GENERAL BIOLOGICAL ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS FOR TENTATIVE TRACT NO. 37803 – A 53.15-ACRE SITE LOCATED IN THE CITY OF PERRIS, CALIFORNIA

ASSESSOR'S PARCEL NO'S 311-080-033, 311-080-033, 311-090-009, 311-090-016, 311-090-020

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TERACOR
RESOURCE MANAGEMENT

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1.0 INTRODUCTION

PURPOSE

UCI Property Development, Inc. is currently processing a land entitlement with the City of Perris ("City"), CA on the subject 53.15 acre property (Tentative Tract No. 37803).

TERACOR has prepared this assessment so that the City may understand the full range of biological resources present and potentially present on-site and the relationship of the biological resources to the proposed project. This analysis is based on biological field evaluations performed on-site, multiple focused surveys performed on the subject property, and our knowledge of cismontane southern California habitats and associated organisms, and relevant scientific literature which describes and categorizes these resources.

MSHCP-RELATED BACKGROUND

The subject property is located within the Western Riverside County Multiple Species Habitat Conservation Plan ("MSHCP" or "Plan") area. The following is quoted from Section 1.0 of the MSHCP:

"*The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan ("HCP") focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region… The MSHCP will allow Riverside County …and its Cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the state and federal Endangered Species Acts.*"

There are 146 sensitive species which are covered under the MSHCP. These species are listed below in *Table 2 – MSHCP-Covered Species* in *Section 5.0 – Regulatory Status Species Analysis*. The MSHCP formation was a collaborative effort between the scientific community, governmental agencies, consultants and Permittees that determined which species were of particular concern in western Riverside County. This suite of sensitive organisms was approved by the **U.S. Fish and Wildlife Service** ("USFWS") and the **California Department of Fish and Wildlife** ("CDFW"). The MSHCP is the overriding document that provides the framework for where and when surveys are conducted and how conservation may occur in the Plan area.

SITE LOCATION AND PHYSIOGRAHY

The 53.15-acre subject property is located within the City of Perris, California, just northwest of the historic center of town. The property is bounded by Metz Road to the north, West San Jacinto Avenue to the south, undeveloped open, rocky ridges to the west and existing residential housing (manufactured units) to the east. The property is geographically located within Section 30 of Township 4 South, Range 3 West of the *Perris, California 7.5 Minute Series U.S.G.S. Topographic Quadrangle*, as depicted in the attached *Exhibit 2 - USGS Topographic Map*.

The subject site is comprised of five (5) parcels totaling 53.15 acres; Assessor Parcel No's. 311-080-033, 311-080-035, 311-090-009, 311-090-016, 311-090-020. Elevations on-site range from approximately 1560 feet above mean sea level (msl) on the western-most edge of the site, to 1485 feet msl at the northeast corner of the property at the intersection of Metz Road and Indian Avenue. There is vertical fall of approximately 75 feet across the site. The highest hill in the center of the approximate center of property is about 1570 feet msl.

The property is situated within a well-known and easily recognized geologic/geomorphic province, specifically, on the western edge of the Perris Valley. The Perris Valley is defined by the surrounding uplifted granitic (gr Mz) -Mesezoic to PreCambriian in age metamorphosed volcanic rock (Mzv), Mesozoic in age (approximately 600 to 65 million years BP) and the intervening valley which is comprised mainly of Quaternary (recent) alluvial materials derived from the eroding granite and related associated intrusive rocks. The property actually lies on the edge of the valley, hence, it has both the granitic outcrops and valley sediments on it. *Exhibit 9 – Regional Geologic Map of California*. The complex and very active geology of California has given rise to the diversity of landscapes and remarkable speciation found in the state, as discussed in the Biogeographic section of this report.

The topography of the area generally slopes from west to east. Site terrain is punctuated by numerous granitic boulder hilltops with shallow sandy soils and intervening saddles. Lower more level areas on the property appeared to have relatively deeper soils. These more level areas and saddles between hillocks are the type of structural habitat have been developed in southern California for reasons of ease of access and grading and development. The northeast corner of the property consists of a disked field, presumably once used for dryland agricultural production as was much of the Perris Valley in decades past. To the south of this former agricultural area, substantive human mechanical modifications were observed. It appeared that modifications had were undertaken in years past, based on the establishment of native vegetation and lack of recent mechanical scaring. Sizeable boulders several feet in diameter were moved and put into irregular piles and formations. These rock piles encircle the existing residential neighborhood east of the project site for reasons not clear to site investigators.

The site is currently vacant. Lower elevation areas are comprised of annual grassland and wildflower fields. These flatter grassland and field areas were structurally suitable in terms of slope, soils types, and vegetation. These fields and lower-lying areas are, however, routinely disked and maintained, presumably for weed abatement and fire protection purposes. There are also a few patches of elderberry scrub, a few scattered scrubby red willow trees mixed with tree tobacco, and ornamental vagrant vegetation (primarily pepper trees) that has become established at the south end of the project site, in areas that have been previously graded, and/or mechanically-gouged. We found these areas to be especially common in the south area where overland sheet flow drainage is discombobulated and incoherently located due to prior disturbances.

PROJECT DESCRIPTION

Tentative Tract No. 37803 proposes the subdivision of the 53.15-acre property into 145 residential lots, along with associated street rights-of-way, and two open space lots. Additionally, there are street rights-of-way that would be dedicated as well as water detention facilities where stormwater runoff from each lot and the street system would be temporarily detained to allow for a reduction in peak stormflow runoff and treatment of low flow runoff from residential lots and streets The natural open space lots together comprise 11.07 acre outcrops which are centrally located in the project area and will be avoided during grading.

SOILS

TERACOR reviewed published description of soils present on-site prepared by the USