – F6c). The tributaries are lettered a-c starting in the east and proceeding west along the main drainage line. The drainage starts offsite to the west, enters the western project boundary and flows east across the entire width of the project site. As Feature 6 leaves the Project area at the eastern boundary it flows into an offsite flood control basin located at the terminus of Mabey Canyon Road.

Feature 6 supports mulefat scrub Alliance along the length of the drainage with two islands of coast live oak Alliance near the western Property boundary and Eucalyptus and Pepper Alliance near the eastern Property boundary. At the time of the field visit no water was present in the main Feature or its tributaries. The main drainage of Feature 6; was determined to be

ephemeral. The tributaries to Feature 6 do not connect to Navigable waters due to a blockage and private road, therefore they are not considered state or federal jurisdiction. The length of the Feature 6 jurisdictional area (main drainage only) is 904 lf. state and federal jurisdiction. The feature comprises 53,336 sq. ft. (1.2 acres) of state streambed and 23,504 sq. ft. (0.54 acres) of federal WoUS. The current project design will impact approximately 3,694 sq. ft. (0.084 acres) of state streambeds.

5.1.7) Feature 7 (aka Wardlow Wash)

Feature 7 is located at the far north section of the project. This feature is a blue-line stream also known as Wardlow Wash. It is composed of a main drainage (F-7) and two tributaries. The tributaries are lettered a-b starting in the east and proceeding west along the main drainage line. Feature 7 enters the Property at the western boundary and flows east. After crossing the eastern project boundary the water flows northeast.

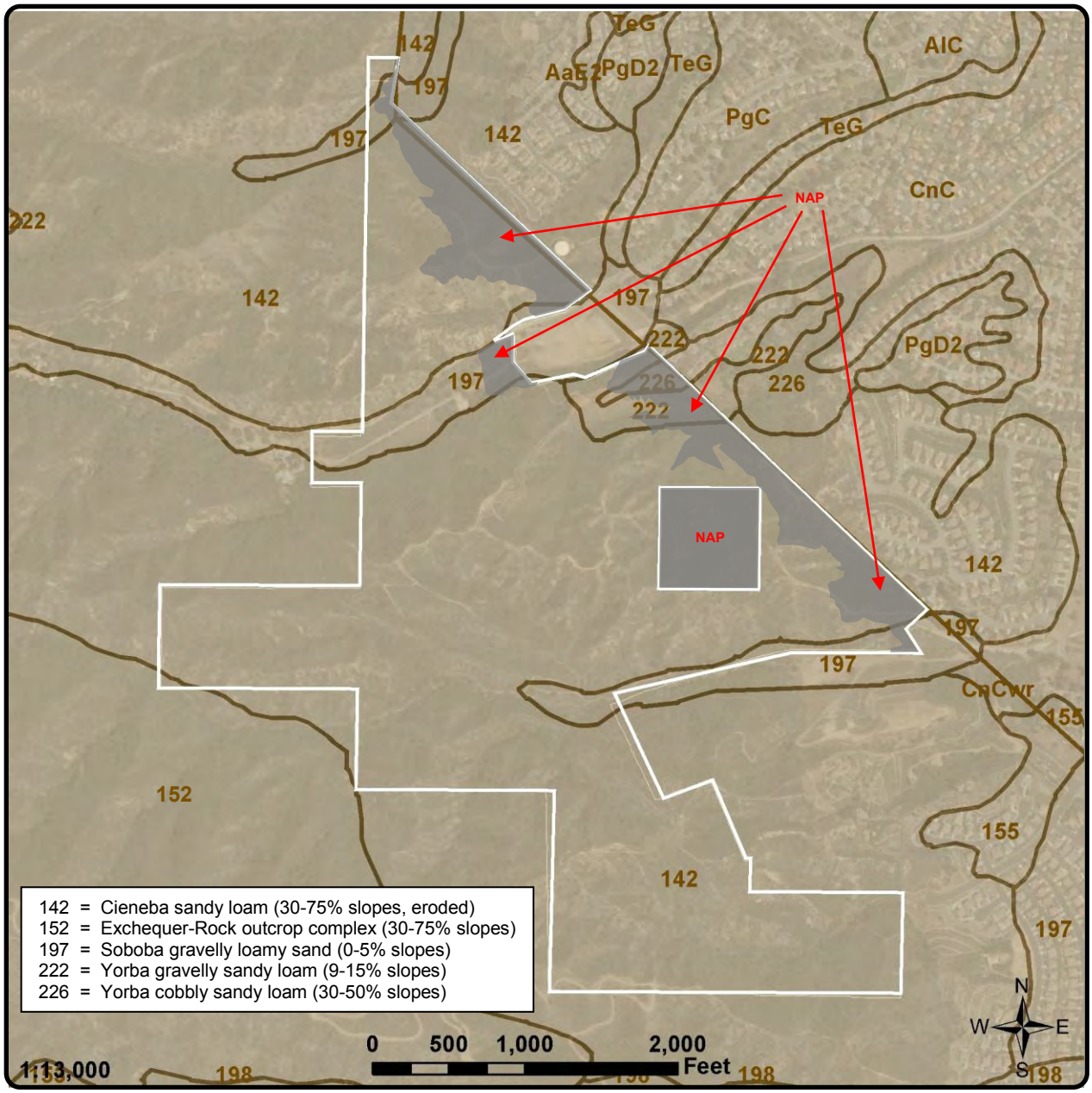
Feature 7 supports mulefat Alliance. At the time of the field visit no water was present in the main Feature or its tributaries. The main drainage of Feature 7; was determined to be ephemeral. The tributaries to Feature 7 flow into an open area and do not connect to Navigable waters, therefore they were not considered state or federal jurisdiction. The length of the Feature 7 jurisdictional area (main drainage only) is 99 lf. state and federal jurisdiction. This feature comprises 574 sq. ft. (0.013 acres) of state streambed and 376 sq. ft. (0.008 acres) of federal WoUS. The project will not impact this feature.

5.2) Soils

Soil Survey Geographic (SSURGO) Database shapefiles identify four (4) soil mapping units on the portions of the site surveyed in the following groups: Cieneba sandy loam, Soboba gravelly loamy sand, Yorba gravelly sandy loam and Yorba cobbly sandy loam (Table 3-Figure 7).

TABLE 3
Soil Series Mapped for the Project Area

Symbol	Name	Description
142	Cieneba sandy loam, 30-75% slopes, eroded	Steep to very steep soil consisting of somewhat excessively drained soils. These soils formed in material weathered from granitic rocks of the Santa Ana Mountains and from the sandstone of the coastal foothills. Slopes are 30-75% eroded. Elevations range from 200-4000 ft. The average annual rainfall ranges from 14-25 inches, the average annual temperature from 59-62 degrees F, and the average frost-free season from 200-340 days. The vegetation is mainly brush.
197	Soboba gravelly loamy sand, 0-5% slopes	Nearly level to gently sloping soil generally occurs as long, narrow areas along stream channels. Slopes are 0-5%. Elevations range from 50-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs cactus, brush and some trees.
222	Yorba gravelly sandy loam, 9-15% slopes	Strongly sloping soil generally occurs on terraces. Slopes are 9-15%. Elevations range from 100-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs, cactus, and some sagebrush.
226	Yorba cobbly sandy loam, 30-50% slopes	Strongly sloping soil generally occurs on terraces. Slopes are 30-50%. Elevations range from 100-2500 ft. The average annual rainfall ranges from 12-20 inches, the average mean temperature is 62 degrees F, and the average frost-free season from 250-300 days. The vegetation is annual grasses, forbs, cactus, and some sagebrush.



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Figure 7

Soils Map

(Photo obtained from Google Earth, 4-23-2014, USDA Nat. Res. Cons. Serv. SSURGO Data)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

5.3) Vegetation

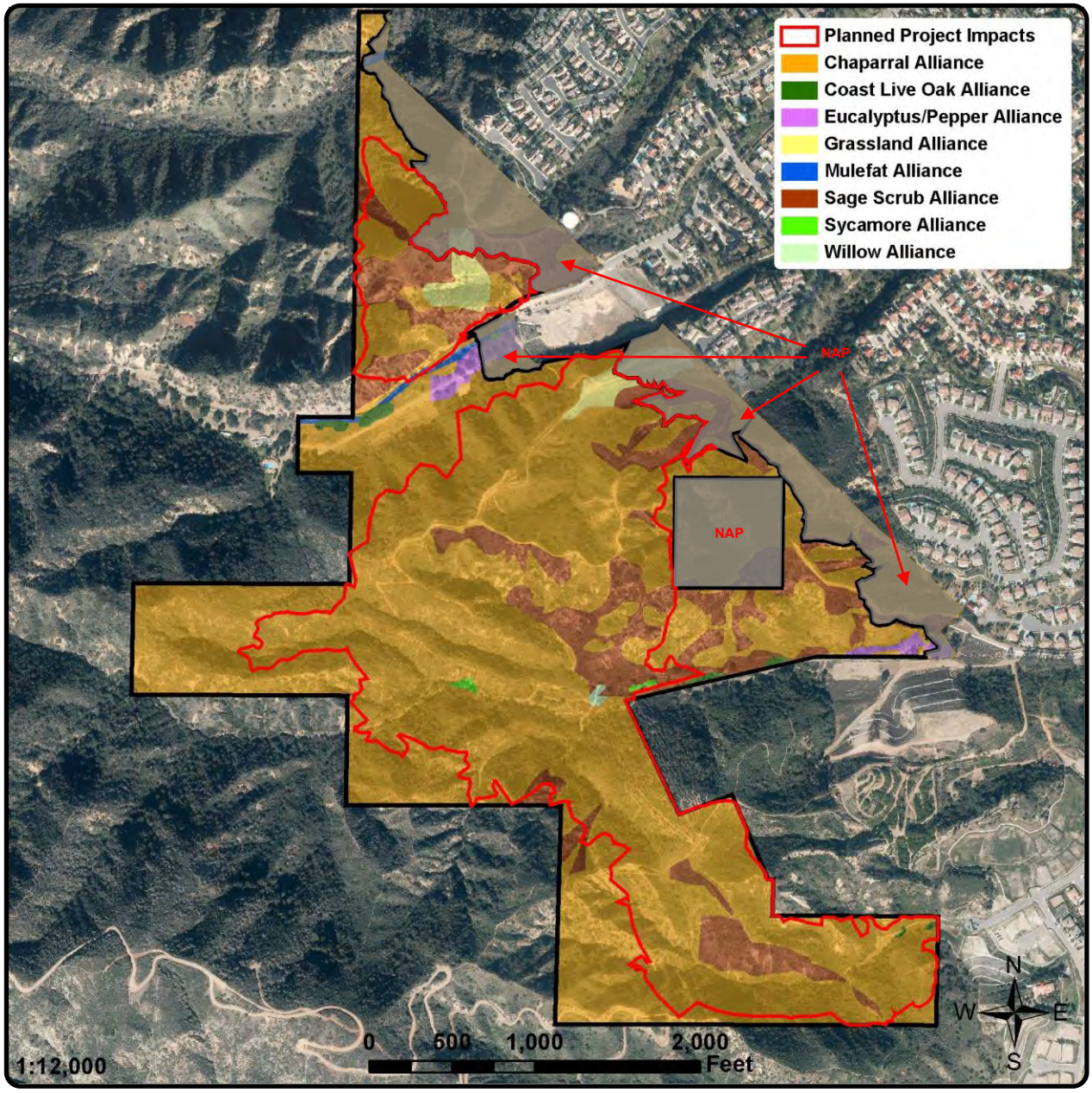
Vegetation Communities on the Project Site

Three general vegetation types currently exist in the immediate vicinity of the project site, Riparian, Upland and Unvegetated/upland. These vegetation types include several plant communities that make up the landscape of the project site (Table 4, Figure 8). Adjacent to the urban areas, landscape species (Eucalyptus and Pepper trees) dominate. Habitat consists of dense chaparral (*Rhus ovata, Adenostoma fasciculatum, Frangula californica*) on the northern slopes and sage scrub (*Artemisia californica, Salvia mellifera, Salvia leucophylla*) on the dry south facing slopes. Scattered areas of sage scrub including California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), brittlebush (*Encelia farinosa*) and white sage (*Salvia apiana*) occur on the slopes and in the wash. Grasslands composed primarily of non-native species bromes (*Bromus spp*.), short-podded mustard (*Hirschfeldia inca*na), filaree (*Erodium spp*.), Russian thistle (*Salsola tragus*), doveweed (*Croton setigerus*), and deer weed (*Acmispon glaber*).

The riparian plant communities observed on the project site are: *Baccharis salicifolia* Alliance (Mulefat Scrub), *Platanus racemosa* Alliance (California sycamore woodlands) and *Salix lasiolepsis* Alliance (Arroyo Willow thickets). *Quercus agrifolia* is also growing along and contributing to the riparian corridor as an intermittent canopy with a sparse ecotonal understory of riparian and Coastal Sage Scrub plant species: poison oak (*Toxicodendron diversilobum*), California Fuchsia (*Epilobium canum*), Douglas' Nightshade (*Solanum douglasii*), and California Buckwheat (*Eriogonum fasciculatum*).

Table 4. Habitat in the Survey Area

Habitat	In the Survey Area (acres)	Riparian Habitat
Chaparral Alliance	218.05	
Coast Live Oak Alliance	1.17	1.17
Disturbed	0	
Eucalyptus/Pepper Alliance	2.82	
Grassland Alliance	5.54	
Mulefat Alliance	1.14	1.14
Sage Scrub Alliance	41.59	
Sycamore Alliance	0.37	0.37
Willow Alliance	0.21	0.21
TOTAL	**270.89**	**2.89**



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Figure 8

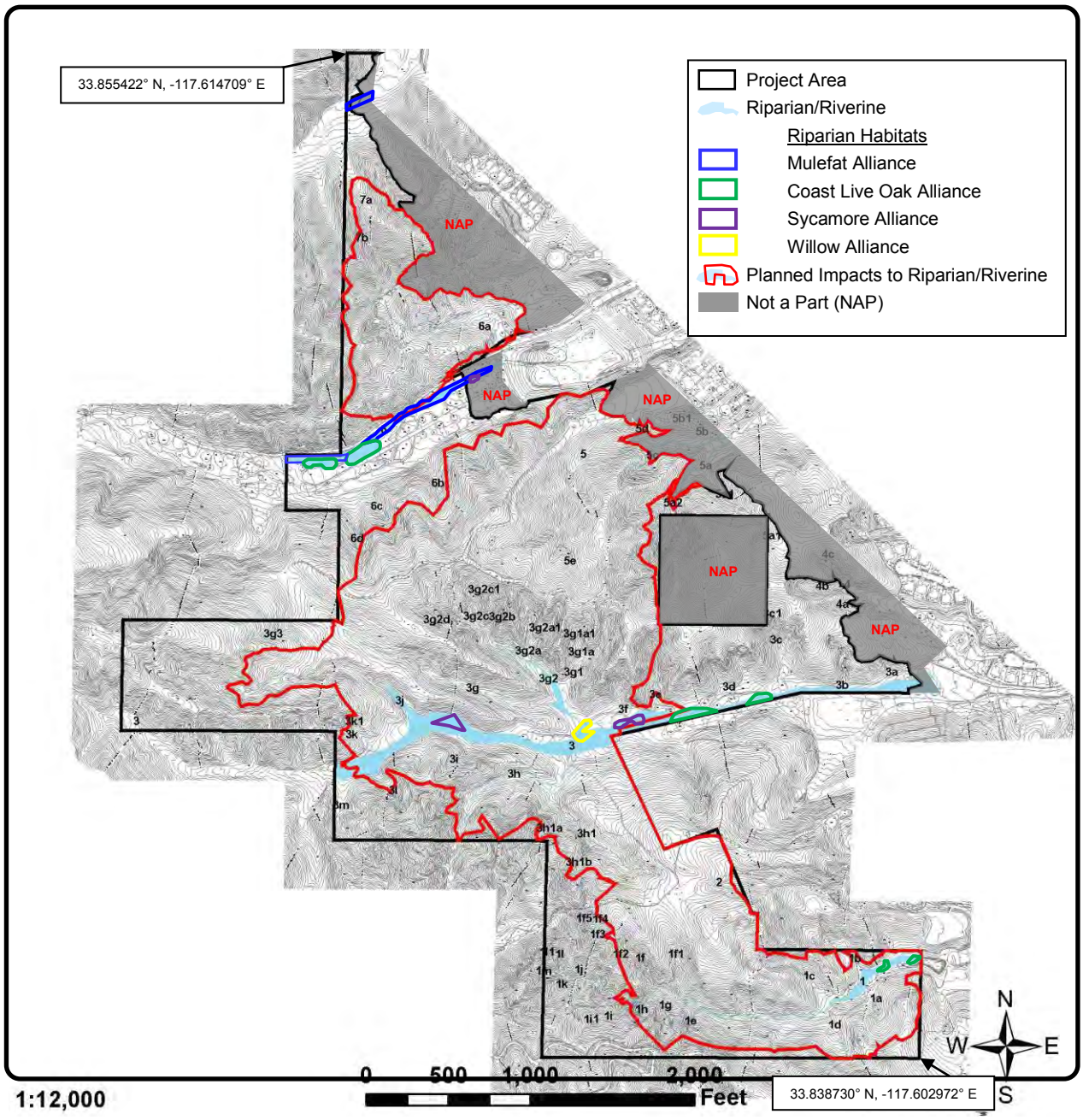
Habitat Map
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

5.4) MSHCP Riparian/Riverine and Vernal Pool Habitat

Under MSHCP Volume 1 Section 6.1.2 areas associated with wetland and streambed systems must be evaluated for consideration as riparian/riverine or vernal pool habitat. L&L found Riparian/riverine areas as defined within the MSHCP are present in the project footprint. MSHCP Riparian/Riverine habitat coincided with State designated jurisdictional area, therefore, 10.2 acres of Riparian/Riverine habitat is present in the survey area and 2.89 acres are considered Riparian (Figure 9).

L&L found no vernal pools present within the site or the project footprint. L&L found soil types present are not consistent with an alkali playa or vernal pool complex and pools or depressions characteristic of vernal habitat were not noted as present on the subject property. No MSHCP species listed for protection associated with riparian/riverine areas and vernal pools were observed.



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Figure 9

MSHCP Riparian/Riverine Impacts

(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

6.0) CONCLUSIONS

L&L has determined that jurisdictional WoUS are present on the project site. Those portions of the features that do not impound water are considered jurisdictional because they flow into Traditionally Navigable Water (TNW), Pacific Ocean, via a Relatively Permanent Water (RPW); Santa Ana River. Consequently, these WoUS are also subject to the control of the Regional Water Quality Control Board.

L&L has determined that drainages and wetland habitat falling under the jurisdiction of the CDFW and subject to the Western Riverside MSHCP, Section 6.1.2, are also present on the project site.

Jurisdictional areas calculated in the survey area include 10.2 acres of State of California Streambeds Jurisdiction and MSHCP Riparian/Riverine habitat. Within the 10.2 acres, 2.16 acres is considered ACOE non wetland "waters" of the U.S. No Federal wetlands were found in the survey area.

The current design impacts 22,249 linear feet and 6.17 acres of the 10.2 acres of state streambeds/wetlands and MSHCP riparian/riverine habitat present on the project site (Table 5). Of the 2.16 acres of WoUS present on the project site, 20,232 linear feet and 1.57 acres will be impacted by the proposed development.

L&L advises the project proponent that consultation with the Army Corps of Engineers, California Department of Fish and Wildlife and the Regional Water Quality Control Board should occur before any vegetation or ground disturbing activities are undertaken on the project. Also, Regulatory permits including a Clean Water Act, 404 permit, a state Streambed Alteration Agreement (1602), and A Regional Water Quality Control Board 401 Certification will be required for project related impacts.

Further, a Determination of Biologically Equivalent or Superior Preservation (DBESP) and a Wildlife Interface Analysis will be required under the Western Riverside County MSHCP and should be submitted for review and approval by the combined MSHCP Wildlife Agencies.

Table 5. Drainage Impact Summary

Feature	Impacts to State Streambeds			Impacts to Federal Features			Impacts to MSHCP Rip/Riv Habitat	
(including tributaries)	Sq. ft.	Acres	Length	Sq. ft.	Acres	Length	Sq. ft.	Acres
F-1	42,594	0.98	6,052	38252	0.88	5232	42,594	0.98
F-2	191	0.004	191	56	0.001	70	191	0.004
F-3	219,064	5.03	13,767	28,825	0.66	13,232	219,064	5.03
F-4	0	0	0	0	0	0	0	0
F-5	3298	0.08	1986	1427	0.03	1317	3298	0.08
F-6	3694	0.08	244	0	0	0	3694	0.08
F-7	0	0	0	0	0	0	0	0
	268,841	6.17ac	22,249	68,560	1.57 ac	19,851	268,841	6.17 ac

7.0) REFERENCES

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APPENDIX A

Table 6. Detail of wetlands criteria and jurisdictional areas for Skyline Project, Riverside County, CA.

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1	2,771	36,078	13	2,771	34,915	12.6	-	-	36,078 [2,771]	-	34,915 [2771]	-	36,078/ 13.0
1a	397	794	2	198	298	1	-	-	776 [397]	-	298 [198]	-	794/ 2.0
1b	234	468	2	117	190	1	-	-	336 [234]	-	190 [117]	-	468 / 2.0
1c	566	1,132	2	377	510	1.2	-	-	1,104 [566]	-	510 [377]	-	1,132 / 2.0
1d	248	546	2.2	124	280	1.3	-	-	489 [248]	-	280 [124]	-	546 / 2.2
1e	190	380	2	95	105	0.7	-	-	372 [190]	-	105 [95]	-	380 / 2.0
1f	910	3,276	3.6	890	1,148	1.4	-	-	2,072 [910]	-	1,148 [890]	-	3,276 / 3.6
1f1	438	1,095	2.5	328	375	1	-	-	872 [438]	-	375 [328]	-	1,095 / 2.5
1f2	122	195	1.6	61	38	0.5	-	-	72 [73]	-	38 [61]	-	195 / 1.6
1f3	109	218	2	75	31	0.5	-	-	-	-	-	-	218 / 2.0
1f4	125	250	2	125	50	0.7	-	-	-	-	-	-	250 / 2.0
1f5	147	309	2.1	147	30	0.5	-	-	-	-	-	-	309 / 2.1
1g	151	574	3.8	75	90	1	-	-	299 [151]	-	90 [75]	-	574 / 3.8
1h	17	34	2	12	6	0.5	-	-	15 [17]	-	6 [12]	-	34 / 2.0

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1i	368	4,710	12.8	184	297	1	-	-	109 [57]	-	297 [184]	-	4,710/ 12.8
1i1	68	197	2.9	35	50	0.9	-	-	-	-	-	-	197 /2.9
1j	108	281	2.6	75	27	0.5	-	-	-	-	-	-	281 / 2.6
1k	95	190	2	80	77	1.1	-	-	-	-	-	-	190 / 2.0
1l	240	288	1.2	200	72	0.4	-	-	-	-	-	-	288 / 1.2
1l1	99	149	1.5	100	16	0.4	-	-	-	-	-	-	149 / 1.5
1m	13	13	1	0	0	0	-	-	-	-	-	-	13/ 1.0
2	211	232	1.1	70	56	0.8	-	-	191 [191]	-	56 [70]	-	232 / 1.1
3	4,041	255,795	63.3	4,041	8,082	2	-	-	168,402 [2,420]	-	8,082 [4,041]	-	255,795/63.3
3a	293	293	1	102	41	0.4	-	-	-	-		-	293 / 1.0
3b	351	1,229	3.5	105	84	0.8	-	-	-	-		-	1,229 / 3.5
3c	536	1,608	3	427	342	0.8	-	-	-	-		-	1,608 / 3.5
3c1	134	161	1.2	60	24	0.4	-	-	-	-		-	161 / 3.0
3d	495	693	1.4	371	186	0.5	-	-	-	-		-	693 / 1.2
3e	513	2,514	4.9	256	290	0.9	-	-	345 [250]	-	290 [256]	-	2,514 / 4.9
3f	325	423	1.3	157	94	0.6	-	-	414 [325]	-	94 [157]	-	423 / 1.3
3g	1,965	6,485	3.3	1,572	1,886	1.2	-	-	6,398 [1,965]	-	1,886 [1,572]	-	6,485 / 3.3
3g1	768	1,152	1.5	625	375	0.6	-	-	1,165 [768]	-	375 [625]	-	1,152 /1.5

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3g1a	226	226	1	53	53	0	-	-	225 [226]	-	53 [53]	-	226/ 1.0
3g1a1	59	118	2	25	10	0	-	-	58 [59]	-	10 [25]	- -	118 / 2.0
3g2	1,293	17,326	13.4	1,034	5,687	5.5	-	-	17,326 [1,293]	-	5,687 [1,034]	- -	17,326 / 13.4
3g2a	390	897	2.3	280	224	0.8	-	-	501 [390]	-	224 [280]	- -	897 / 2.3
3g2a1	305	458	1.5	0	0	0	-	-	304 [305]	-		-	458 / 1.5
3g2b	266	532	2	165	66	0	-	-	262 [266]	-	66 [165]	-	532 / 2.0
3g2c	252	378	1.5	126	114	0.6	-	-	383 [252]	-	114 [126]	- -	378 / 1.5
3g2c1	95	190	2	52	42	0	-	-	94 [95]	-	42 [52]	- -	190 / 2.0
3g2d	74	222	3	37	72	1.2	-	-	74 [74]	-	72 [37]	- -	222 / 3.0
3g3	324	648	2	162	158	0.9	-	-	-	-		-	648 / 2.0
3h	1,301	6,635	5.1	1,301	2,862	2.2	-	-	6,615 [1,301]	-	2,862 [1,301]	-	6,635 / 5.1
3h1	744	1,488	2	744	670	0.9	-	-	1,482 [744]	-	670 [744]	-	1,488 / 2.0
3h1a	245	515	2.1	172	155	0	-	-	222 [223]	-	155 [172]	-	515 / 2.1
3h1b	396	990	2.5	264	261	0.9	-	-	265 [266]	-	261 [264]	-	990 / 2.5

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3i	310	651	2.1	110	44	0.4	-	-	304 [310]	-	44 [110]	-	651 / 2.1
3j	2,367	21,066	8.9	1,635	7,338	3.1	-	-	13,580 [1,635]	-	7,338 [1,635]	-	21,066/ 8.9
3k	440	1,364	3.1	322	354	1.1	-	-	381 [266]	-	354 [266]	-	1,364 / 3.1
3k1	158	205	1.3	95	57	0	-	-	120 [121]	-	57 [95]	-	205 / 1.3
3l	344	447	1.3	222	89	0	-	-	144 [222]	-	89 [222]	-	447 / 1.3
3m	771	1,850	2.4	325	293	0	-	-	-	-	-	-	1,850/ 2.4
4 *													
4a	233	350	1.5	75	45	0.6	-	-	-	-	-	-	350 / 1.5
4b	269	484	1.8	70	42	0.6	-	-	-	-	-	-	484/ 1.8
4c*													
5	1,187	8,546	7.2	900	900	1	-	-	2403 [1,187]	-	900 [900]	-	8,546 / 7.2
5a	186	1,302	7	92	147	1.6	-	-	86 [160]	-	147 [92]	-	1,302 /7.0
5a1	288	518	1.8	220	132	0.6	-	-	-	-	-	-	518 / 1.8
5a2	109	174	1.6	60	66	0	-	-	64 [63]	-	66 [60]	-	174 / 1.6
5b*													
5b1*													
5c	104	208	2	40	36	0.6	-	-	208 [104]	-	36 [40]	-	208 / 2.0

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
5d	71	142	2	50	70	0	-	-	137 [71]	-	70 [50]	-	142 / 2.0
5e	401	762	1.9	175	208	0.8	-	-	400 [401]	-	208 [175]	-	762 / 1.9
6	904	53,336	59	904	23,504	26	-	-	3,694 [244]	-	-	-	53,336 / 59.0
6a	-	-	-	-	-	-	-	-	-	-	-	-	-
6b	-	-	-	-	-	-	-	-	-	-	-	-	-
6c	-	-	-	-	-	-	-	-	-	-	-	-	-
7	99	574	5.8	99	376	3.8	-	-	-	-	-	-	574 / 5.8
7a	-	-	-	-	-	-	-	-	-	-	-	-	-
7b	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**31,259**	**444,364 (10.2 acres)**		**23,664**	**94,140 (2.16 acres)**		**0 (0.00 acres)**	**0 (0.00 acres)**	**268841 [22,249] (6.17 acres)**	**0 (0.00 acres)**	**68,560 [19,851] (1.57 acres)**	**0 (0.00 acres**	**444,364 (10.2 acres)**

*** - Foothill Project**

Table 7: Plants Observed (n=111)

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status
	DIVISION ANTHOPHYTA	**FLOWERING PLANTS**			
	Class Dicotyledones	**Dicots**			
	FAMILY ADOXACEAE	**ELDERBERRY FAMILY**			
	Sambucus nigra ssp. caerulea	Blue Elderberry	U/R	U/R	FACU
	FAMILY ANACARDIACEAE	**SUMAC FAMILY**			
	Malosma laurina	Laurel Sumac	U/R	U/R	
	Rhus integrifolia	Lemonadeberry	U	U	---
	Rhus ovata	Sugarbush	U/R	U/R	---
X	*Schinus molle*	Peruvian Pepper Tree	U	U	---
	Toxicodendron diversilobum	Poison Oak	U/R	U/R	---
	FAMILY PINACEAE	**PINE FAMILY**			
X**	*Pinus jeffreyi*	Jeffrey Pine	U	U	---
	FAMILY AMARANTHACEAE	**AMARANTH FAMILY**			
X	*Amaranthus albus*	Tumbleweed	U/R	U	FACU
	FAMILY APIACEAE	**CARROT FAMILY**			
X	*Foeniculum vulgare*	Sweet fennel			---
	FAMILY APOCYNACEAE	**MILKWEED FAMILY**			
	Asclepias fascicularis	Narrow-leaf Milkweed	U/R	---	FAC
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**			
	Ambrosia acanthicarpa	Annual Bur-sage	U/R	U/R	---
	Ambrosia confertiflora	Burrweed	U/R	U/R	---
	Ambrosia psilostachya	Western Ragweed	R	---	FACU
	Artemisia californica	California Sagebrush	U	U	---
	Baccharis pilularis	Chaparral Broom	R	R	---
	Baccharis salicifolia	Mulefat	R	R	FAC
X	*Centaurea melitensis*	Tocalote	U	U/R	---
X	*Cirsium vulgare*	Bull Thistle	U/R	U/R	FACU
	Corethrogyne filaginifolia	Common Sandaster	U	R	---
	Deinandra fasciculata	Clustered Moonshine-Daisy	U	U	FACU
	Encelia californica	California Brittlebush	U/R	U/R	---
X	*Erigeron bonariensis*	Flax-leaved Horseweed	R	---	---
	Erigeron canadensis	Horseweed	U/R	U/R	FAC
X	*Hedypnois cretica*	Hedyponois	U/R	U/R	---
	Helianthus annuus	Common Sunflower	U/R	U	FACU
	Heterotheca grandiflora	Telegraph Weed	U	U	---
	Solidago californica	Oreja de liebre	U	U	---
	FAMILY BORAGINACEAE	**BORAGE FAMILY**			
	Amsinckia intermedia	Common Fiddleneck	U	U	---
	Amsinckia menziesii	Small Flowered Fiddleneck	U	U	---
	Cryptantha intermedia	Cryptantha	U	U	---
	Eriodictyon crassifolium	Thick-leaved Yerba Santa	U	U	---
	Phacelia cicutaria	Caterpillar Phacelia	U	U	---
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**			
	Brassica nigra	Black Mustard	---	U	---
	Brassica rapa	Field Mustard	---	R	FACU
X	*Hirschfeldia incana*	Short-pod Mustard	U/R	U/R	---
X	*Sisymbrium irio*	London Rocket	U		---
	FAMILY CACTACEAE	**CACTUS FAMILY**			
	Cylindropuntia californica	California Cholla	U	U	---
	Opuntia littoralis	Western Prickly Pear	U	U	---
	FAMILY CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**			
	Lonicera subpicata	Southern Honeysuckle	U	U	---
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**			
X	*Atriplex semibaccata*	Australian Saltbush	U	---	FAC
X	*Chenopodium album*	Pigweed	U	U	FACU
X	*Salsola tragus*	Prickly Russian Thistle	U/R	U/R	FACU
	FAMILY CONVOLVULACEAE	**MORNING-GLORY FAMILY**			
X	*Convolvulus arvensis*	Bindweed	U/R	---	---
	Cuscuta californica	Chaparral Dodder	U	U	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status
	FAMILY CRASSULACEAE	**STONE CROP FAMILY**			
	Crassula connata	Sand Pygmyweed	U	U	FAC
	FAMILY CUCURBITACEAE	**SQUASHES, MELONS & GOURDS FAMILY**			
	Cucurbita palmata	Coyote Gourd	U	---	---
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**			
	Chamaesyce albomarginata	Rattlesnake Weed	U	U	---
X	*Chamaesyce maculata*	Spotted Spurge	U	U	UPL
	Croton setigerus	Dove Weed	U	---	---
X	*Ricinus communis*	Castor Bean	R	R	FACU
	FAMILY FABACEAE	**PEA FAMILY**			
	Acmispon glaber	Deerweed	U	U	---
	Lupinus truncatus	Collared Annual Lupine	U	U	---
	Lathyrus vestitus var. *alefeldii*	San Diego Pea	U	U	---
X	*Medicago sativa*	Alfalfa	---	U	---
X	*Melilotus albus*	White Sweetclover	U	U	---
X	*Melilotus indicus*	Annual Yellow Sweetclover	U	U	FACU
	FAMILY FAGACEAE	**OAK FAMILY**			
	Quercus agrifolia	Coast Live Oak	U/R	U/R	---
	FAMILY GERANIACEAE	**GERANIUM FAMILY**			
X	*Erodium botrys*	Long-beaked Filaree	U	U	---
X	*Erodium cicutarium*	Red-stemmed Filaree	U	U/R	---
	FAMILY GROSSULARIACEAE	**CURRANT FAMILY**	U/R	U/R	---
	Ribes speciosum	Fushia-flowered Gooseberry			
	FAMILY LAMIACEAE	**MINT FAMILY**			
X	*Marrubium vulgare*	Horehound	U	U/R	FACU
	Salvia apiana	White Sage	U/R	U/R	---
	Salvia columbariae	Chia Sage	U	U	---
	Salvia leucophylla	Purple Sage	U/R	U/R	---
	Salvia mellifera	Black Sage	U/R	U/R	---
	FAMILY MALVACEAE	**MALLOW FAMILY**			
X	*Malacothamnus densiflorus*	Yellow Bushmallow	U/R	U	---
	FAMILY MELANTHIACEAE	**PERENNIAL LILY FAMILY**			
	Toxicoscordion fremontii	Fremont's Star Lily	U	U	---
	FAMILY MONTIACEAE	**PURSLANE FAMILY**			
	Calandrinia ciliata	Red Maids	U	U	FACU
	Claytonia perfoliata	Miner's Lettuce	U	U	FAC
	FAMILY MYRTACEAE	**MYRTLE FAMILY**			
X	*Eucalyptus citriodora*	Lemon Scented Gum	R/U	R/U	---
X	*Eucalyptus polyanthemos*	Silver Dollar Gum	R	R	---
X	*Eucalyptus rudis*	Desert Gum	U	U	---
	FAMILY OLEACEAE	**OLIVE FAMILY**			
	Fraxinus velutina	Velvet Ash	R	R	FAC
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**			
	Epilobium canum	California Fuchsia	R	R	---
	FAMILY PAPAVERACEAE	**POPPY FAMILY**			
	Eschscholziacalifornica	California Poppy	U/R	U/R	---
	Romneya coulteri	Coulter's Matilija Poppy***	U/R	U/R	---
	FAMILY PHRYMACEAE	**LOPSEED FAMILY**			
	Mimulus aurantiacus	Bush Monkeyflower	U	U	
	FAMILY PLATANACEAE	**SYCAMORE FAMILY**			
	Platanusracemosa	California Sycamore	R	R	FACW
	FAMILY POLEMONIACEAE	**PHLOX FAMILY**			
	Gilia angelensis	Angel Gilia	U	U	---
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**			
	Eriogonumfasciculatum	California Buckwheat	U	U	---
	FAMILY RANUNCULACEAE	**CLEMATIS FAMILY**			
	Clematis lasiantha	Chaparral clematis	U	U	---
	FAMILY RHAMNACEAE	**BUCKTHORN FAMILY**			
	Frangula californica	California Coffeeberry	U/R	U/R	---

Non-native (35)	SCIENTIFIC NAMES	COMMON NAMES	GEC Surveys*	Previous Surveys**	CA Region "O" or Arid Lands Indicator Status
	FAMILY ROSACEAE	**ROSE FAMILY**			
	Adenostoma fasciculatum	Chamise	U	U	---
	Heteromeles arbutifolia arbutifolia	Toyon	U	U	---
	FAMILY SALICACEAE	**WILLOW FAMILY**			
	Populus fremontii	Fremont Cottonwood	---	R	FAC
	Salix gooddingii	Goodding's Willow	---	R	FACW
	Salix lasiandra	Pacific Willow	R	R	FACW
	Salix lasiolepis	Arroyo Willow	R	R	FACW
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**			
	Datura wrightii	Jimson Weed	R	U/R	UPL
X	*Nicotiana glauca*	Tree Tobacco	R	R	FAC
	Solanum douglasii	Douglas' Nightshade	R	R	FAC
	FAMILY URTICACEAE	**NETTLE FAMILY**			
	Urticadioica ssp. *holosericea*	Hoary Nettle	R	R	FAC
	Class Monocotyledones	**Monocots**			
	FAMILY AGAVACEAE	**AGAVE FAMILY**			
	Hesperoyucca whipplei	Chaparral Yucca	U	U	---
	FAMILY LILIACEAE	**LILY FAMILY**			
	Calocortus splendens	Splendid Mariposa Lily	---	U	---
	FAMILY POACEAE	**GRASS FAMILY**			
X	*Avena barbata*	Slender Wild Oat	U	U	---
X	*Avena fatua*	Common Wild Oats	U/R	U/R	---
X	*Bromus diandrus*	Ripgut Grass	U	U	---
X	*Bromus hordeaceus*	Soft Chess	U	U	FACU
X	*Bromus madritensis*ssp.*rubens*	Foxtail Chess	U	U	---
X	*Echinochloacrus-galli*	Common Barnyard-grass	U	U	FAC
	Elymus condensatus	Giant Wild Rye	U	U	---
X	*Festuca myuros*	Rattail	U	U	---
X	*Hordeummurinum ssp. leporinum*	Hare Barley	U	U	FACU
	Leptochloa fusca	Mexican Sprangletop	R	R	FACW
	Melica imperfecta	Coast Range Melic	U	U	---
	Muhlenbergia microsperma	Annual Muhley	U	U	
	Muhlenbergia rigens	Deergrass	U	U	---
X	*Schismus barbatus*	Mediterranean Schismus	U	U	---
	Stipa coronata	Crested Needle grass	U	U	---
	Stipa lepida	Foothill Needle grass	U	U	---
	FAMILY THEMIDACEAE	**BRODIAEA FAMILY**			
	Dichelostemma capitatum	Wild Hyacinth	---	U/R	---

* = U-Upland habitats (chaparral, sage scrub, grasslands);R-Riparian Habitats (oak woodland, willow, sycamore, mulefat).
** = Surveys conducted by GEC in past years
*** = Rare plant
X** = Native used as landscape species

Wetland Indicator Status:
The following symbols are used to indicate the wetland indicator status of plant species identified onsite, if any. OBL Obligate: under natural conditions, occurs almost always (estimated probability >99%) in wetlands.
FACW - Facultative Wetland: usually occurs in wetlands (estimated probability 67-99%), but occasionally found in non-wetlands.
FAC - Facultative: equally likely to occur (estimated probability 34-66%) in wetlands or non-wetlands.
FACU - Facultative Upland: usually occur in non-wetlands but occasionally (estimated probability 1-33%) found in wetlands.
UPL - Obligate Upland: occur in wetlands in another region, but occur almost always(estimated probability>99%) under natural conditions in non-wetlands in the region specified.
NI or --- No Indicator Status: was recorded for those species for which sufficient information was not available to determine an indicator status or that were not considered by the Regional Panel.

Table 8: Wildlife Observed(n=98)

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (3)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	---
FAMILY PHRYNOSOMATIDAE	**SPINY LIZARD FAMILY**			
Sceloporus occidentalis longipes	Great Basin fence lizard	X	X	---
FAMILY VIPERIDAE	**RATTLESNAKE FAMILY**			
Crotalus ruber	Red Diamond rattlesnake	X	X	CSC
CLASS AVES	**BIRDS (61)**			
FAMILY ODONTOPHORIDAE	**QUAIL**			
Callipepla californica	California Quail	X	X	
FAMILY ACCIPITRIDAE	**BUTEOS, KITES AND HAWKS**			
Accipiter cooperii	Cooper's Hawk	X	X	CSC
Buteo jamaicensis	Red-tailed Hawk	X	X	---
FAMILY COLUMBIDAE	**DOVES AND PIGEONS**			
Columba livia	*Rock Pigeon	X		---
Zenaida asiatica	White-winged Dove	X		---
Zenaida macroura	Mourning Dove	X	X	---
FAMILY TYTONIDAE	**BARN AND BAY OWLS**			
Tyto alba	Barn owl	X	X	---
FAMILY STRIGIDAE	**TRUE OWLS**			
Megascops kennicottii	Western Screech-Owl	X	X	---
Bubo virginianus	Great Horned Owl	X	X	---
FAMILY APODIDAE	**SWIFTS**			
Chaetura vauxi	Vaux's Swift	X	---	
Aeronautes saxatalis	White-throated Swift	X	---	
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Archilochus alexandri	Black-chinned Hummingbird	X		---
Calypte anna	Anna's Hummingbird	X	X	--
Calypte costae	Costa's Hummingbird	X		Rare
FAMILY CUCULIDAE	**CUCKOOS, ANIS AND ROADRUNNERS**			
Geococcyx californianus	Greater roadrunner	X	X	
FAMILY PICIDAE	**WOODPECKERS AND FLICKERS**			
Picoides nuttallii	Nuttall's Woodpecker	X		Rare
Picoides pubescens	Downy Woodpecker	---	X	
Colaptes auratus	Northern Flicker	X	---	
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	X	X	
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Empidonax difficilis	Pacific-slope Flycatcher	---	X	
Myiarchus cinerascens	Ash-throated Flycatcher	X	---	
Sayornis nigricans	Black Phoebe	X	X	
Sayornis saya	Say's Phoebe	X	X	
Tyrannus verticalis	Western Kingbird	X	---	
Tyrannus vociferans	Cassin's Kingbird	X	X	
FAMILY CORVIDAE	**CROWS AND RAVENS**			
Corvus brachyrhynchos	American Crow	---	X	
Corvus corax	Common Raven	X	---	
Aphelocoma californica	Western Scrub Jay	X	X	
FAMILY ALAUDIDAE	**LARKS**			
Eremophila alpestris	Horned Lark	X	---	WL
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Hirundo rustica	Barn Swallow	---	X	
Petrochelidon pyrrhonota	Cliff Swallow	---	X	
Stelgidopteryx serripennis	Northern Rough-winged Swallow	X	---	
Tachycineta bicolor	Tree Swallow	---	X	
Tachycineta thalassina	Violet-green Swallow	---	X	

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
FAMILY AEGITHALIDAE	**BUSHTITS AND LONG-TAILED TITS**			
Psaltriparus minimus	Bushtit	X	X	
FAMILY TROGLODYTIDAE	**WRENS**			
Salpinctes obsoletus	Rock Wren	X	X	
Thryomanes bewickii	Bewick's Wren	X	X	
FAMILY SYLVIIDAE	**OLD WORLD WARBLERS**			
Chamaea fasciata	Wrentit			
FAMILY TURDIDAE	**THRUSHS, SOLITAIRES AND BLUEBIRDS**			
Sialia mexicana	Western Bluebird	X	X	
FAMILY MIMIDAE	**MIMIC THRUSHES, OR MIMIDS**			
Mimus polyglottos	Northern Mockingbird	X	X	
Toxostoma redivivum	California Thrasher	X	X	
FAMILY STURNIDAE	**STARLINGS AND ALLIES**			
Sturnus vulgaris	*European Starling	X	X	
FAMILY PTILOGONATIDAE	**SILKY FLYCATCHERS**			
Phainopepla nitens	Phainopepla	X	X	
FAMILY PARULIDAE	**WARBLERS**			
Geothlypis tolmiei	MacGillivray's Warbler	X	X	
Oreothlypis celata	Orange-crowned Warbler	---	X	
FAMILY EMBERIZIDAE	**SPARROWS AND TOWHEES**			
Aimophila ruficeps	Rufous-crowned Sparrow	---	X	
Chondestes grammacus	Lark Sparrow	---	X	
Melozone crissalis	California Towhee	X	X	
Melospiza melodia	Song Sparrow	X	X	
Pipilo maculatus	Spotted Towhee	---	X	
Spizella atrogularis	Black-chinned Sparrow	---	X	
Zonotrichia leucophrys	White-crowned Sparrow	X	X	
FAMILY CARDINALIDAE	**CARDINALS AND BUNTINGS**			
Passerina amoena	Lazuli Bunting	X	X	
Piranga ludoviciana	Western Tanager	X	X	
FAMILY ICTERIDAE	**BLACKBIRDS AND ALLIES**			
Agelaius phoeniceus	Red-winged Blackbird	---	X	
Icterus cucullatus	Hooded Oriole	---	X	
Molothrus ater	Brown-headed Cowbird	---	X	
FAMILY FRINGILLIDAE	**NEW WORLD SEEDEATERS**			
Haemorhous mexicanus	House Finch	X	X	
Spinus lawrencei	Lawrence's Goldfinch	X	X	Rare
Spinus tristis	American Goldfinch	X		
FAMILY PASSERIDAE	**OLD WORLD SPARROWS**			
Passer domesticus	*House Sparrow	X	X	
CLASS MAMMALIA	**MAMMALS (12)**			
FAMILYDIDELPHIDAE	**OPOSSUM**			
Didelphis virginiana	Virginia Opossum	X	---	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**			
Canis latrans	Coyote	X	X	
Canis lupus familiaris	Domestic Dog	X	X	
Urocyon cinereoargenteus	Gray Fox	X	---	
FAMILY PROCYONIDAE	**RACCOONS AND RINGTAILS**			
Procyon lotor	Raccoon	X	---	
FAMILY SCIURIDAE	**SQUIRRELS**			
Spermophilus beecheyi	California Ground Squirrel	X	X	
FAMILY GEOMYIDAE	**POCKET GOPHERS**			
Thomomys bottae	Southern Pocket Gopher	---	X	
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	---	X	CSC
Sylvilagus audubonii	Cottontail	X	X	
FAMILY FELIDAE	**CATS**			
Felis catus	Domestic cat	X	---	
Lynx rufus	Bobcat	X	---	
Puma concolor	Mountain Lion	X	---	

SCIENTIFICNAMES	COMMONNAMES	GEC Surveys*	Previous Surveys**	Status
INVERTEBRATES				
CLASS INSECTA	**INSECTS (21)**			
FAMILY CERCOPOIDEA	**SPITTLE BUGS**			
Prosapia bicincta	Two-Lined Spittle Bug	X	X	
FAMILY APIDAE	**HONEY BEES**			
Apis mellifera	Honey Bee	---	X	
FAMILY RIODININAE	**METALMARKS**			
Apodemia virgulti	Mormon Metalmark	X	X	
FAMILY POLYOMMATINAE	**BLUE GOSSAMER-WINGED BUTTERFLIES**			
Brephidium exilis	Pygmy Blue Butterfly	---	X	
FAMILY PENTATOMIDAE	**STINK BUGS**			
Chlorochroa sayi	Say's Stinking Bug	---	X	
FAMILY COLIADINAE	**SULPHER BUTTERFLIES**			
Colias eurytheme	Orange Sulpher	---	X	
FAMILY SCARABAEIDAE	**SCARAB BEETLE**			
Cotinus mutabilis	Green Fruit Beetle	X	X	
FAMILY TENEBRIONIDAE	**DARKLING BEETLES**			
Eleodes acutus	Stink beetle	X	X	
FAMILY APHIDIDAE	**APHIDS**			
Toxoptera aurantii	Aphids	---	X	
FAMILY CULICIDAE	**MOSQUITOES**			
Culex quinquefasciatus	Mosquito	---	X	
FAMILY FORFICULIDAE	**EARWIGS**			
Forficula auricularia	European Earwigs	---	X	
FAMILY BOMBYLIIDAE	**ROBBER FLIES**			
Mallophora fautrix	Robber fly	X	X	
FAMILY MUSCIDAE	**HOUSE FLY**			
Musca domestica	Common House Fly	X	X	
FAMILY PAPILIONIDAE	**SWALLOWTAIL**			
Papilio rutulus	Western Tiger Swallowtail Butterfly	---	X	
FAMILY POMPILIDAE	**SPIDER WASPS**			
Pepsis chrysothymus	Tarantula Hawk	X	X	
FAMILY PIERIDAE	**CABBAGE BUTTERFLIES**			
Pieris protodice	Common White Butterfly	X	X	
Pieris rapae	Cabbage White		X	
FAMILY FORMICIDAE	**HARVESTER ANT**			
Pogonomyrmex californicus	California Harvester Ant	X	X	
FAMILY VESPIDAE	**SOCIAL WASP**			
Polistes excaimans	Paper wasp	---	X	
FAMILY ACRIDIDAE	**COMMON GRASSHOPPER**			
Trimerotropis pallidipennis	Pallid Band-wing	---	X	
FAMILY NYMPHALIDAE	**PAINTED LADY'S**			
Vanessa cardui	Painted Lady	X	X	
CLASS ARACHNIDA	**SPIDERS, MITES, TICKS AND SCORPIONS (1)**			
FAMILY CTENIZIDAE	**TRAP DOOR SPIDER**			
Bothriocyrtum californicum	California Trapdoor Spider	X	X	

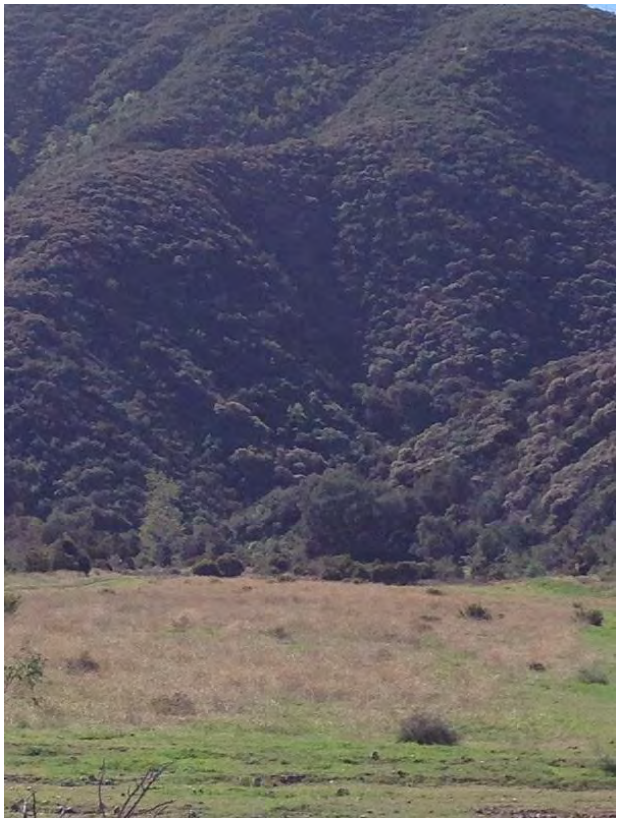
Table 9 Climatic Data

PDT	Max Temp F	Min Temp F	Max Dew Point F	Min Dew point F	Precipitation In	Cloud Cover	Events
10/1/2014	86	50	60	45	0	0	
10/2/2014	99	55	54	7	0	0	
10/3/2014	101	43	51	7	0	0	
10/4/2014	99	46	46	30	0	0	
10/5/2014	97	46	49	34	0	0	
10/6/2014	95	47	49	34	0	0	
10/7/2014	95	54	50	27	0	0	
10/8/2014	90	52	62	42	0	0	
10/9/2014	81	52	62	51	0	2	Fog
10/10/2014	83	50	62	48	0	0	
10/11/2014	86	51	64	52	0	2	Fog
10/12/2014	84	52	64	52	0	4	Fog
10/13/2014	86	46	64	46	0	3	Fog
10/14/2014	79	51	63	52	0.09	4	Fog
10/15/2014	79	55	59	50	0	3	
10/16/2014	79	52	58	48	0	2	
10/17/2014	77	48	58	47	0	2	
10/18/2014	79	55	58	52	0	3	
10/19/2014	79	48	60	47	0	0	
10/20/2014	79	50	61	49	0	1	Fog
10/21/2014	81	52	61	50	0	2	
10/22/2014	88	45	55	36	0	0	Fog
10/23/2014	90	46	54	43	0	1	
10/24/2014	91	45	50	38	0	2	
10/25/2014	83	51	57	42	0	3	Rain
10/26/2014	77	43	60	41	0	4	
10/27/2014	77	47	57	45	0	6	
10/28/2014	82	45	58	43	0	7	
10/29/2014	88	44	55	38	0	8	Fog
10/30/2014	83	46	60	42	0	8	
10/31/2014	70	46	59	45	0	8	Rain

PST	Max Temp F	Min Temp F	Max Dew Point F	Min Dew point F	Precipitation In	Cloud Cover	Events
11/1/2014	64	46	59	45	0.25	4	Rain
11/2/2014	68	38	49	39	0	0	Fog
11/3/2014	73	38	45	15	0	0	
11/4/2014	81	45	34	5	0	0	
11/5/2014	90	52	45	6	0	0	
11/6/2014	90	39	53	24	0	0	
11/7/2014	90	43	42	28	0	0	
11/8/2014	90	39	46	33	0	0	
11/9/2014	82	41	58	39	0	1	
11/10/2014	72	50	58	48	0	4	
11/11/2014	66	54	55	49	0	8	
11/12/2014	70	50	54	47	0	6	
11/13/2014	70	50	55	48	0	5	
11/14/2014	72	56	57	51	0	6	
11/15/2014	72	52	56	51	0	3	
11/16/2014	72	52	52	-15	0	1	
11/17/2014	77	56	13	-6	0	0	
11/18/2014	79	38	30	4	0	0	
11/19/2014	73	37	48	21	0	1	
11/20/2014	68	36	55	32	0	1	
11/21/2014	70	43	55	41	0	1	
11/22/2014	72	36	52	34	0	0	
11/23/2014	77	41	45	-7	0	0	
11/24/2014	77	45	20	7	0	0	
11/25/2014	81	37	32	-3	0.02	0	
11/26/2014	91	34	40	18	0	0	
11/27/2014	88	34	34	23	0	0	
11/28/2014	82	34	37	28	0	0	
11/29/2014	75	32	53	28	0	0	
11/30/2014	63	41	59	37	0.02	6	Rain

APPENDIX B

Site Photographs









APPENDIX C

Riverside County Documentation

Certification

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

DATE: March 11,2015 SIGNED: _____

Leslie Irish, Principal, L&L Environmental, Inc.
951-681-4929

1) Fieldwork Performed By:

Leslie Irish
Name

2) Fieldwork Performed By:

Ann Lopez
Name

3) Fieldwork Performed By:

Crystal Olszewski
Name

4) Fieldwork Performed By:

_____
Name

5) Fieldwork Performed By:

_____
Name

6) Fieldwork Performed By:

_____
Name

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

BIOLOGICAL REPORT SUMMARY SHEET

Applicant Name: Richland Communities, LLC
Assessor's Parcel Number(s): 275-080-010,275-070-003,275-050-004,275-040-011,275-040-006,275-040-005,275-040-004,275-040-012,275-030-006
Section, Township and Range: Sections 3, 4 & 9, Township 4 South, Range 7 West, portions of Sections 3,4 and 9
Building and Safety Log Number: _____
Case Number: _____ Lot/Parcel _____ EA Number _____

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

MARK ITEM(S) SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE of CONCERN	*(Mark Yes, No, or N/A regarding species findings on the referenced site)*		
	Other	Yes	No	n/a
	Other	Yes	No	n/a
	Other	Yes	No	n/a
	Other	Yes	No	n/a
	Other	Yes	No	n/a
	Other	Yes	No	n/a

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

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

L & L Environmental, Inc. March 11, 2015
Signature and Company Name Date

10(a) Permit Number (if applicable) Permit Expiration Date

County Use Only

Received By: _____ Date: _____
PD-B# _____

Attachment E-4

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

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

Assessor's Parcel Number(s): 275-080-010,275-070-003,275-050-004,275-040-011,275-040-006,275-040-005,275-040-004,275-040-012,275-030-006

Date: March 11, 2015

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

Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact

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

☐ ☐ ■ ☐

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

☐ ☐ ☐ ■

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

☐ ☐ ☐ ■

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

☐ ☐ ☐ ■

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

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

☐ ☐ ■ ☐

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

☐ ☐ ☐ ■

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

☐ ☐ ■ ☐

Findings of Fact:

The project will impact 6.17 acres of State of California, Department of Fish and Wildlife Jurisdiction and MSHCP riparian/riverine habitat and 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS). Oak trees will also be impacted.

Proposed Mitigation:

Riparian Riverine and Jurisdictional Drainages will be mitigated at a no net loss via the development of a habitat mitigation plan / DBESP and via on or off-site mitigation.

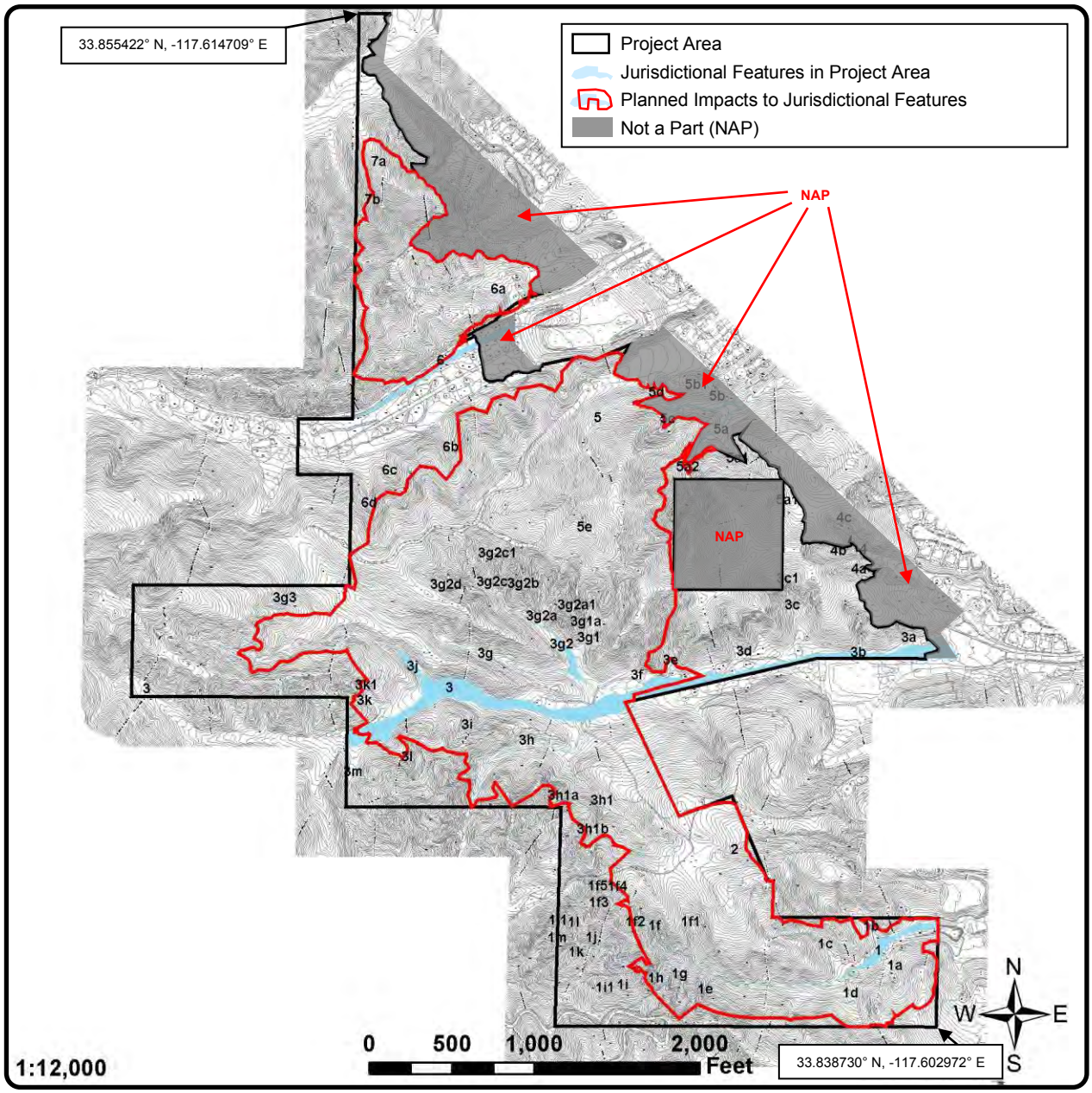
Monitoring Recommended:

Monitoring is recommended during clearing of vegetation within the nesting season.
Monitoring is recommended when working in or adjacent to jurisdictional waters
Monitoring is recommended for any on-site mitigation establishment period.

Source: CGP Fig. VI.36-VI.40
Revised October 1999

APPENDIX D

Figures



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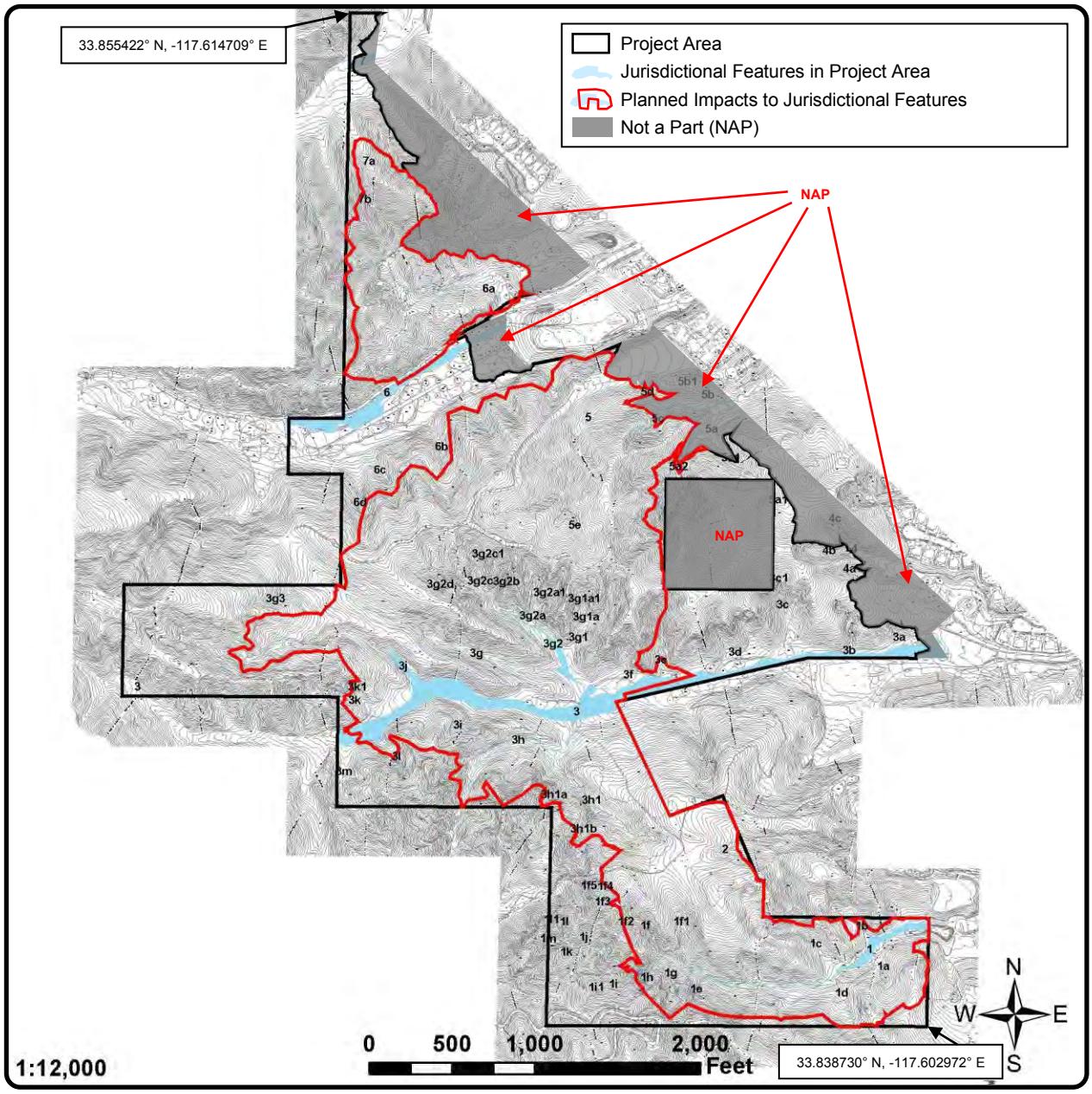
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 10

ACoE Feature Impacts
(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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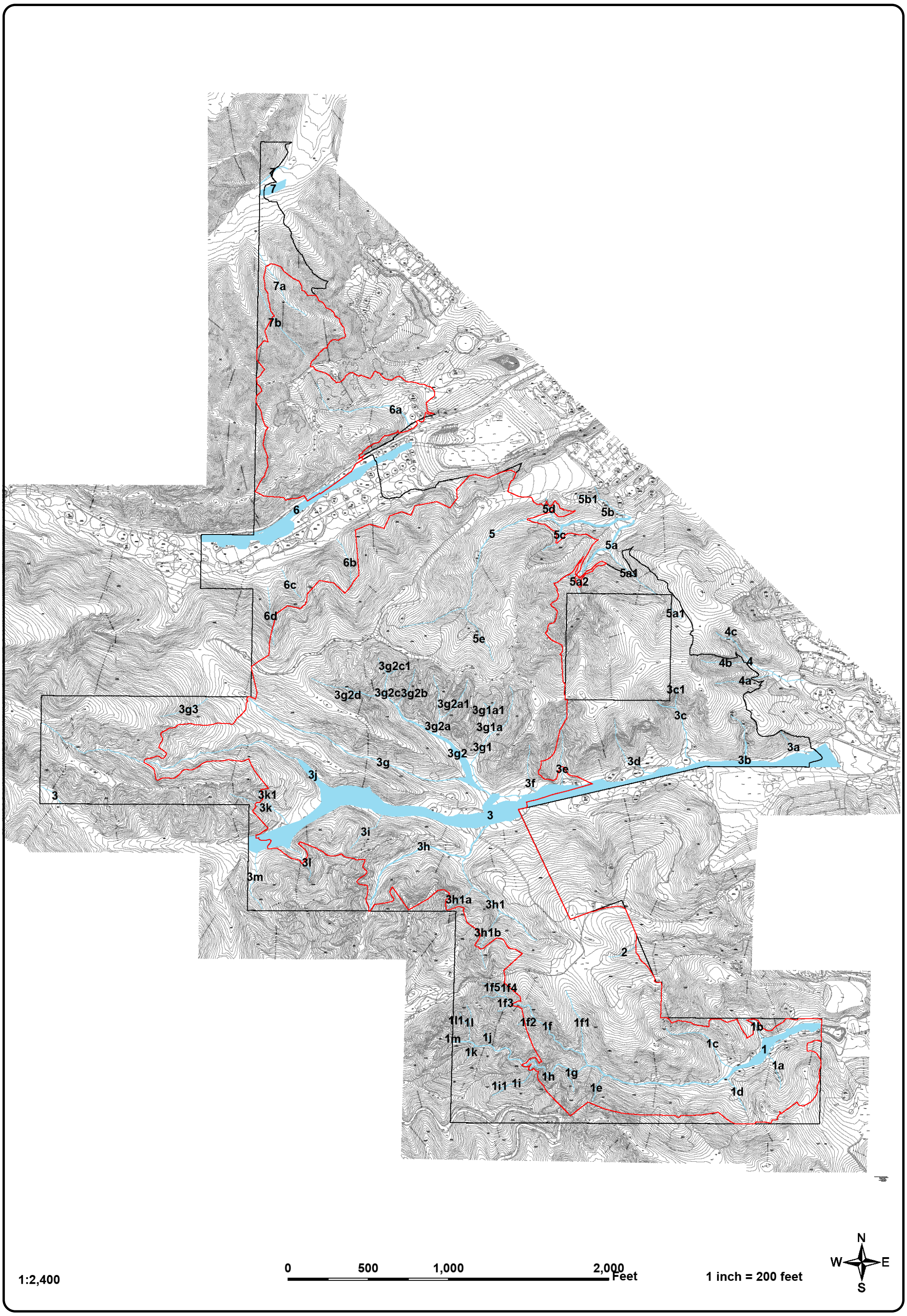
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RLCC-14-458
March 2015

Figure 11

CDFW Feature Impacts
(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



1:2,400

0 500 1,000 2,000 Feet

1 inch = 200 feet

N W E S

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BIOLOGICAL AND CULTURAL
INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 12

Detailed CDFW Feature Impacts on Topo

(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

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

DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION OF RIPARIAN/RIVERINE HABITAT FOR TTM 36544, SKYLINE HEIGHTS PROJECT, CITY OF CORONA, RIVERSIDE COUNTY, CALIFORNIA

±271 Acre Property, ±271 Acres Surveyed

APNs 275-030-006, 275-040-006, 275-040-011, 275-040-012, 275-040-015, 275-050-004, 275-070-003, 275-080-010, Portions of Sections 3, 4, 9, & 10 in Township 4 South, Range 7 West, USGS 7.5-minute Topographic Corona South Quadrangle

Prepared For:

Mike Byer
Richland Communities, LLC
3161 Michelson Drive, Suite 425
Irvine, CA92612
949-383-4137

Prepared By:

L & L Environmental, Inc.

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Report Date: March 2015

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1.0) INTRODUCTION

This document is a Determination of Biologial Equivalent or Superior Preservation (DBESP) Report necessitated by the Western Riverside Muti-Species Habitat Conservation Plan (MSHCP) for impacts to Riparian/Riverine Areas/Vernal Pools as defined by the MSHCP (Section 6.1.2).

Because the Skyline Heights Project proposes to impact Riparian/Riverine habitat the following DBESP report has been prepared for Mike Byer, Richland Communities, LLC, of Irvine CA, by L&L Environmental, Inc. The project area or site (TTM 36544) consists of APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006 totaling ±270.9 acres within Riverside County, California.

Principally, this DBESP describes the proposed Project and its potential impacts on Riparian/Riverine habitat and details the means and methods of proposed mitigation impacts. Characterizations of significant impactsto resources follow California Environmental Quality Act (CEQA) definitions. Mitigation discussed is designed to provide preservation of biologically equivalent or superior resources. All impacts are described in relation to present site conditions.

2.0) DEFINITION OF THE PROJECT AREA

The project area as defined in this report is located south of Wardlow Canyon Wash, west of the paved portion of Mabey Canyon Drive, west of Mangular Avenue, and north of the dirt road portion of Chase Drive in the Corona area of Riverside County, California (Figures 1 and 2).

The site is locatedwithin San Bernardino Meridian in portions of Sections 3, 4 and 9, Township 4 South, Range 7 West in Riverside County, California (Figures 1 and 2). This location is shown on the Corona South, California 7.5-minute U.S. Geological Survey (USGS) quadrangle (Corona South 1979). The approximate center of the site is located at the center of the project area is 33°50'39.72"N/117°36'41.11"W.

The Skyline Heights project is generally bounded to the north and east by single-family residences and on the south and west by the Cleveland National Forest and large privately owned parcels (Figure 3). Within the general boundaries of the project is an undeveloped 10.0-acre parcel which is considered "Not a Part" and is owned by the U.S. Forest Service. Adjacent to the southeast portion of the project site is a single-family residential community which is currently graded and under construction (Tract Map 31955). The immediate surrounding area consists of Low Density Residential (2-6 du/ac) as well as undeveloped open space within the City of Corona. Skyline Drive, a graded forest service access road, is located just to the south of the project. This road provides recreational hiking and mountain biking opportunities to residents on a local and regional level.



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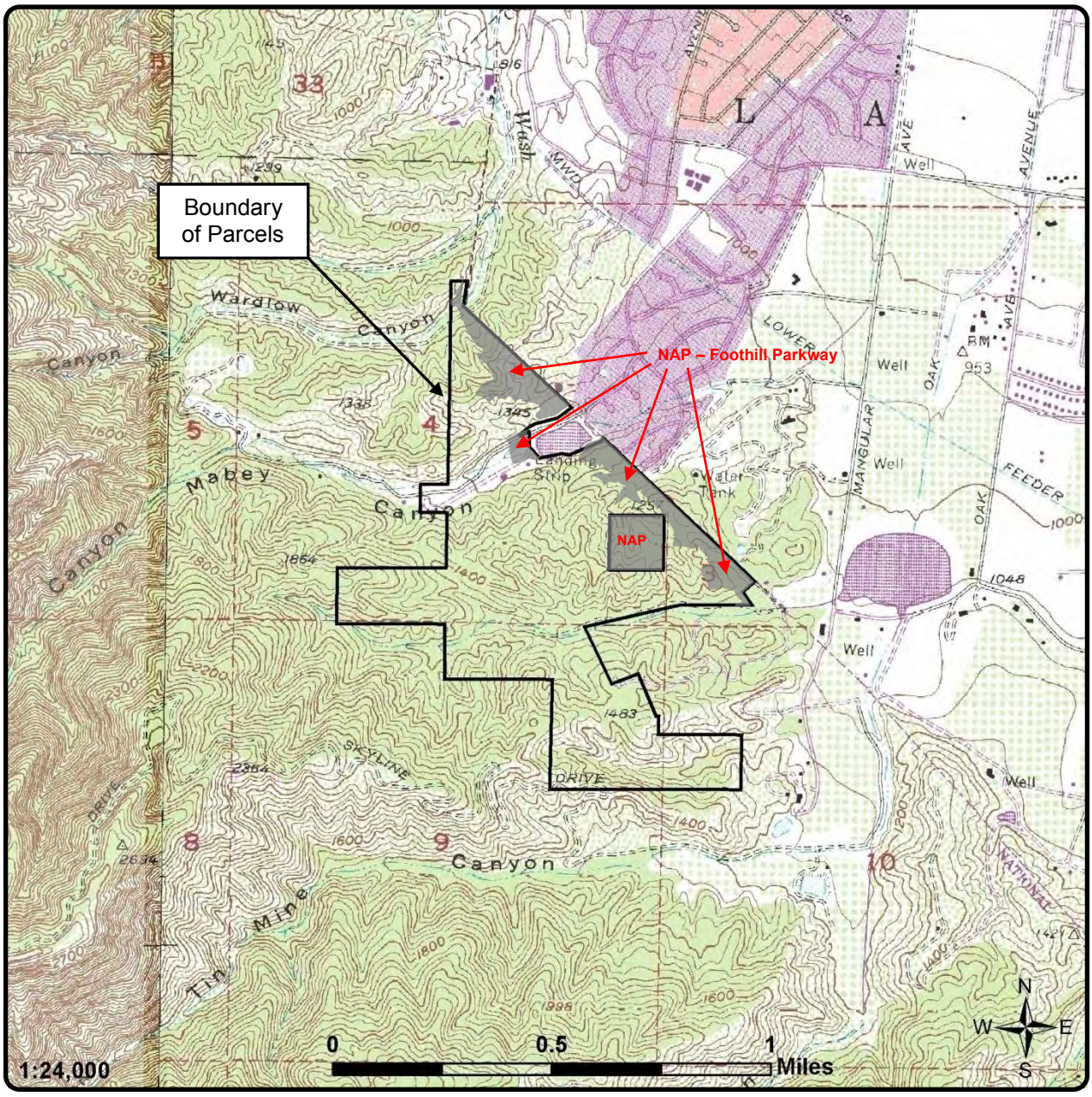
BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

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Figure 1

Project Vicinity Map

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

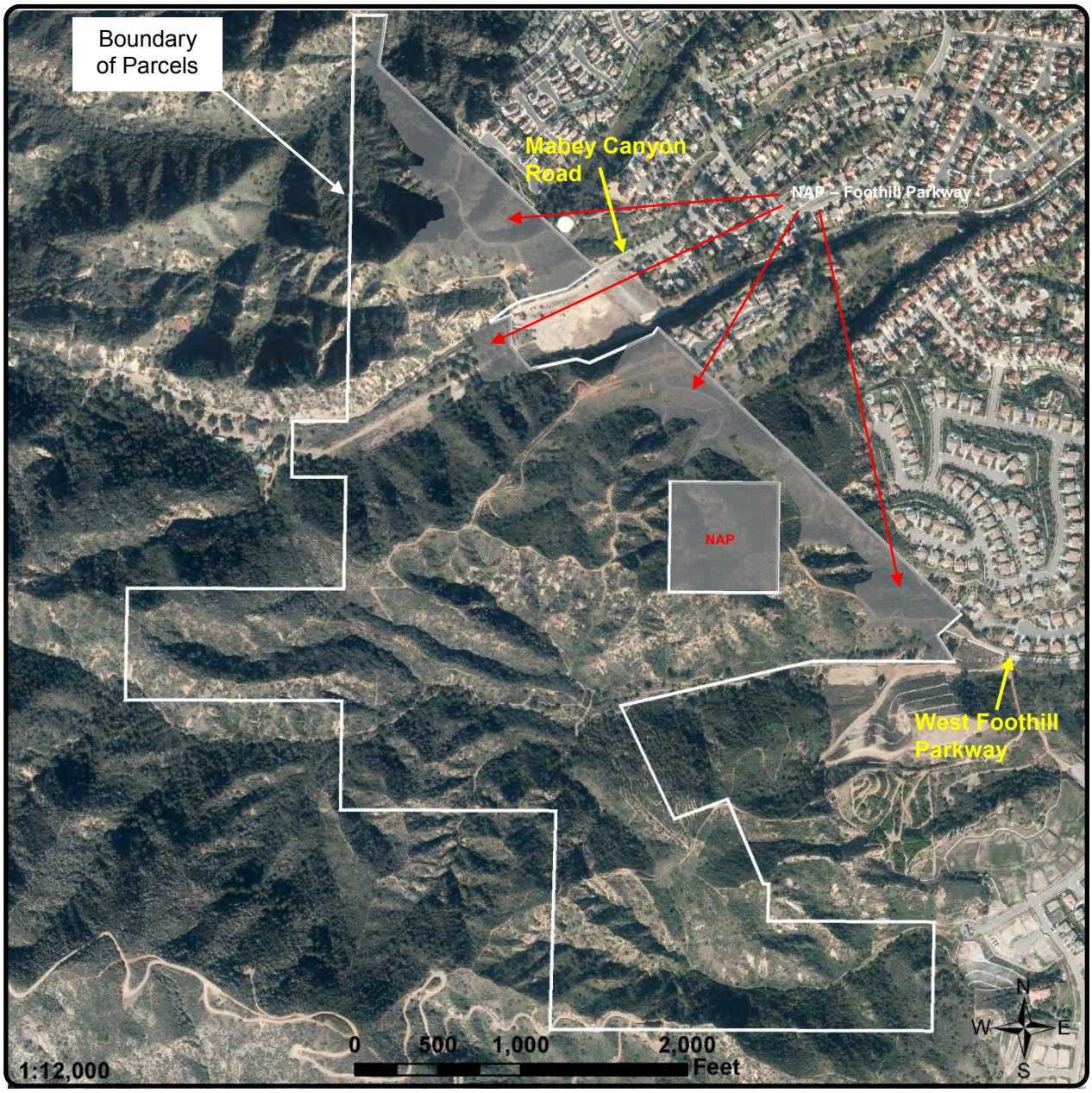
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Figure 2

Project Location Map

(USGS Corona South [1982] quadrangle, Sections 3, 4, 9, & 10, Township 4 South, Range 7 West)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



L&L Environmental, Inc.

BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 3

Aerial Photograph
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

2.1) **Project Description** (Preferred Alternative)

The Skyline Heights (TTM 36544) project is comprised of 270.9 acres of vacant land situated in the hills southwest of the City of Corona in Riverside County, California, at the western terminus of West Foothill Parkway.

A Development Plan has been prepared for the Project and will consist of two (2) graded areas. The area north of Mabey Canyon is proposed to be 45 Single Family lots and the area to the south will be 247 Single Family lots. This totals to 292 Single Family Low Density Residential lots for a project density of 1.07 du/ac (Figure 4).

The Skyline Heights Project will be developed in three map recording phases, but will be mass graded together as one phase. The grading operation entails significant cuts and fills from the existing grades to the proposed ultimate roadway and pad grades within the Project development. The anticipated maximum cuts and fills depths are 160 feet and 145 feet, respectively. The estimated earthwork volume to be moved is approximately 5,000,000 cubic yards. The site is designed to balance the cut and fill within the project site with no import or export of material assuming a 5% shrinkage and subsidence adjustment factor.

The proposed Project requires the construction of Foothill Parkway and infrastructure improvements along the Project frontage as proposed by the City of Corona's Foothill Parkway Westerly Extension Capital Improvement Project. The anticipated completion date of this section of Foothill Parkway is 2016. This development assumes that Foothill Parkway is in place prior to the construction of the Project.

A portion of the survey area (33 acres) will be graded by the Foothill Parkway project (Figure 4). While this area is mapped within the survey area (and disclosed in the overall project description, the impacts have been considered in the Foothill Parkway documents and have been excluded here.

2.2) **Alternatives**

As described in the Biological Resources Assessment (L&L, 2015) several alternatives were considered for the Skyline Heights Project.

2.2.1) No Action Alternative

Under the No Action Alternative no residential development would occur. The current condition of vegetation, habitats, individual botanical or wildlife species, State and Federal jurisdictional features, Riparian/Riverine habitat and wildlife corridors would remain the same. The No Action Alternative would have no direct, indirect or cumulative impacts.

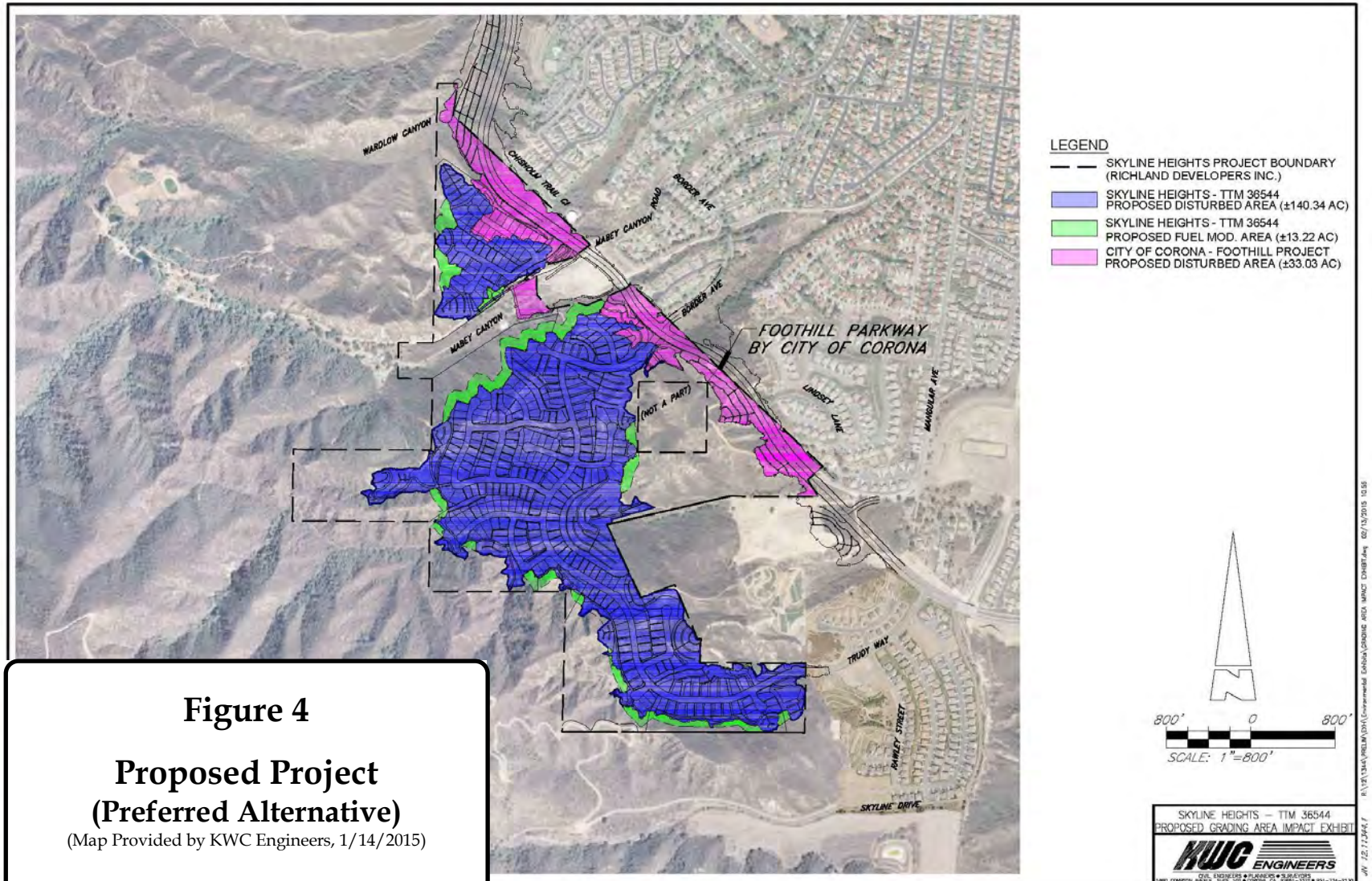


Figure 4

Proposed Project
(Preferred Alternative)

(Map Provided by KWC Engineers, 1/14/2015)

Skyline Heights (TTM 36544), City of Corona
County of Riverside, California

2.2.2) The Reduced Lot Count Alternative

Under the Reduced Lot Count Alternative either a bridge would be constructed over Feature-1 or Feature-1 would be avoided altogether. This alternative would reduce but not eliminate impacts to drainage features within the project footprint. This alternative would reduce the lot count significantly and require export of fill material off-site.

2.2.3) The Increased Lot Count Alternative

The Increased Lot Count Alternative included construction of a roadway across Feature 6 (Mabey Canyon) to provide a traffic circulation between the two development areas and a second point of access for the northerly development area as required by the City of Corona design requirements (Figure 5). This alternative would add 23 lots for a total of 315 residential lots, but would include additional impacts in the western most portions of the survey area (south of Feature 6) and to the area south of the 10 acre Public or Quasi-Public lands. This alternative provided additional areas where fill material can be placed and therefore eliminated the potential need export material or to redesign the site to balance the earthwork for the development.

2.3) Avoidance Feasibility

This section discusses the feasibility of implementing the alternatives, outlined above and their potential impacts on Riparian/Riverine and vernal pool resources within the MSHCP plan area. Avoidance of Riparian/Riverine and vernal pool resources is also discussed.

The **No Action Alternative** would not impact Riparian/Riverine habitat, but it would also not meet the proposed project goals to provide residential housing in the western Riverside/Corona area.

The **Reduced Lot Alternative** was designed to avoid impacts to the main drainage of Feature-1. The only way to avoid impacts to F-1 is with the construction of a bridge or complete removal of the secondary access point. Construction of a bridge would be extremely expensive. Without constructing a bridge the project would have fire access and road circulation issues due to the lack of a secondary access point. Without a contiguous access, providing an efficient looped water system to the project would not be possible. Without an efficient looped water system the project and surrounding developments would be put at risk in the event of a fire event.

Removing the fill of the un-named stream would require the project to either export 3 to 4 million cubic yards of material and correspondingly increase truck traffic and air pollution or radically downsize the development footprint to reduce the cut. Combined or individually, the reduced cut or the increased export would make the project infeasible particularly when impacts to infrastructure and reduced lot count is also considered.

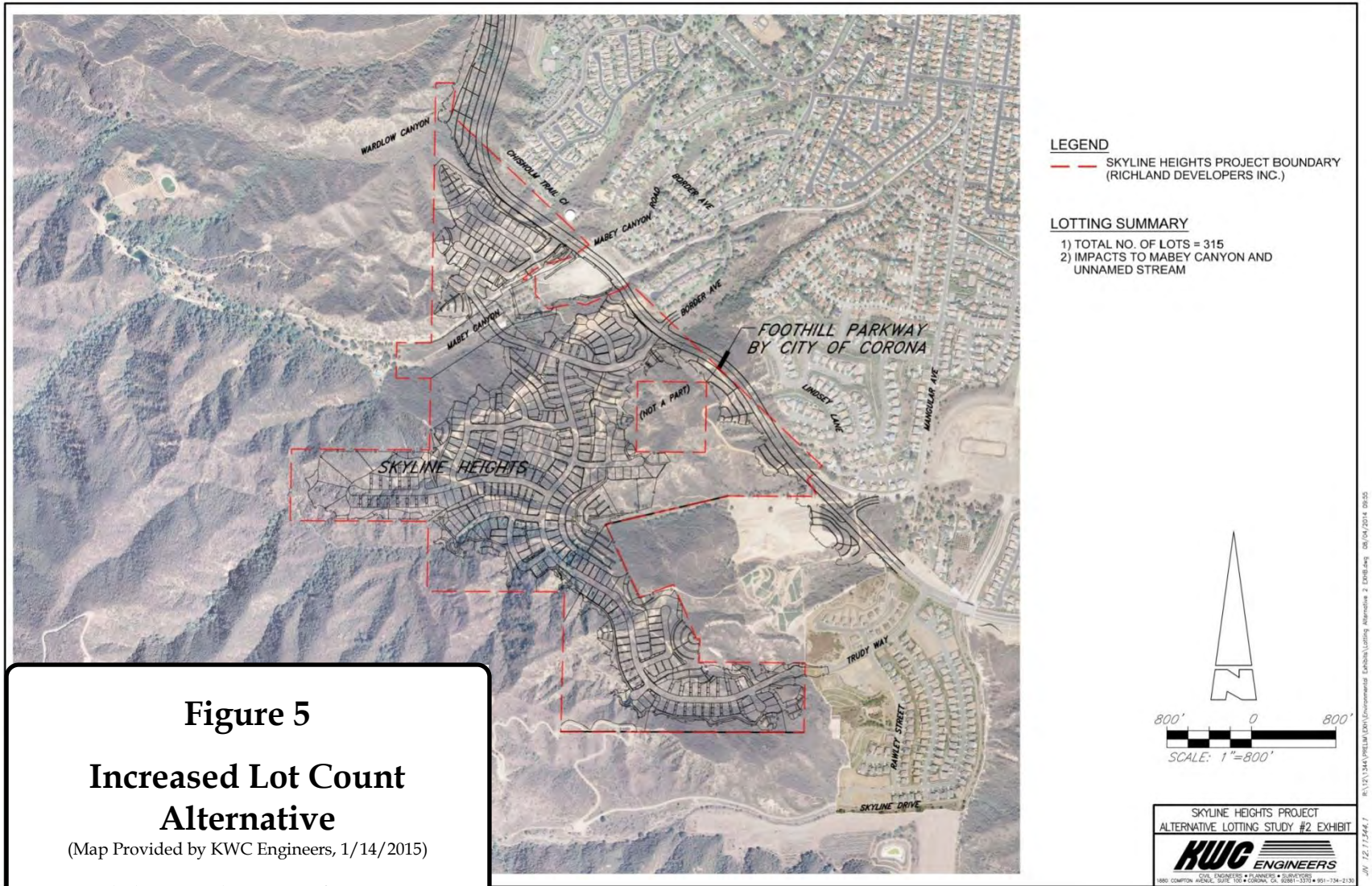


Figure 5

Increased Lot Count Alternative

(Map Provided by KWC Engineers, 1/14/2015)

Skyline Heights, City of Corona
County of Riverside, California

The revised project design would also require alternative water, sewer and roadway facilities to be constructed that are less efficient and would reduce the lot count significantly from the 292 lots shown on TTM 36544. This alternative would be financially infeasible due to increased costs and reduced lot yield.

The **Increased Lot Alternative** would not avoid impacts to Riparian/Riverine habitat; rather it would impact an additional 0.25 acres riparian habitat and 0.11 acres of riverine habitat.

The **Preferred Alternative** (Proposed Project**)** has implemented some on-site avoidance measures including avoidance of Mabey Wash and portions of the headwaters of F-1 and F-3. The proposed Project avoids and minimizes impacts to Riparian/Riverine habitat and provides for a practicable alternative.

Additional avoidance of Riparian/Riverine resources would require a much reduced project footprint and corresponding lot yield, which would limit the economic viability of the project. Due to the way the Features and tributaries are braided throughout the property, complete avoidance of Riparian/Riverine features would preclude the development of required roads and infrastructure. No feasible alternatives exist that would avoid impacts to all Riparian/Riverine resources and result in sufficient acreage remaining for a viable development when the economic, environmental, and legal considerations are taken into account. Therefore, complete avoidance is not considered feasible.

3.0) REGULATORY ENVIRONMENT

3.1) Western Riverside County Multiple Species Habitat Conservation Plan

The County of Riverside, 8 additional land jurisdictions and 14 cities have prepared a Multiple Species Habitat Conservation Plan (MSHCP). The plan, under development by the Riverside County Integrated Project, will build upon existing preserves and attempts to provide connectivity and wildlife corridors throughout the region. The plan proposes to conserve approximately 500,000 acres and 146 different species. Approximately 347,000 acres are anticipated to be conserved on existing Public/Quasi-Public lands with additional contributions of approximately 153,000 acres from willing sellers (County of Riverside, 2003).

The MSHCP was approved by the County on June 17, 2003 and an Implementation Agreement (IA) between the USFWS, the CDFG and the County was executed and an associated USFWS Section 10(a)(1)(B) Permit (No. TE-088609) was issued on June 22, 2004. The permit grants take authorization for certain species identified in Attachment 2 of the permit as "Covered Species Adequately Conserved."

The MSHCP establishes seven (7) core reserve areas and associated linkages between proposed and existing core areas. The MSHCP divides areas into Cells using USGS coordinates. The County of Riverside has been issued a Section 10(a) permit for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which this project falls within.

Section 6.1.2

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

- **Riparian/Riverine Areas** are lands that have flow for all or a portion of the year and which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.

- **Vernal pools** are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and

> the definition of the watershed supporting vernal pool hydrology, must be made on a case-by case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.

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

This Determination of Biologically Equivalent or Superior Preservation report is produced in response to identified Riparian/Riverine habitat impacts.

3.2) California Environmental Quality Act

The California Environmental Quality Act (CEQA) definitions of mandatory findings of significant environmental impact (*Title 14. California Code of Regulations*, Chapter 3; Guidelines for Implementation of the California Environmental Quality Act, Article 5; Preliminary Review of Projects and Conduct of Initial Study, Section 15065) are used in this report. They are as follows:

> (a) A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:
>
> (1) The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.
>
> (2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
>
> (3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
>
> (4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

4.0) EXISTING CONDITION

The biological background is based on the documentation provided by the proponent and the proponent's engineer, KWC Engineers (hereafter referred to jointly as the proponent), information collected during biological surveys by Gonzales Environmental Consulting, LLC (hereafter referred to as GEC) and biological and jurisdictional data collected by L&L Environmental Inc. (hereafter L&L).

The following reports were prepared and synthesized during the development of this DBESP:

- Biological Resources Assessment for TTM 36544; Skyline Heights Project, City of Corona, Riverside County, CA, L&L Environmental, Inc. 2015
- Jurisdictional Delineation, for TTM 36544; Skyline Heights Project, City of Corona, Riverside County, CA, L&L Environmental, Inc., 2015
- Determination of Biologically Equivalent or Superior Preservation APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006.Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Burrowing Owl APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Rare Plant Surveys for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Coastal California Gnatcatcher APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Habitat Assessment and Focused Surveys for Least Bell's Vireo APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.
- Jurisdictional Delineation for APN's: 275-080-010, 275-070-003, 275-050-004, 275-040-011, 275-040-006, 275-040-005, 275-040-015, 275-040-004, 275-040-012, 275-030-006. Gonzales Environmental Consulting, LLC. 2013.

4.1) Physical Condition

Located at the base of the Santa Ana Mountains, the survey area consists of relatively gentle to moderately sloping terrain that drops downward to the north and east, depending on the location in the landscape. The areas that are hilly to steep are generally rocky. The survey area has a combined vertical relief of roughly 260 feet, with elevations ranging from approximately 955 feet AMSL in the northernmost point of the site, within Wardlow Canyon Wash, to 1700 feet AMSL at the western most boundary, in the northwest corner of parcel 275-040-006.

Soils data for the survey area identify the site as largely Cieneba sandy loam with a mixture of smaller areas of Soboba gravelly loamy sand, Yorba gravelly sandy loam and Yorba cobbly sandy loam (Figure 6). The site is composed of Friant-Cieneba-Exchequer association. According to The National Resource Conservation Service Hydric Soils List for California (SCS, 1985) the soils on the project site are not hydric.

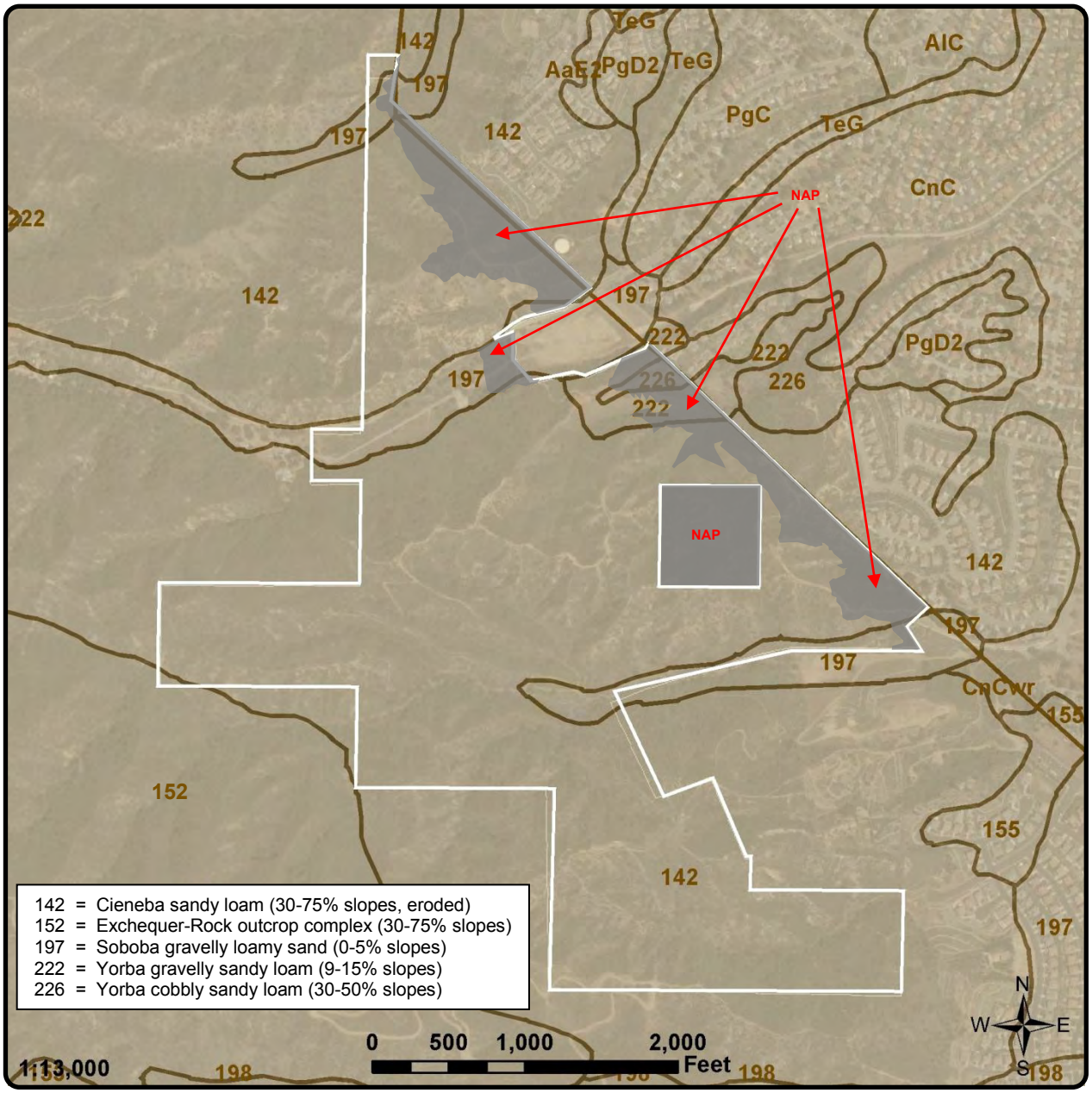
4.1.1) Vegetation

Nine (9) vegetation communities are present within the project area including Coast Live Oak (*Quercus agrifolia*) Alliance, California Sycamore (*Platanus racemosa*) Woodlands Alliance, Willow(*Salix lasiolepis*) Alliance, Mulefat (*Baccharis salicifolia*) Alliance, Sage Scrub Alliance, Chaparral Alliance, California Annual Grassland Alliance, Eucalyptus Alliance, Pepper Tree (*Schinus molle*) Alliance, and disturbed/cleared areas (dirt roads or clearings) where portions of the project site have been subject to anthropogenic disturbances (Figure 7). Detailed habitat descriptions are provided in Appendix A.

Implementation of the proposed project would result in the estimated direct permanent loss of approximately 153.50 acres of habitat (see Table 1 and Figure 7); 124.39 acres of chaparral alliance, 24.98 acres of sage scrub alliance, 0.10 acres of coast live oak alliance, 3.42 acres of grassland alliance, 0.21 acre of willow alliance, 0.32 acre of sycamore alliance, and 0.08 acre mulefat alliance. Of these habitats, 0.72acres are associated with riparian habitat (coast live oak alliance, mulefat alliance, sycamore alliance and willow alliance). Coast live oaks are protected by local City of Corona ordinance and are present within the impact area.

Table 1. Vegetation Planned For Impact.

Vegetation Type	Present in Parcels	Project Disturb.	Potential Temporary	Fuel Mod.	Total Project Impacts	Total Riparian Impacts
Chaparral Alliance	218.05 ac.	110.29 ac.	2.59 ac.	11.51 ac.	**124.39 ac.**	
Coast Live Oak Alliance	1.17 ac.	0.10 ac.	0.004 ac.	-----	**0.10 ac.**	**0.10 ac.**
Eucalyptus/ Pepper All.	2.82 ac.	-----	-----	-----	**-----**	
Grassland Alliance	5.54 ac.	3.41 ac.	-----	0.01 ac.	**3.42 ac.**	
Mulefat Alliance	1.14 ac.	0.022 ac.	0.022 ac.	0.042 ac.	**0.09ac.**	**0.09 ac.**
Sage Scrub Alliance	41.59 ac.	22.88 ac.	0.48 ac.	1.61 ac.	**24.97ac.**	
Sycamore Alliance	0.37 ac.	0.30 ac.	0.02 ac.	-----	**0.32 ac.**	**0.32 ac.**
Willow Alliance	0.21 ac.	0.21 ac.	-----	-----	**0.21 ac.**	**0.21 ac.**
Totals	**270.88ac.**	**137.21 ac.**	**3.11 ac.**	**13.17ac.**	**153.50 ac.**	**0.72 ac.**



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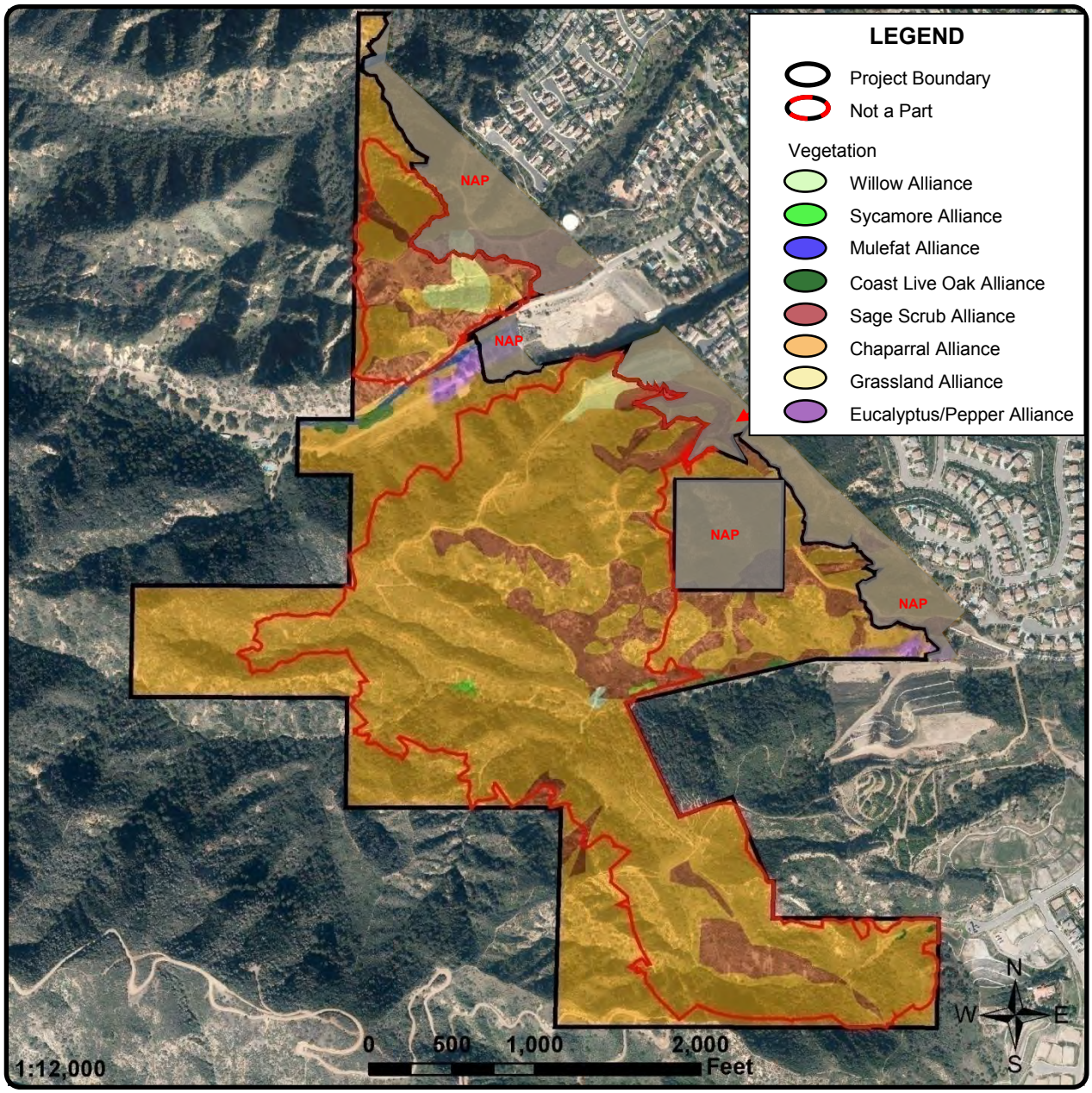
RLCC-14-458
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Figure 6

Soils Map

(Photo obtained from Google Earth, 4-23-2014, USDA Nat. Res. Cons. Serv. SSURGO Data)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

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Figure 7

Habitat Map
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Botanical Species

No threatened, endangered or MSHCP Narrow Endemic or additional needs botanical species were observed in the survey area or are expected to occur. No surveys for narrow endemic species or additional needs botanical surveys were required for the survey area.

Coulter's matilija poppy: Coulter's matilija poppy (*Romneya coulteri*) (a CNPS 4.2 species) was identified in the survey area in 2008 and 2013. Germinated populations between 2008 and 2013 surveys were reduced in size. Between 225 and 100 individuals will be impacted. The proposed project will avoid approximately 60% of the known individuals.

Intermediate mariposa-lily: Intermediate mariposa-lily *(Calochortus weedii var. intermedius),* (CDFW S2, CNPS 1B.2 species) may be impacted by the project. This species was reported in 2008 by BonTerra as occurring in the Project area. BonTerra reported a total population 0f 303 individuals, the majority of which are off-site in the Foothill Parkway Impact area. As this species was not observed during current surveys, the impacts are unknown, but can be estimated at less than100 individuals.

Chaparral nolina: Chaparral nolina (*Nolina cismontane*) (CDFW S2, CNPS 1B.2 and USFS sensitive species) was reported in the survey area by the CNDDB and may be impacted by the project. As this species was not observed or previously detailed on the project site the impacts are unknown and cannot be clearly quantified.

4.1.2) Wildlife

The habitat on the project site supports common native wildlife species that would be directly affected by the removal of the habitat. More mobile wildlife species, such as birds and larger mammals that utilize the affected area will be displaced during clearing activities into adjacent open areas. Less mobile species will probably be lost during habitat clearing and grading. Construction of the project will probably limit the future use by wildlife of the developed area, except for common reptile, bird, and small mammal species that can be found in urban neighborhoods.

Sensitive Species

Focused species-specific surveys were conducted for burrowing owl (*Athene cunicularia*), least Bell's vireo (*Vireo bellii pusillus*) and springtime botanical species (in the spring and summer of 2013.The least Bell's vireo and burrowing owl surveys were negative. These species are not currently occupying the site or adjacent areas, as both studies include a surveyed buffer zone. No endangered or threatened species or critical habitat is anticipated to be lost due to implementation of this project.

Five sensitive wildlife species were observed during the biological surveys; northern red-diamond rattlesnake (*Crotalus ruber*), Cooper's hawk (*Accipiter cooperii*), California horned lark (*Eremophila alpestris actia*), Lawrence's goldfinch (*Spinus lawrencei*) and the San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

Seventeen other sensitive wildlife species were determined to have a high or moderate potential to occur in the survey area based on the presence of suitable habitat, species range and proximity to known occurrences. These species are; California silvery legless lizard (*Anniella pulchra pulchra*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), rosy boa (*Charina trivirgata*), San Bernardino/San Diego ringneck snake (*Diadophis punctatus ssp. modestus and similis*), California mountain kingsnake (*Lampropeltis zonata pulchra)* San Diego population, coast horned lizard (*Phrynosoma blainvillii*), Coronado island skink (*Plestiodon skiltonianus interparietalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), burrowing owl, black-chinned sparrow (*Spizella atrogularis*), pallid bat (*Antrozous pallidus*), Dulzura pocket mouse (*Chaetodipus californicus femoralis*), hoary bat (*Lasiurus cinereus*), San Diego desert woodrat (*Neotoma lepida intermedia*) and monarch butterfly (*Danaus plexippus*).

Of these species the MSHCP considers the following species "Covered Species Adequately Conserved:" orange throated whiptail, coastal whiptail, northern red-diamond rattlesnake, coast horned lizard, California horned lark, Cooper's hawk, southern California rufous-crowned sparrow, San Diego desert woodrat and San Diego black-tailed jackrabbit. The California mountain kingsnake (San Diego population) will be considered "Adequately Conserved" once a Memorandum of Understanding is executed with the USFS that addresses management for this species on Forest Service Land.

Anticipated impacts to most sensitive wildlife species would be relatively minor for the following reasons: (a) no threatened or endangered species are expected to occur (b) most of the potentially impacted species are relatively common, but agencies are collecting additional data to more accurately determine rarity, (c) the project area is already partially disturbed by anthropogenic activities and (d) mitigation measures will reduce impacts to nesting birds.

Impacts to the sensitive species listed above would not affect the survival of a local or regional population. Impacts are considered adverse, but not generally considered significant and do not require specific mitigation measures (with the exception of the burrowing owl and migratory birds).

Migratory Birds

Trees and habitat suitable for nesting birds protected by the Migratory Bird Treaty Act are present within and around the site. Presence of this potential habitat is the basis for recommendation of a preconstruction survey (valid for 30 days) for nesting birds (raptors, riparian birds, etc.) prior to any site disturbance during the nesting season (January 1 through September 1). If nesting birds are present, avoidance of nest sites will be required and a buffer of 200 to 500 ft. (depending on the species) is recommended until juvenile birds have fledged and/or an authorized biologist has verified that the nest has become inactive. Active nests shall be monitored by an authorized biologist.

Wildlife Corridors

The project site includes native habitat that supports a variety of wildlife species and likely contributes generally to the Corona-Temecula Foothills linkage. However, it does not constitute a wildlife corridor (i.e., a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another), as movement on a regional scale is not confined within a specific corridor in this area. Rather, it is comprised of open space at the interface with urban development and is contiguous to a large expanse of open space within Core B and the Cleveland National Forest. Thus, wildlife currently move freely throughout the project site and surrounding areas via existing travel routes,[1] such as drainages, ridgelines, and existing dirt roads. It should be noted that Wardlow Wash, which crosses the northernmost tip of the project site, was identified by BonTerra Consulting as a regional wildlife corridor that facilitates movement between the Cleveland National Forest and Prado Basin, as referenced by the Foothill Parkway Westerly Extension DEIR (RBF Consulting 2008). However, Wardlow Wash is relatively constrained by development on either side, road crossings at three locations (Paseo Grande, Serfas Club Drive, and Palisades Drive), and State Route 91 is a significant barrier to wildlife movement. Wardlow Wash will not be impacted by the proposed development. The project site also currently provides for movement on a smaller, local scale for species that live within the project site.

4.1.3) Public Use

The portions of the project area readily accessible to the general public area used by non-owner / local residents for recreational activities. These activities include hiking, biking and ORV uses.

[1] A landscape feature (such as a ridgeline, drainage, canyon, or riparian strip) within a larger natural habitat area that is frequently used by wildlife to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas, and provides a relatively direct link between target habitat areas.

Riparian areas and dry drainage are attractive to the public and provide aesthetic and cultural functions which have traditional and artistic value. Greenbelts and open spaces, even if not approachable, have intrinsic value to humans and have been shown to improve health, longevity and wellbeing.

Additional aesthetic benefit may be provided by the views afforded by the natural and exotic vegetation as seen some distance away, either from the vantage point of hillside homes or in quick glimpses from passing motorists.

4.1.4) PQP Land/Relationship of the Project to MSHCP Core B Areas

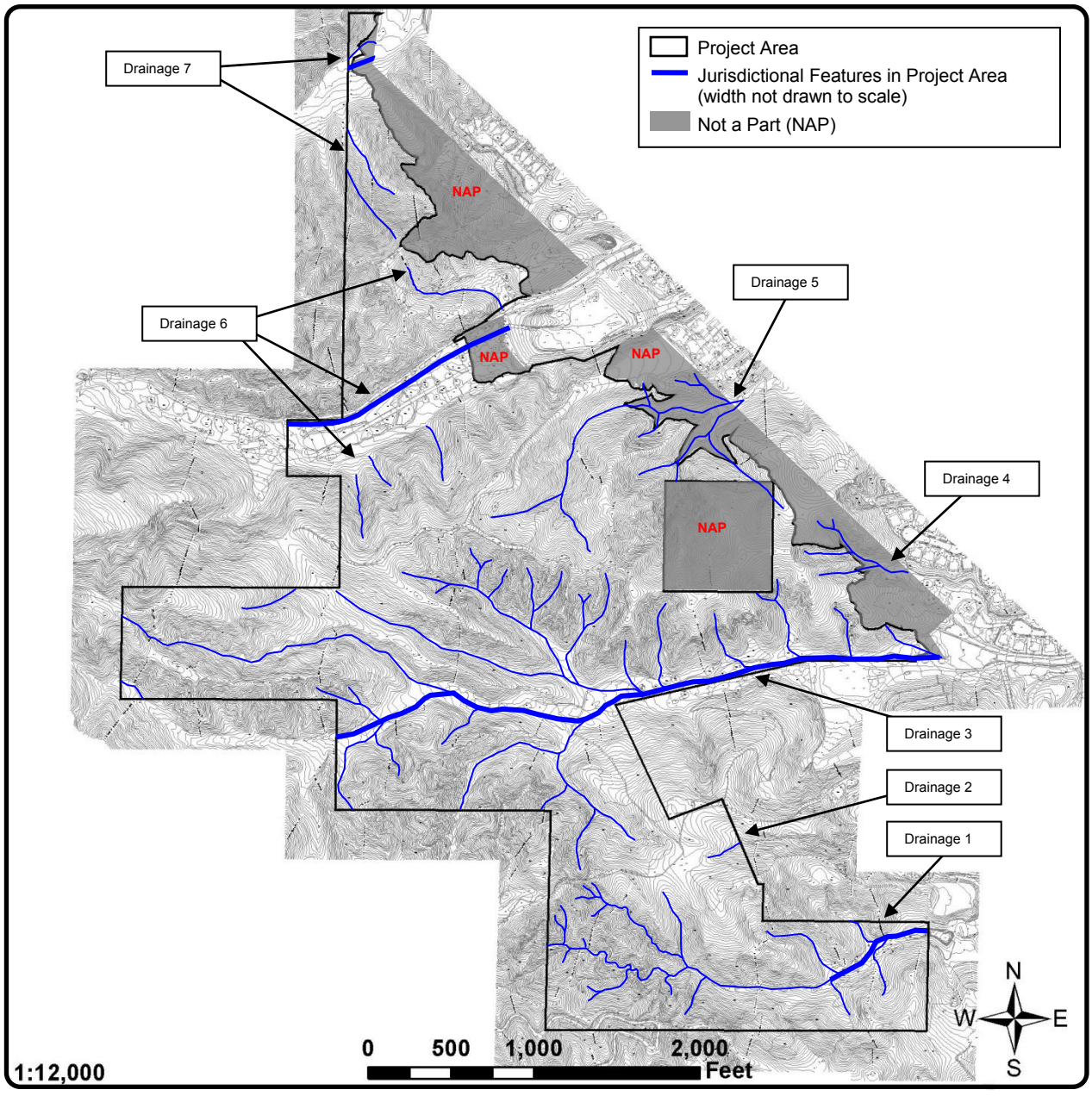
The survey area is bordered by dense urban development to the north and east, a few parcels of low density residential development and open space to the west; and open space to the south. The survey area abuts MSHCP Core B (Cleveland National Forest) to the east, and generally lies at the northern end of Core B. A recognized connection between the Santa Ana Mountains and Chino Hills area is farther to the west via Coal Canyon (Penrod et al. 2001, Beier 1993). The MSHCP also proposes a connection between Existing Core A (Prado Basin/Santa Ana River) with Existing Core B (Cleveland National Forest) via Constrained Linkages 1 and 2, which are also farther to the west (but east of Coal Canyon).

A ten (10) acre U.S. Forest Service (USFS) owned parcel, identified in the MSHCP as a Public/Quasi Public parcel that would add to conserved lands, is surrounded by the survey area. The development will be constructed to the west and south of the parcel and will connect with existing development and the Foothill Parkway to encircle the 10 acre PQP parcel and adjacent land. This parcel and adjacent land would be separated from the greater Cleveland National Forest (Core B in the MSHCP) and isolated.

4.2) Riparian/Riverine Resources

L&L found seven (7) Riparian/Riverine features containing fifty six (56) tributaries, for a total of 63 features of which three are USGS mapped blue-line streams (Figure 8, Table 5 in Appendix A). Within the seven features L&L identified a total of 10.2 acres of MSHCP Riparian/Riverine habitat features which are also State of California Streambeds Jurisdiction. The 10.2 acres of MSHCP habitat breaks down into 2.89 acres of riparian and 7.31 acres of unvegetated or upland vegetated riverine habitat.

Current design indicates that 22,240 linear feet and6.17acres of the 10.2 acres MSHCP Riparian/Riverine habitat will be impacted by the proposed development, of which 0.72 acres of riparian and 5.45acres of riverine will be impacted. The proposed project footprint will avoid 2.17acres of Riparian and 1.86 acres of riverine habitat.



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Figure 8

Jurisdictional Drainages
(Topography received from KWC Engineers) (NTS)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Of the 10.2 acres of State and MSHCP, 2.16 acres is considered federal non-wetland "waters" of the U.S of which 23,664 linear feet and 1.57 acres will be impacted by the proposed development.

Table 2. Drainage Impact Summary

Feature	Impacts to MSHCP Riparian/Riverine Habitat		
(including tributaries)	Length	Sq. ft.	Acres
F-1	6,052	42,594	0.98
F-2	191	191	0.004
F-3	13,767	219,064	5.03
F-4	0	0	0
F-5	1986	3298	0.08
F-6	244	3694	0.08
F-7	0	0	0
	22,249	268,841	6.17ac

4.2.1) Riparian/Riverine Resource Descriptions

Vegetation in and adjacent to jurisdictional features includes *Quercus agrifolia* Alliance, California Sycamore Woodlands Alliance, *Salix lasiolepis* Alliance, Mulefat Alliance, Sage Scrub Alliances, Chaparral Alliances, California Annual Grassland Alliance, Eucalyptus Alliance, *Schinus* Alliance and disturbed. Where riparian habitats fell within or adjacent to drainages, that habitat was considered part of the State jurisdiction. These alliances are very limited on the project site. They are located throughout the project site as follows:

- Coast live oak woodland alliance, exists only in limited areas of F-1, F-3 and F-6 (Mabey Canyon Wash).
- California Sycamore alliance exists only in limited areas of F-3 and F-6 (Mabey Canyon Wash).
- Arroyo Willow Thicket alliance exists only in limited areas of F-3.
- Mulefat alliance exists in narrow bands ofF-6 (Mabey Canyon Wash) and F-7 (Wardlow Canyon Wash).

Where hydrologic indications are that water flows all or a portion of the year and/or soil (deposits or patterns) indicate jurisdictional features, but the drainages lack hydrophytic vegetation and hydric soils, the feature is considered riverine under the MSHCP. All of the Features on the project site were considered to be at least partially riverine where it is either unvegetated or vegetated in upland species. Features 2, 4 and 5 are exclusively riverine, as are all Feature tributaries.

Each feature had hydrologic indicators that were identified periodically along the drainage including drift lines, sediment deposits and/or water marks and each feature connects to a drainage complex that flows to and ultimately connects with the Santa Ana River.

F-1 - Unnamed Feature

Feature 1 is located in the southernmost portion of the project boundary. It is composed of a main drainage (F-1), 13 tributaries (F1a – F1m) and seven secondary tributaries. Feature 1 enters the Property at the western boundary and flows east. After crossing the eastern project boundary the water flow enters into a basin at the terminus of Trudy Way.



Feature 1 supports mostly upland species with two areas of coast live oak woodland at the eastern Property boundary. At the time of the field visit no water was present in the main Feature or its tributaries. Portions of F-1 has been disturbed to the point that jurisdiction is difficult to characterize. This drainage has been used as a road or a trail.

F-2 - Unnamed Feature

Feature 2 is locatedin the southern portion of the Project, but north of Feature 1. This feature begins just inside of the eastern Property boundary and flows east. After leaving the property Feature 2 passes through open space into agricultural land and ends near the terminus of the West Foothill Parkway. The drainage does not have any tributaries within the project boundary and only supports upland chaparral species. At the time of the field visit no water was present. The feature was determined to be ephemeral.



F-3 - Unnamed Blue-Line Feature

F-3 is an unnamed blue-line wash located near the middle of the Project. It is composed of a main drainage (F-3), 13 tributaries (F3a – F3m) and 16 secondary tributaries. Feature 3 is located close to the center of the survey area. It enters the

Property at the western boundary and flows east, before being funneled into a drainage which leads to Oak Hills flood control facility.



Riparian woodland habitat is confined to moister soils within the wash area. Pockets of riparian vegetation, dominated by arroyo willow (*Salix lasiolepis*) and blue elderberry (*Sambucus nigra ssp. caerulea*) occur throughout the drainage. Drier areas within the wash contain populations of Matilija poppy), sage scrub, and chaparral species. Channel incising braids between the steep heavily vegetated hillsides. Stream habitat has been disturbed by road grading and flood control activities. Random non-native trees, such as Peruvian pepper tree (*Schinus molle*) and Eucalyptus (*Eucalyptus sp.*) border stream banks near the urban interface.

At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral.

F-4 - Unnamed Feature

Feature 4 is located east of the 10 acre Public/Quasi Public Land parcel the survey area surrounds, but that is not a part of the Project. The feature runs from west to east before leaving the property boundary near the terminus of Meadow Crest Circle. The feature supports upland species within the survey area, including sage scrub and chaparral species. Channel incising braids between the steep heavily vegetated hillsides. At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral.

Feature 4 (the main drainage) falls outside of the Skyline Heights project boundary in the Foothill Parkway impact area. Tributaries 4a and 4b are within the Project boundary, but will not be impacted by the proposed Project.

F-5 - Unnamed Feature

Feature 5 is located north of the 10 acre Public/Quasi Public parcel the survey area surrounds, but that is not a part of the project. It is composed of a main drainage (F-5), 5 tributaries (F5a –

F5e) and three secondary tributaries. The feature starts onsite and flows east. It leaves the Project site south of the terminus of Border Avenue.

The feature supports upland species within the survey area including sage scrub and chaparral species. Channel incising braids between the steep heavily vegetated hillsides. At the time of the field visit no water was present in the main Feature or its tributaries; all of which were determined to be ephemeral.

F-6 - Mabey Canyon Feature



F-6 is a blue-line stream also known as Mabey Canyon Wash. It is composed of a main drainage (F-6) and three tributaries (F6a – F6c). The tributaries to Feature 6 do not connect to Navigable waters due to a blockage and private road, therefore they are not considered state or federal jurisdiction. The drainage starts offsite to the west, enters the western project boundary and flows east across the entire width of the project site. As Feature 6 leaves the Project area at the eastern boundary it flows into an offsite flood control basin located at the terminus of Mabey Canyon Road. The area to the south of the Wash is used as a small air strip. The air strip is bordered by steep hills.

Vegetation within the drainage is primarily mulefat (*Baccharis salicifolia*) with occasional arroyo willow. Channel incising and man-made riprap are present from the western property edge, which is located near a small ranch on Mabey Canyon Road. Stream habitat has been disturbed by road grading and flood control activities. Small stands of riparian vegetation, mature arroyo willow, are located within the stream. Random non-native shrubs such as, Peruvian pepper tree, tree tobacco and western prickly pear (*Opuntia littoralis*) border the stream banks. Between the ranch house and the flood control basin, trash has been deposited into the stream. Vegetation downstream consists of immature cottonwood



(*Populus fremontii*) and willow stands. Stinging nettle (*Urtica dioica*) forms islands as understory vegetation.

At the time of the field visit no water was present in the main Feature or its tributaries. The main drainage of Feature 6; was determined to be ephemeral. Hydrologic indicators found periodically along the drainage include drift lines, sediment deposits and water marks.

F-7 - Wardlow Canyon Feature

F-7 is a blue-line stream also known as Wardlow Wash. F-7 is composed of a main drainage (F-7) and two tributaries. The tributaries to Feature 7 flow into an open area and do not connect to Navigable waters, therefore they were not considered state or federal jurisdiction.



Feature 7 enters the Property at the western boundary and flows east. After crossing the eastern project boundary the water flows to the northeast.

Within the boundary, F-7is a narrow-incised channel vegetated with patches of mulefat mixed with laurel sumac (*Malosma laurina*), California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), toyon (*Heteromeles arbutifolia*), deerweed (*Acmispon glaber*), and Tocalote (*Centaurea melitensis*) dominating the habitat.



At the time of the field visit no water was present in the main Feature or its tributaries. The main drainage of Feature 7 was determined to be ephemeral. Hydrologic indicators found periodically along the drainage include drift lines, sediment deposits and water marks.

5.0) Existing Functions and Values Assessment

The following section analyzes the functions and values provided by the Riparian/Riverine resources within the impact footprint to special status wildlife and plant species covered under the Western Riverside County MSHCP (County of Riverside 2003).

5.1) Species Functions and Values

5.1.1) Wildlife

Birds (bald eagle, least Bell's vireo, peregrine falcon, southwestern willow flycatcher, and western yellow-billed cuckoo)

A focused survey for least Bell's vireo (LBV) was performed by GEC in 2013 and resulted in no LBV or other sensitive riparian birds observed. Based on the results of this study, it can be reasonably concluded that least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo are not presently utilizing the subject property. Less than one acre of riparian habitat is present on the property and it is sporadic and highly isolated from other suitable habitat. Consequently, the survey indicated that the property lacks potentially suitable breeding habitat for all three species, therefore the project will have will no impact on these special-status riparian bird species.

The project site also lacks potential for the bald eagle and peregrine falcon, species that require stands of trees or high cliffs for roosting and water bodies for foraging. No potential for impact to these species is expected by the proposed project.

Amphibians (arroyo toad, mountain yellow-legged frog, and California red-legged frog)

The project's Riparian/Riverine areas do not support adequate aquatic habitat for these species. These species require persistent water from March to mid-June. Features within the property boundary are ephemeral in nature and do not provide suitable habitat for these three amphibian species. These species were not observed and are not expected to occur in the project boundary; therefore, the project will not impact these amphibian species

Fish (Santa Ana sucker)

The project site lacks open water and therefore does not support habitat for Santa Ana sucker. The project site also occurs outside the geographic range of the species.

Invertebrates/Crustaceans (Riverside fairy shrimp and vernal pool fairy shrimp)

L&L found soil types present are not consistent with an alkali playa or vernal pool complex and pools or depressions characteristic of vernal habitat were not noted as present on the subject

property. No fairy shrimp, fairy shrimp habitat, vernal pool species or vernal pools were observed on the property nor are they expected to occur.

5.1.2) Plants

The plants associated within Riparian/Riverine and vernal pool resources and that are to be provided conservation and protection to under the MSHCP Section 6.1.2 policies include Brand's phacelia, California Orcutt grass, California black walnut, Coulter's matilija poppy, Engelmann oak, Fish's milkwort, graceful tarplant, lemon lily, Mojave tarplant, mud nama, ocellated Humboldt lily, Orcutt's brodiaea, Parish's meadowfoam, prostrate navarretia, San Diego buttoncelery, San Jacinto Valley crownscale, San Miguel savory, Santa Ana River woolly-star, slender-horned spineflower, smooth tarplant, spreading navarretia, thread-leaved brodiaea, and vernal barley.

As discussed in Section 4.1.1 Coulter's matilija poppy was identified in the survey area in 2008 and 2013. Germinated populations between 2008 and 2013 surveys were reduced in size. Between 225 and 100 individuals will be impacted. The proposed project has been designed to avoid approximately 60% of the known individuals. Where this species is avoided, the associated Riparian/Riverine habitat in F-3 will also be avoided.

Fish's milkwort was determined to have a moderate potential of occurrence based on potential habitat onsite and the proximity of a known record however, this species was not observed, during multiple years of surveys. Consequently impacts to Fish's milkwort are expected to be low or nonexistent. No other plant species associated with wetlands or vernal pools under the MSHCP Section 6.1.2 were observed on the project site.

5.1.3) Additional Survey Needs

A Habitat Assessment and focused burrowing owl survey was conducted by GEC in 2013. The burrowing owl was not observed and is not expected to be occupying the property or adjacent buffer zone. Impacts to the burrowing owl are not expected to occur.

Focused surveys for the coastal California gnatcatcher (*Polioptila californica californica* performed to determine whether California gnatcatchers are located within potentially suitable habitat on the property. The gnatcatcher was not observed and the MSHCP does not require protocol surveys for coastal California gnatcatchers. Impacts to the gnatcatcher are not expected to occur.

In summary, the Riparian/Riverine resources within the proposed impact area minimally contribute to botanical and wildlife species of concern listed in Section 6.1.2.

5.2) Hydrological Functions and Values

The on-site Riparian/Riverine resources are expected to contribute at least minimally to the hydrological functions and values of downstream Riparian/Riverine habitat within the Santa Ana River and to those areas immediately adjacent to the project and between the project and the Santa Ana River.

The Santa Ana River watershed is located in Riverside, Orange and San Bernardino Counties. The project site occurs in one of the highest points in the local watershed. Within the site are a number of ridgelines that more or less define the drainage patterns onsite. These flow primarily in a west to east direction and provide ephemeral flows. Storm waters flow from the project site during or for a short period of time following a rain fall event and are conveyed through surface channels in a combination of natural and man-made storm drainage systems.

Three blue-line streams and four other drainages are located within the project site. Feature 7 (Wardlow Wash) carries storm water directly to the Santa Ana River. Feature 6 (Mabey Wash) flows into Mabey Canyon debris basin which outflows into Oak Street Channel (concrete trapazoidal channel). D-1 through D-5 flow via open channel or subterranian channel into Oak Street detention basin which also outflows into Oak Street Channel (concrete trapazoidal channel). Oak Street Channel hydrologically connects to Prado Basin and the Santa Ana River.

While riparian vegetation is present in small patches on site the major flood storage and flood flow modification occurring in the area is downstream of the planned project. The City of Corona has installed and maintains a number of flood control facilities, which are of sufficient size to trap flood events and allow slow release downstream.

Water that enters the Features on-site originates from the Santa Ana foothills. These areas support native vegetation and are mostly undeveloped. The upper tributary areas of the project are steep and likely contribute little to groundwater storage and have little potential to develop riparian habitat. Lower, broader and more level areas of the property contain wider channels with riparian vegetation as well as exotic non-native trees and shrubs. These areas would provide some flow absorption where sandy bottom channels receive low flow/low energy flows.

The primary hydrological contribution is to the downstream recharge basins and to the flows within the Santa Ana River, though these may only reach the River at high volume/high flow rates once the basins have filled and start to discharge water.

Riparian/Riverine resources on the site provide nutrient removal, sediment retention and toxicant trapping. The existing Riparian/Riverine habitat includes vegetation and soils which would be expected to perform biogeochemical cycling functions and improve water quality, particularly with regard to nitrogen, sulfur, and phosphorous content and reduction of sediment

and toxins to the extent that these might occur in the project site. Where Riparian/Riverine resources are present, and to the extent that it is occurring, this process contributes to the water quality and the habitat in the downstream flood control basins and the Santa Ana River.

Natural water transported from the Santa Ana mountains, through the site and downstream eventually enters and combines with flows from the City of Corona / County of Riverside storm water and flood control facilities. . As a result, non-point-source chemicals associated with the urban landscape including residential uses have the potential to be present within storm and nuisance flows prior to entering the Santa Ana River.

6.0) RIPARIAN/RIVERINE RESOURCES IMPACT ASSESSMENT

The Skyline Heights project will impact 153.5 of the 271 acres surveyed. Impacts would be primarily to chaparral and sage scrub alliance (upland) vegetation, but Riparian/Riverine communities will also be impacted.

The impact analysis for the proposed project was conducted by overlaying the proposed impact footprint with the applicable biological resource mapping. All impacts from the project footprint are considered permanent, direct impacts. Proposed impacts will substantially alter the existing bed and bank of stream channels, will impact hydrology and remove native and existing vegetation within the proposed impact footprint.

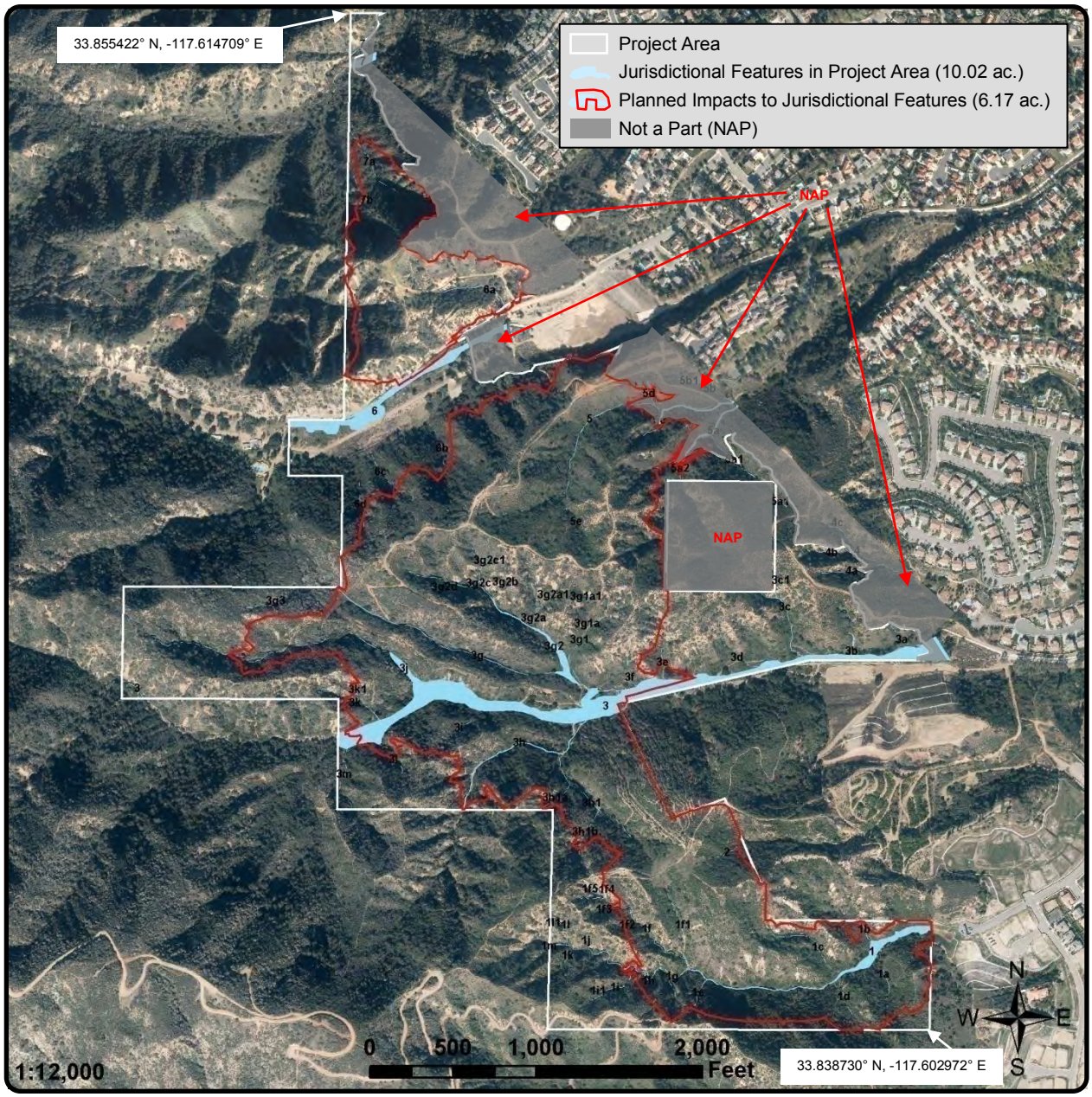
6.1) Direct Effects to Riparian/Riverine Functions and Values

Unvegetated or upland vegetated, non-wetland drainage features and riparian vegetated drainage features will be impacted by the proposed project. The proposed project will unavoidably impact 22,240 linear feet, 6.17 acres of MSHCP Riparian/Riverine resources (also identified as State of California, Department of Fish and Wildlife Jurisdiction)(Figure 9) and20,232 linear feet, 1.57 acres of Army Corps of Engineers, Waters of the U.S. (WoUS). No direct effects will occur to Federal wetlands. Impacts to Riparian/Riverine habitat are summarized in Tables3 and 4.The feature detail, which shows the length, average width and impacts to each drainage and tributary is included in Table 5, Appendix A. Riparian impacts include Sycamore Alliance (0.32 acre), Mulefat Alliance (0.09 acre), Willow Alliance (0.21 acre), Oak Alliance (0.1 acre) and unvegetated or upland vegetated streambeds (5.45 acres) (Figure 10).

The Skyline project avoids 75% of the riparian resources within the property boundary. The Skyline project avoids 25% of the riverine habitat within the project area. While impacts have been minimized and avoided to the extent practicable an alternatives analysis has determined impacts to Riparian/Riverine habitat is unavoidable. Those impacts that cannot be avoided must be mitigated.

Table 3. Percent Impacts to Avoidance Features

MSHCP 6.1.2 Features	On-site	Avoided (acres)	Project Impacts (acres)	Percent Avoided	Percent Impacted
Upland or Unvegetated Riverine Features	7.31	1.86	5.45	25%	75%
Riparian Vegetated Features	2.89	2.17	.72	75%	25%
TOTAL	**10.2**	**4.03**	**6.17**	**100%**	**100%**



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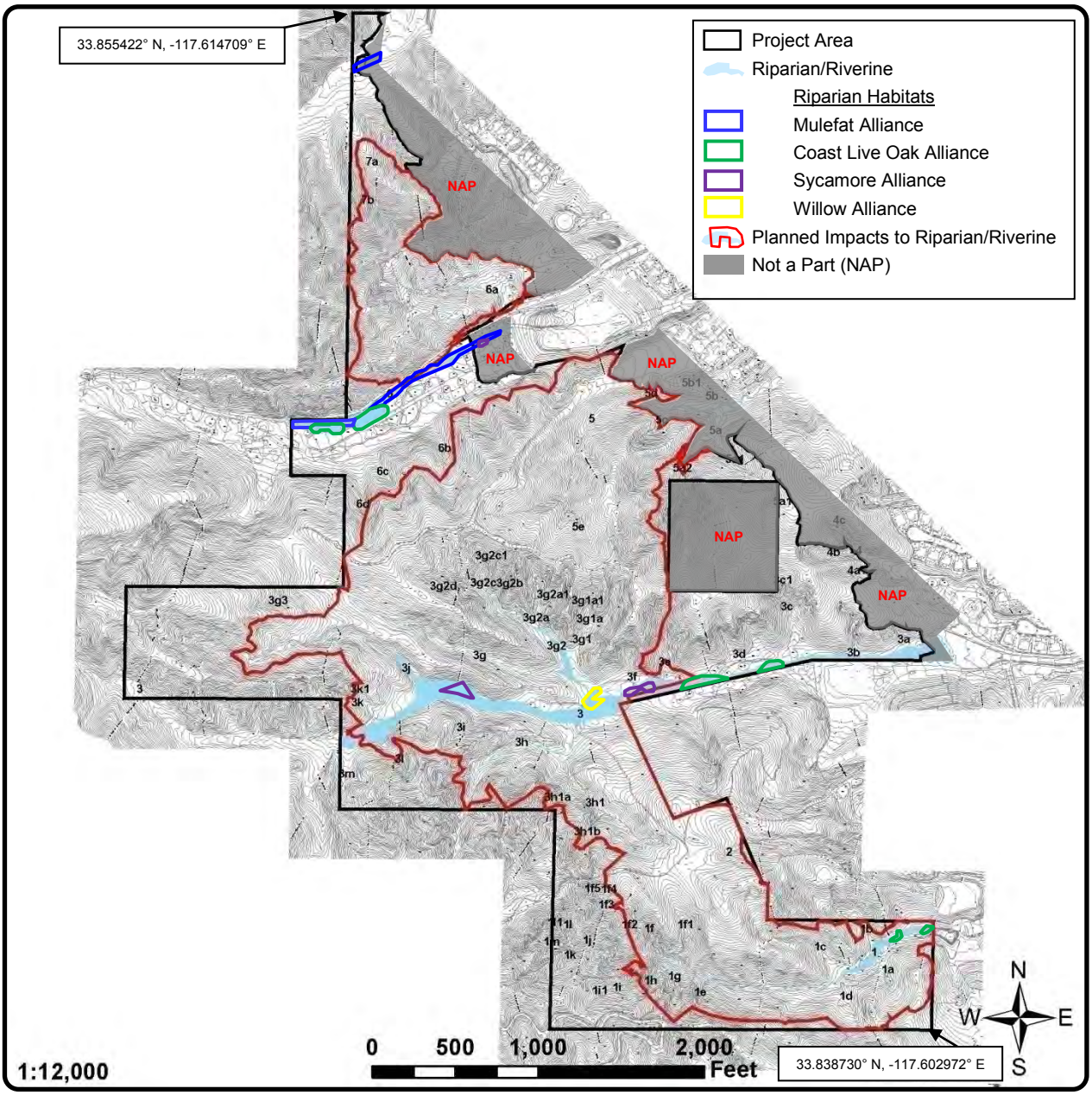
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March 2015

Figure 9

CDFW Feature Impacts

(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California



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BIOLOGICAL AND CULTURAL INVESTIGATIONS AND MONITORING

RLCC-14-458
March 2015

Figure 10

MSHCP Riparian/Riverine Impacts

(Topography received from KWC Engineers)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Table 4. Detail of Impacts to Avoidance of Riparian

Riparian Habitat	On-site	Avoided (acres)	Project Impacts (acres)	Percent Avoided	Percent Impacted
Mulefat Alliance	1.14	1.05	0.09	92	8
Coast Live Oak Alliance	1.17	1.07	0.1	91	9
Sycamore Alliance	0.37	0.05	0.32	13.5	86.5
Willow Alliance	0.21	0	0.21	0	100
TOTAL	**2.89**	**2.17**	**.72**		

6.1.1) Plants

The project site supports populations of Coulter's matilija poppy, between 236 and 526 individuals (2008 vs. 2013 populations). The proposed project will directly impact approximately 40% of the population, or between 95 and 211 individuals. All of the Coulter's matilija poppy is found adjacent to Feature 3 or its tributaries, with the exception of one small population adjacent to an access road. The population associated with the access road is not associated with onsite Riparian/Riverine habitat. The 60% of the population falls outside of the proposed project site and will not be impacted.

The project site has the potential to support Fish's milkwort, but it is not known to occupy the site. Since this species was not observed during the current or previous surveys the potential it will be impacted is considered low. Impacts could not be estimated.

6.1.2) Wildlife

The project site lacks suitable habitat for the wildlife species outlined in Section 6.1.2 of the MSHCP (GEC 2013); therefore, direct impacts to the functions and values necessary for these Section 6.1.2 wildlife species would not occur.

6.1.3) Other Impacts

Oak trees will be avoided to the maximum extent feasible. Over 1 acre of the onsite coast live oak habitat will be avoided under the current design. Included in the habitat impacts are unavoidable impacts to 0.1 acres of coast live oaks.

6.2) Indirect Effects to Riparian/Riverine Functions and Values

The proposed project could result in potential indirect impacts to Riparian/Riverine resources within the Project site and downstream of the project site in off-site Riparian/Riverine areas in Wardlow Wash, the Santa Ana River and their tributaries. Impacts from earthmoving or other

construction activities in a drainage or sheet-flow area could result in discharge of toxic materials, silt, debris, or excessive erosion into waters of the U.S. during project construction. In addition, development could introduce a greater potential for invasive botanical species to spread and invade natural areas.

Noise, lighting and predation are indirect impacts primarily applicable to wildlife. Because no Riparian/Riverine associated sensitive wildlife species were identified in the project area and none are expected to occur, these indirect impacts will not impact the onsite functions and values of Riparian/Riverine resources.

6.3) Minimization and Avoidance Measures to Functions and Values

A reduced project footprint alternative was considered and not advanced for further consideration because both options, construction of a bridge or not, increase construction costs exponentially and reduce lot yield. Although, of the two options, not constructing the bridge would cost less, this option did not allow for critical circulation and fire access requirements and would not have accomplished the project goal and be economically feasible.

The preferred alternative (proposed Project) is both feasible and minimizes impacts to riparian and riverine habitats while accomplishing the project goal.

7.0) RATIONALE WHY AVOIDANCE ALTERNATIVE IS NOTPOSSIBLE

7.1) Complete Avoidance

Compete avoidance of the Riparian/Riverine resources on the project site is not possible or feasible. No project design would allow for road and utility circulation with two points of connection while avoiding all features. Avoidance of all features would limit lot yield well below the feasibility level and would be cost prohibitive.

7.2) Reduced Lot Footprint Alternative Analysis

The Reduced Lot Footprint Alternative (described in Section 2) is basically the same as the proposed project in terms of proposed impacts to Riparian/Riverine resources, with the added avoidance of the main drainage of Feature-1. Avoidance of F-1 would require construction of a bridge or removal of the secondary access point. As Discussed in Section 2, construction of a bridge would be financially infeasible due to increased costs and reduced lot yield.

Removal of the secondary access point would create fire access and road circulation issues due to a lack of secondary access point. Without a contiguous access, providing an efficient looped water system within the project would not be possible creating a risk in a fire situation. Second, by removing the ability to fill the un-named stream the site will need to export 3 to 4 million cubic yards of material from the site or radically adjust the development footprint to drastically reduce the cut. Being that this site is a hillside grading project, export of that much material is too expensive and redesigning the site and streets to reduce the cut while maintaining a comparable lot count is not attainable. Third, the alternative land plans required additional water, sewer, roadway facilities to be constructed that are less efficient and therefore substantially increase the cost to development. These increased costs would have made the project economically infeasible to develop. The last factor is the lot count and site efficiencies. The inability to fill the un-named stream reduced the developable footprint and would reduce the lot count significantly from the 292 lots shown on TTM 36544. This alternative would be financially infeasible due to increased costs and reduced lot yield.

8.0) MITIGATION TO FUNCTIONS AND VALUES

8.1) Mitigation for Direct Impacts

The following mitigation measures have been proposed within the Biological Resources Assessment (CEQA documentation level) for impacts to PQP Lands and Riparian/Riverine resources:

MM3) On a 1:1 basis, ten (10) acres of natural habitat, biologically equivalent or superior to the PQP (NAP) land that the survey area surrounds, adjacent to Forest Service land will be preserved and a deed restriction placed on the land to prevent future development.

MM4) Replacement of coast live oaks at no less than a 1:1 basis within landscaped areas.

MM5) Mitigation will be provided for the 6.17 acre of Riparian/Riverine impacts at no less than a 1:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP evaluation of functions and values analysis. The proponent proposes mitigation at a ratio of 2:1 for riparian habitat and 1:1 for riverine habitat in the form of off-site mitigation with the Riverside-Corona Resource Conservation District (RCRCD).

The preservation of onsite resources via deed restriction, the acquisition and preservation of mitigation land via deed restriction, the on-site creation, enhancement and /or reestablishment or a combination acceptable to the City of Corona and the Wildlife Agencies may be substituted according to the functions and values assessment with an equivalent or superior preservation if necessary.

In the event that on-site creation is later substituted as mitigation, the applicant shall provide an approved Habitat Mitigation Monitoring and Reporting Plan. All proposed on-site creation areas would be identified in a conceptual habitat mitigation plan consistent with USACE regulatory requirements, and including the following:

- Quantitative success criteria (vegetation cover and species richness)
- Recommendations for soil preparation
- A plant palette to include native species occurring on the Site, such as coast live oak and Coulter's matilija poppy
- Planting methods
- Irrigation and maintenance requirements
- A long-term mitigation maintenance and monitoring plan with remedial measures

In the event that a bond (associated with on-site mitigation) is required for assurance, the estimated cost for completion of a five (5) year CEQA program is $125,000.00.

The functions and values assessment of resources within the Skyline Heights project footprint are primarily hydrological support to the downstream habitat within the Santa Ana River. Mitigation measure 5 would support the functions and values of Riparian/Riverine areas within the Santa Ana watershed by replacing impacted Riparian/Riverine habitat available and concentrating it for use by species covered in Section 6.1.2 of the MSHCP.

The preservation of lands within a suitable off-site habitat creation bank is considered superior preservation to on-site creation and enhancement for projects where small islands of habitat are created, but are isolated from other habitat and may be difficult for residents to maintain in perpetuity. The use of habitat creation banks is consistent with the MSHCP policy and procedures.

The resources preserved as a result of this DBESP may also be used to satisfy the requirement or a portion of the requirement for the CDFW and/or ACOE & RWQCB and the reverse, by agreement. However, if additional enhancement is provided through agreement plans with other outside agencies, this additional enhancement would not be required to create a biologically equivalent or superior habitat community. This obligation will be considered complete when proof of purchase of mitigation credits from an acceptable bank available at the time is supplied for grading clearance.

In no event shall the impacts onsite be greater than the 6.17 acres or mitigation less than the functional value of the 6.17 acres impacted by the Skyline project.

8.2) Mitigation for Indirect Impacts

8.2.1) Water Quality

To mitigate potentially significant indirect impacts to riparian resources located downstream of the Project site, the following measures would be implemented by the applicant during the construction.

A water pollution and erosion control plan will be required, that would describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans would be reviewed and approved by Riverside County and participating jurisdictions prior to construction.

Included in these plans will be BMPs:

MM6) The project proponent shall employ all standard best management practices (BMPs) to prevent discharges from entering waters of the U.S. during construction. BMPs, such as:

- the use erosion control or sedimentation prevention methods; such as fiber rolls,

sand bags, rice mats, straw wattles or similar measures, where appropriate,

- proper use and disposal of oil, gasoline, diesel fuel, antifreeze and other toxic substances will be enforced.

In addition, the proponent will:

MM7, 8, 9)Comply with any and all conditions of permits by the USACE or RWQCB under Sections 404 or 401 of the federal CWA, by CDFG under Section 1602 of the Fish and Game Code, or by Riverside County pursuant to the Western Riverside County MSHCP. Permit conditions generally include both short-term (during construction) and long-term (operation) requirements.

8.2.2) Invasive Species

MM12) Design guidelines for the proposed Project will provide the homeowners with a list of native landscaping materials permitted within the development area. These materials have been selected for their contribution to the project theme, adaptability to local climatic and soil conditions, and for their compatibility with the unique natural environment in the area. None of the plants listed in Section 6.1.4 of the MSHCP will be utilized in the development and their use by future homeowners will be prohibited. The MSHCP has identified invasive plants that should be removed from open space areas. This list is included in Table 6-2 of the MSHCP and here in Appendix D.

MM13) To mitigate for exposure of areas to additional invasive vegetation, City of Corona approved barriers will be placed around the development (See Measure 24 below).

MM14) All heavy equipment that will be used will be washed, particularly the wheels and under carriage, prior to bringing it onto the Project site from other construction sites to prevent the spread of weedy species.

MM15) Staging areas shall be placed in areas that have been previously disturbed or have degraded habitat within the project footprint, but do not show an infestation of non-native species. Staging areas will be maintained in a weed/noxious weed-free condition.

With the above mitigation measures features, the proposed project would avoid the use of invasive species. There are additional mitigation measures that will be implemented that address indirect impacts associated with noise, vibration, and lighting, which could impact special-status wildlife species on the project site. However, no suitable habitat exists on the project site for special-status wildlife species discussed in Section 6.1.2 of the MSHCP and thus such measures have not been included here.

9.0) MITIGATION FOR OTHER MSHCP IMPACTS

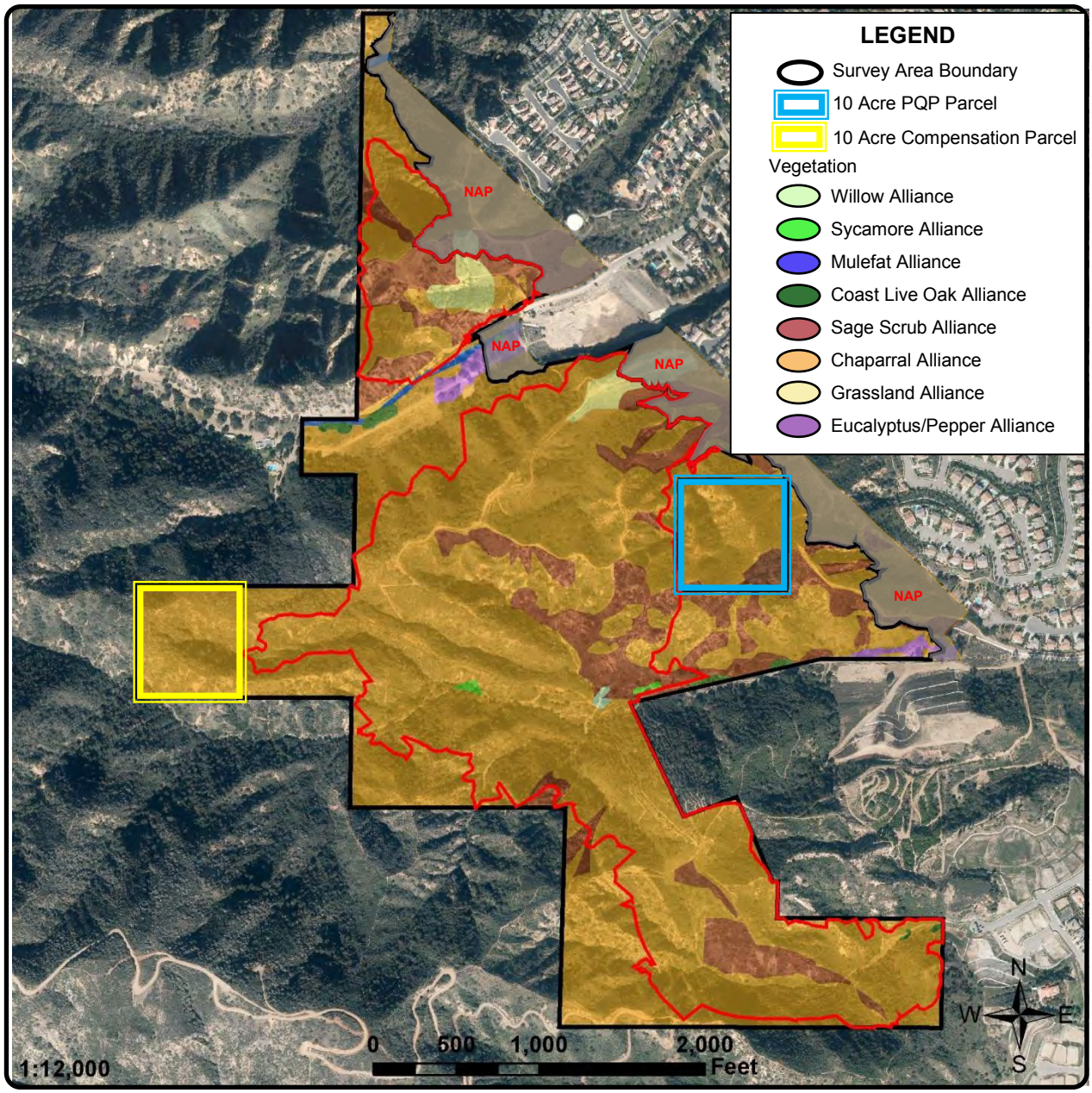
The following mitigation measures have been proposed within the Biological Resources Assessment (CEQA documentation level) for impacts to Public and Quasi-Public Lands

With the implementation of the Project a single 10 acre PQP parcel is surrounded by the survey area and is bordered to the west, north and east by the proposed development and the Foothill Parkway. Although not all of the land surrounding the 10 acre parcel is proposed for development, this parcel and adjacent habitat avoided by the proposed Project will be isolated and wildlife movement restricted from this land to the greater Cleveland National Forest (MSHCP Core B).

The MSHCP (Section 3.2.1) requires that if an MSHCP permittee alters PQP land in such a way that it no longer contributes to the reserve assembly, the permittee will replace the land at a ratio no less than 1:1 and the replacement must be biologically equivalent or superior. Ten acres of habitat adjacent to Forest Service land (Figure 11) will be avoided as compensation for the isolation of the 10 acre PQP parcel and will be deed restricted to prevent future impacts.

The existing PQP parcel is 10 acres in the foothills east of the proposed project. The parcel supports two jurisdictional features and approximately 10 acres of dry scrub habitat; 9 acres of chaparral Alliance, 1 acre of sage scrub Alliance. The parcel is crossed on the east side by a dirt access road and is a part of the general area being used for recreational purposes. The site is on the edge of development, approximately 525 feet from agricultural development to the southeast, 650 feet from medium density residential development to the east and is immediately adjacent to the proposed Foothill Parkway impact area.

The 10 acre parcel proposed for compensation is in the far west portion of the survey area, very close to the isolated parcel; in the same area of the Santa Ana foothills. The compensation parcel supports 10 acres of chaparral Alliance and two jurisdictional (riverine) features. There are no access roads on the property. The proposed development is adjacent to the compensation parcel, but only a narrow east/west band comes close to the compensation parcel and the elevational difference of the majority of the site is well above the adjacent development. Another seven acres of natural land adjacent to the 10 acre compensation parcel (north and south of the development in this area) will be avoided by the development, will remain undeveloped and add to the open space available for wildlife use in MSHCP Core B. The proposed parcel is immediately adjacent to PQP land, MSHCP Core B, and would add to the total acreage of contiguous land within the Core permanently available to wildlife species as habitat and for species movement.



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Figure 11

Compensation Parcel
(Photo obtained from NAIP, February 2011)

Skyline Heights (TTM 36544), Corona Area
County of Riverside, California

Mitigation Measure 3, preserving a 10 acre block of natural land adjacent to the Forest Service land and Core B, and Measure 5, to the extent feasible, avoided resources within the survey area will be preserved in open space and deed restricted to prevent future impacts, will increase the size of natural land associated with Core B of the MSHCP Conservation Areas and will provide a larger area to be utilized by a wide variety of species for dispersal, seasonal migration and home range connectivity. There would be no loss to the overall acreage or quality of PQP lands and no future development could isolate the compensation parcel from the Core.

10.0) DETERMINATION OF BIOLOGICALLY EQUIVALENT OR SUPERIOR PRESERVATION

Implementation of the avoidance, minimization and proposed mitigation, as outlined in Section 8.0 would mitigate for impacts to Riparian/Riverine resources. As identified in Chapter 5, the existing riparian/riparian resources in the study area support Coulter's matilija poppy. With avoidance of 60% of the population the avoided areas will be available for the expansion of the poppy and will continue to benefit the long-term conservation of the species.

The Riparian/Riverine resources on the project site are limited in terms of riparian vegetation and consequently habitats for riparian-associated wildlife species are generally absent. The only locations within the project site that have riparian vegetation are along drainages in small, isolated patches. Therefore, it was determined that no suitable habitat exists on the project site for special-status wildlife species discussed in Section 6.1.2 of the MSHCP.

Mitigation for Riparian/Riverine resources will be provided for the 6.17 acre of Riparian/Riverine impacts at no less than a 1:1 basis, as determined through consultation with the City of Corona and wildlife agencies based on an MSHCP functions and values analysis. The proponent proposes mitigation at a ratio of 2:1 for riparian habitat and 1:1 for riverine habitat in the form of off-site mitigation with the Riverside-Corona Resource Conservation District (RCRCD). In the event mitigation with the RCRCD is not finalized for any reason, equal or greater value mitigation will be provided with a combination of one or more of the following: off-site acquisition and preservation, participation in an approved mitigation bank, on-site creation, off-site creation, enhancement or reestablishment. Substitution of mitigation must be approved by the local and wildlife agencies.

The PQP parcel affected, will not be lost as open space land and habitat, but will be isolated from the Core and will restrict wildlife movement. Habitat and topography are very similar to the isolated parcel and both are located in the same general area. Replacement of the 10 acre PQP parcel with 10 acres contiguous to the Cleveland National Forest and MSHCP Core area the parcel will immediately add to the overall open space land permanently available to wildlife species as habitat will allow for species movement and will never be isolated from the Core.

Potential downstream effects to existing or proposed conservation lands and/or conserved species are not expected when proposed mitigation measures are considered in conjunction with the proposed project. Therefore, there will be no-net-loss of functions and values resulting from the development of the Skyline project. Avoidance, preservation and mitigation will provide an equivalent or superior preservation.

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APPENDIX A

Habitat Descriptions

***Quercus agrifolia* (Coast live oak woodland) Alliance 71.060.02**



Coast live oak occurs as the dominant tree in the canopy. Poison oak is the dominant shrub in the understory. It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees (Klein and Evens 2006). *Quercus agrifolia* (Riparian) Alliance occurs in the valley between the steep hills on the project site (D-1, Mabey Canyon and D-2). *Quercus agrifolia* is growing along and contributing to the riparian corridor as an intermittent canopy with a sparse ecotonal understory of riparian and Coastal Sage Scrub plant species: poison oak (*Toxicodendron diversilobum*), California Fuchsia (*Epilobium canum*), Douglas' Nightshade (*Solanum douglasii*), and California Buckwheat (*Eriogonum fasciculatum*).This community is very limited on the project site, existing only in limited areas of the unnamed drainage, Mabey Canyon Wash and in one location off of the project site.

California Sycamore Woodland Alliance 61.310.00



This riparian community on the proposed project site is composed primarily of sycamore (*Platanus racemosa*) and California Sagebrush (*Artemisia californica*). This plant alliance has a global and state ranking of G3S3 (Global and State Vulnerable (rare; typically having 21 to 100 occurrences, or 3,001 to 10,000 individuals). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery

substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Sycamores have well developed vegetative reproduction, giving the woodland a clumped appearance (Klein and Evens 2006). This community is very limited on the project site, existing only in limited areas of D-1 and in Mabey Canyon Wash.

***Salix lasiolepis* (Arroyo Willow thickets) Alliance 61.201.01**



This riparian community on the proposed project site is composed primarily of arroyo willow (*Salix lasiolepis*). This plant alliance has a global and state ranking of G4 S4 (Global and State Vulnerable (Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals). It is found in braided, depositional channels of intermittent streams, usually with cobbly or bouldery substrate. These drainages rely on rainfall, rather than snowmelt, for their water supply, so they usually have flowing water only for brief periods after winter storms. These flows may be quite violent, damaging or even uprooting the trees. Willows have well developed vegetative reproduction, giving the islands of habitat a clumped appearance (Klein and Evens 2006). This community is very limited on the project site, existing only in limited areas of D-1 and in one location off of the project site.



***Baccharis salicifolia* (Mulefat thickets) Alliance 63.510.00**

A depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat (*Baccharis salicifolia*). This plant alliance has a global and state ranking of G5 S4 (Global Vulnerable (Secure (common, widespread, abundant, and lacking major threats or long-term concerns) and State Vulnerable (Apparently secure (uncommon but not rare, but with some cause for long-term concern; typically having 101 or more occurrences, or 10,001 or more individuals).This early serial community is maintained by frequent flooding. Found in intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Frequently occurs as a patchy understory in light gaps in Sycamore Alluvial Woodland, especially under heavy grazing. Mulefat scrub often occurs in pure stands. Secondary species vary regionally (Klein and Evens 2006). This community is very limited on the project site, existing only in small areas of unnamed drainage, Mabey Canyon Wash and Wardlow Canyon Wash.



***Eucalyptus* spp. Alliance (Eucalyptus)**

Non-native landscape species (*Eucalyptus*) are located immediately adjacent to the unnamed drainage and Mabey Canyon Wash on the proposed project area.

Schinus spp. Alliance (Pepper)

Non-native landscape species (Pepper) are located immediately adjacent to Mabey Canyon Wash on the proposed project area.



UPLAND HABITATS

GRASSLAND

California Annual Grassland Alliance42.026.00



California Annual Grassland Alliance consists of low herbaceous vegetation that is dominated by introduced annual grasses and is often associated with several native wildflower species, as well as introduced forbs. California Annual Grassland is typically dominated by annual grasses of various genera that are primarily of Mediterranean origin, including: Avena spp. (wild oats), Bromus spp. (bromes), and Hordeum spp. (barleys). Because introduced annual grass species have irreversibly invaded the once native perennial stands, they are often referred to as naturalized, and are now considered important California Annual Grassland contributors (Zedler et al. 1997).

Species composition varies among stands, as the associate species may consist of several native herbs (or wildflowers). These wildflowers are important contributors to the ground layer, while emergent trees and shrubs may be present. Grasslands composed primarily of non-native species bromes, short-podded mustard (*Hirschfeldia incana*), filaree (*Erodium* spp.), Russian thistle (*Salsola tragus*), doveweed *(Croton setigerus*), and deer weed (*Acmispon glaber*) occur throughout the project area. Showy annuals and perennials observed include: common fiddleneck (*Amsinckia intermedia*), small-flowered fiddleneck (*Amsinckia menziesii*), cryptantha (*Cryptantha intermedia*), and Fremont's star lily (*Toxicoscordion fremontii*). No sensitive native grassland alliances were observed on the project site. Native grasses were sparsely intermixed with dominate non-native species. Grasslands observed on site are dominated by non-native grass species: Slender Wild Oat (*Avena barbata*), Common Wild Oats (*Avena fatua*), Ripgut Grass (*Bromus diandrus*), Soft Chess (*Bromus hordeaceus*), and Foxtail Chess (*Bromus madritensis ssp. Rubens*).

California Annual Grassland Alliance also typically includes scattered nonnative forbs. Although California Annual Grassland Alliance is predominated by introduced annual grass species, this plant community has a significant component of native herbs and may provide some functional habitat for many wildlife species. Only when annual grassland is significantly influenced by invasive species (generally a result of a significant disturbance) is the plant community classified as Ruderal Grassland Alliance.

SAGE SCRUB ALLIANCES

California sage brush-purple sage

Sage Scrub is a shrubland dominated by facultative drought-deciduous, low-growing, soft-leaved, and grayish-green (malacophyllus) shrubs and subshrubs. Sage Scrub plant series typically exhibit a patchy distribution, often in close association with areas inhabited by chaparral habitats. Due to stand variations, Sage Scrub is often considered part of a collection of species specific plant series (Sawyer, Keeler-Wolf, and Evens 2009). The five most common sage and sagebrush scrub series described for the area include: *Eriogonum fasciculatum* Alliance (California Buckwheat Scrub), *Salvia mellifera* (Black sage scrub) Alliance, *Salvia leucophylla* (Purple sage scrub) Alliance and *Encelia californica* (California brittle bush scrub) Alliance (Klein and Evens 2006).

Sage Scrub generally occurs on rolling hills of the lower areas on the project site and outside the scour area of D-1. It then transitions into chaparral where hills become steep. Sage Scrub on the project site intermixes with chaparral throughout the project site. These plant communities are described in the following paragraphs.

***Eriogonum fasciculatum* Alliance (*California Buckwheat Scrub*) 32.040.00**



Eriogonum fasciculatum Alliance (California Buckwheat Scrub) is dominated by *Eriogonum fasciculatum* var. *fasciculatum*, which is a perennial shrub with fasciculed tomentose (lower surface) leaves and small clustered white to pinkish flowers. *E. fasciculatum* commonly occurs on dry slopes, washes, and canyons that are scattered throughout foothills and mountains, and this shrub is likely to be seral to other plant communities. It is most often found on slopes that have been disturbed within the last ten years. *Eriogonum fasciculatum* Alliance forms a shrub canopy less than one meter tall, and forms an intermittent canopy over a variable or grassy ground layer. This scrub type prefers shallow and rocky soils at elevations between sea level and 1,200 meters (Sawyer, Keeler-Wolf, and Evens 2009). One patch of *Eriogonum fasciculatum* Alliance, along the ridge top adjacent to a dirt road is a monotypic stand of *Eriogonum fasciculatum* var. *fasciculatum* (California Buckwheat). This particular patch of *Eriogonum fasciculatum* Alliance most likely originated following construction of the fire road in the area. Some associate species to this plant community include Our Lord's Candle (*Hesperoyucca whipplei*) and Ripgut Grass.

***Salvia leucophylla* Alliance (Purple Sage Scrub) 32.090.00**

Salvia leucophylla Alliance (Purple Sage Scrub) is dominated by Purple Sage (*Salvia leucophylla*). *Salvia leucophylla* is often an important shrub with California Sagebrush. *Salvia leucophylla* typically forms a continuous to intermittent canopy over available ground layer. *Salvia leucophylla* Alliance grows on steeper north-facing slopes in colluvial-derived, rocky soils. It is considered part of the Sage Scrub series collection, and *Salvia leucophylla* stands typically create mosaics with *Quercus agrifolia* Alliance.

Salvia leucophylla Alliance was observed as an important component of Sage Scrub within the project area. Several associate native species contribute to the canopy of *Salvia leucophylla* Alliance onsite, including: *Artemisia californica*, Coyote Bush (*Baccharis pilularis*), California Bush Sunflower (*Encelia californica*), California Buckwheat, Slender Wild Oat, and Black sage (*Salvia mellifera*).

***Salvia apiana* Alliance (White Sage Scrub) 32.030.00**

Salvia apiana Alliance (White Sage Scrub) is dominated by white sage (*Salvia apiana*), which is a drought-deciduous, very aromatic shrub, with white-gray leaves and whitish flowers in a long tomentose panicle extending well above the leaves (Hickman 1993). *Salvia apiana* Alliance exists when *S. apiana* is the sole, dominant, or important shrub growing with *Artemisia californica* in the canopy. This alliance forms a continuous or intermittent canopy over a variable ground layer. *Salvia apiana* Alliance grows on dry slopes, or in rarely flooded, low gradient deposits along streams. It requires shallow soils, and occurs at elevations between sea level and 1,600 meters (Sawyer and Keeler-Wolf 1995). Important shrub canopy contributors observed onsite include *Artemisia californica* and Laurel Sumac (*Malosma laurina*). Other herbaceous associate species observed growing below the low shrub canopy include Slender Wild Oat and Short-pod mustard.

***Salvia mellifera* Alliance (Black Sage Scrub) 32.020.00**

Salvia mellifera Association, *Salvia mellifera* is usually dominant shrub in the overstory. *Eriogonum fasciculatum* is consistently present, usually as a sub-dominant shrub. A variety of other coastal sage and chaparral species frequently intermix in the shrub layer as sub-dominants. Some of these species include *Artemisia californica*, *Ceanothus crassifolius*, *Adenostoma fasciculatum*, *Keckiella antirrhinoides*, and *Encelia farinose* (Klein and Evens 2006). *Salvia mellifera* Alliance was observed as an important component of Sage Scrub within the project area. Several associate native species contribute to the canopy of *Salvia mellifera* Alliance onsite, including: *Artemisia californica*, California Bush Sunflower, California Buckwheat, Slender Wild Oat and Purple sage.

CHAPARRAL ALLIANCES



Chaparral is a type of shrubland that is dominated by evergreen shrubs with small, thick, leathery, dark green, sclerophyllous leaves. The shrubs of chaparral are relatively tall and dense, and are adapted to periodic wildfires by stump sprouting or by germination from a dormant seed bank. These evergreen shrubs are also adapted to drought by deep extensive root systems, while their small thick leaf structure prevents permanent damage from moisture loss (Zedler et al.1997). Many typical Coastal Sage Scrub species also grow intermixed as associates with chaparral species. Chaparral typically occurs on moderate to steep south-facing slopes with dry, rocky, shallow soils, becoming more abundant with higher elevations where temperatures are lower and moisture supplies are more ample. The Chaparral plant communities observed onsite are *Adenostoma fasciculatum* Alliance, or Chamise Chaparral, which is discussed below.

Adenostoma fasciculatum Alliance (Chamise Chaparral) 37.101.00

Adenostoma fasciculatum Alliance (Chamise Chaparral) is dominated by the evergreen shrub, *Adenostoma fasciculatum* (Chamise), which is the most abundant species in the non-desert shrublands of California. This species is a burled and many-branched shrub that has gray-brown trunk bark, clustered small linear leaves, and tiny white flowers. It is adapted to California's Mediterranean climate by a dual root system that has both deep and shallow roots. *Adenostoma fasciculatum* individuals recover from fire by both resprouting and seedling recruitment (Zedler et al. 1997). *Adenostoma fasciculatum* Alliance forms an intermittent to continuous canopy less than three meters tall, growing over a sparse herbaceous layer, especially in older stands. *Adenostoma fasciculatum* is usually associated with all slope aspects, but is commonly found on the drier south- and west-facing slopes and ridges, growing in very shallow soils (mafic-derived). To be classified as *Adenostoma fasciculatum* Alliance, the stand must have at least 60% cover by *A. fasciculatum* (Sawyer and Keeler-Wolf 1995).

The shrub canopy associate species observed as important contributors to *Adenostoma fasciculatum* Alliance include: Thickleaf Yerba Santa (*Eriodictyon crassifolium*), *Eriogonum fasciculatum*, *Hesperoyucca whipplei*, Toyon (*Heteromeles arbutifolia*), Deerweed, Laurel Sumac and Sugarbush (*Rhus ovata*). Several understory herbs listed above for Sage Scrub are expected as associates in Chaparral plant community's onsite.

In addition to the *Adenostoma fasciculatum* Alliance onsite*, Adenostoma fasciculatum-Eriogonum fasciculatum* Alliance (Chamise-Buckwheat-Chaparral) 37.101.14 is also found on the project site. In the *Adenostoma fasciculatum-Eriogonum fasciculatum* Association**,** both species are consistently present in an open to intermittent shrub overstory, where *Adenostoma fasciculatum* is dominant or codominant with *Eriogonum fasciculatum*. Other species (e.g., *Salvia mellifera*, *Arctostaphylos glauca*, *Encelia farinosa* and *Rhus ovata*) often intermix in the shrub layer at low cover (Klein and Evens 2006).

APPENDIX B

Tables

Table 5. Summary of wetlands criteria and jurisdictional areas for Skyline Project, Riverside County, CA.

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1	2,771	36,078	13	2,771	34,915	12.6	-	-	36,078 [2,771]	-	34,915 [2771]	-	36,078/ 13.0
1a	397	794	2	198	298	1	-	-	776 [397]	-	298 [198]	-	794/ 2.0
1b	234	468	2	117	190	1	-	-	336 [234]	-	190 [117]	-	468 / 2.0
1c	566	1,132	2	377	510	1.2	-	-	1,104 [566]	-	510 [377]	-	1,132 / 2.0
1d	248	546	2.2	124	280	1.3	-	-	489 [248]	-	280 [124]	-	546 / 2.2
1e	190	380	2	95	105	0.7	-	-	372 [190]	-	105 [95]	-	380 / 2.0
1f	910	3,276	3.6	890	1,148	1.4	-	-	2,072 [910]	-	1,148 [890]	-	3,276 / 3.6
1f1	438	1,095	2.5	328	375	1	-	-	872 [438]	-	375 [328]	-	1,095 / 2.5
1f2	122	195	1.6	61	38	0.5	-	-	72 [73]	-	38 [61]	-	195 / 1.6
1f3	109	218	2	75	31	0.5	-	-	-	-	-	-	218 / 2.0
1f4	125	250	2	125	50	0.7	-	-	-	-	-	-	250 / 2.0
1f5	147	309	2.1	147	30	0.5	-	-	-	-	-	-	309 / 2.1
1g	151	574	3.8	75	90	1	-	-	299 [151]	-	90 [75]	-	574 / 3.8
1h	17	34	2	12	6	0.5	-	-	15 [17]	-	6 [12]	-	34 / 2.0

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
1i	368	4,710	12.8	184	297	1	-	-	109 [57]	-	297 [184]	-	4,710/ 12.8
1i1	68	197	2.9	35	50	0.9	-	-	-	-	-	-	197 /2.9
1j	108	281	2.6	75	27	0.5	-	-	-	-	-	-	281 / 2.6
1k	95	190	2	80	77	1.1	-	-	-	-	-	-	190 / 2.0
1l	240	288	1.2	200	72	0.4	-	-	-	-	-	-	288 / 1.2
1l1	99	149	1.5	100	16	0.4	-	-	-	-	-	-	149 / 1.5
1m	13	13	1	0	0	0	-	-	-	-	-	-	13/ 1.0
2	211	232	1.1	70	56	0.8	-	-	191 [191]	-	56 [70]	-	232 / 1.1
3	4,041	255,795	63.3	4,041	8,082	2	-	-	168,402 [2,420]	-	8,082 [4,041]	-	255,795/63.3
3a	293	293	1	102	41	0.4	-	-	-	-		-	293 / 1.0
3b	351	1,229	3.5	105	84	0.8	-	-	-	-		-	1,229 / 3.5
3c	536	1,608	3	427	342	0.8	-	-	-	-		-	1,608 / 3.5
3c1	134	161	1.2	60	24	0.4	-	-	-	-		-	161 / 3.0
3d	495	693	1.4	371	186	0.5	-	-	-	-		-	693 / 1.2
3e	513	2,514	4.9	256	290	0.9	-	-	345 [250]	-	290 [256]	-	2,514 / 4.9
3f	325	423	1.3	157	94	0.6	-	-	414 [325]	-	94 [157]	-	423 / 1.3
3g	1,965	6,485	3.3	1,572	1,886	1.2	-	-	6,398 [1,965]	-	1,886 [1,572]	-	6,485 / 3.3
3g1	768	1,152	1.5	625	375	0.6	-	-	1,165 [768]	-	375 [625]	-	1,152 /1.5

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3g1a	226	226	1	53	53	0	-	-	225 [226]	-	53 [53]	-	226/ 1.0
3g1a1	59	118	2	25	10	0	-	-	58 [59]	-	10 [25]	- -	118 / 2.0
3g2	1,293	17,326	13.4	1,034	5,687	5.5	-	-	17,326 [1,293]	-	5,687 [1,034]	- -	17,326 / 13.4
3g2a	390	897	2.3	280	224	0.8	-	-	501 [390]	-	224 [280]	- -	897 / 2.3
3g2a1	305	458	1.5	0	0	0	-	-	304 [305]	-		-	458 / 1.5
3g2b	266	532	2	165	66	0	-	-	262 [266]	-	66 [165]	-	532 / 2.0
3g2c	252	378	1.5	126	114	0.6	-	-	383 [252]	-	114 [126]	- -	378 / 1.5
3g2c1	95	190	2	52	42	0	-	-	94 [95]	-	42 [52]	- -	190 / 2.0
3g2d	74	222	3	37	72	1.2	-	-	74 [74]	-	72 [37]	- -	222 / 3.0
3g3	324	648	2	162	158	0.9	-	-	-	-		-	648 / 2.0
3h	1,301	6,635	5.1	1,301	2,862	2.2	-	-	6,615 [1,301]	-	2,862 [1,301]	-	6,635 / 5.1
3h1	744	1,488	2	744	670	0.9	-	-	1,482 [744]	-	670 [744]	-	1,488 / 2.0
3h1a	245	515	2.1	172	155	0	-	-	222 [223]	-	155 [172]	-	515 / 2.1
3h1b	396	990	2.5	264	261	0.9	-	-	265 [266]	-	261 [264]	-	990 / 2.5

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
3i	310	651	2.1	110	44	0.4	-	-	304 [310]	-	44 [110]	-	651 / 2.1
3j	2,367	21,066	8.9	1,635	7,338	3.1	-	-	13,580 [1,635]	-	7,338 [1,635]	-	21,066/ 8.9
3k	440	1,364	3.1	322	354	1.1	-	-	381 [266]	-	354 [266]	-	1,364 / 3.1
3k1	158	205	1.3	95	57	0	-	-	120 [121]	-	57 [95]	-	205 / 1.3
3l	344	447	1.3	222	89	0	-	-	144 [213]	-	89 [222]	-	447 / 1.3
3m	771	1,850	2.4	325	293	0	-	-	-	-	-	-	1,850/ 2.4
4 *													
4a	233	350	1.5	75	45	0.6	-	-	-	-	-	-	350 / 1.5
4b	269	484	1.8	70	42	0.6	-	-	-	-	-	-	484/ 1.8
4c*													
5	1,187	8,546	7.2	900	900	1	-	-	2403 [1,187]	-	900 [900]	-	8,546 / 7.2
5a	186	1,302	7	92	147	1.6	-	-	86 [160]	-	147 [92]	-	1,302 /7.0
5a1	288	518	1.8	220	132	0.6	-	-	-	-	-	-	518 / 1.8
5a2	109	174	1.6	60	66	0	-	-	64 [63]	-	66 [60]	-	174 / 1.6
5b*													
5b1*													
5c	104	208	2	40	36	0.6	-	-	208 [104]	-	36 [40]	-	208 / 2.0

Feature [Type]	State Length (ft.)	State Streambed Area (sq. ft.)	State Streambed Area Avg. Width (ft.)	Federal Length (ft.)	Federal Feature Area (sq. ft.)	Federal Feature Avg. Width (ft.)	State Wetland (sq. ft.) / Avg. Width (ft.)	Federal Wetland (sq. ft.) / Avg. Width (ft.)	Impact to St. Streambed/Wetlands in sq. ft. [Length]		Impact to Federal Feature | Wetlands in sq. ft. [Length]		MSHCP Rip. / Riv. Habitat (sq. ft.) / Avg. Width (ft.)
5d	71	142	2	50	70	0	-	-	137 [71]	-	70 [50]	-	142 / 2.0
5e	401	762	1.9	175	208	0.8	-	-	400 [401]	-	208 [175]	-	762 / 1.9
6	904	53,336	59	904	23,504	26	-	-	3,694 [244]	-	-	-	53,336 / 59.0
6a	-	-	-	-	-	-	-	-	-	-	-	-	-
6b	-	-	-	-	-	-	-	-	-	-	-	-	-
6c	-	-	-	-	-	-	-	-	-	-	-	-	-
7	99	574	5.8	99	376	3.8	-	-	-	-	-	-	574 / 5.8
7a	-	-	-	-	-	-	-	-	-	-	-	-	-
7b	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**31,259**	**444,364 (10.2 acres)**		**23,664**	**94,140 (2.16 acres)**		**0 (0.00 acres)**	**0 (0.00 acres)**	**268841 [22,240] (6.17 acres)**	**0 (0.00 acres)**	**68,560 [19,851] (1.57 acres)**	**0 (0.00 acres**	**444,364 (10.2 acres)**

*** - Foothill Project**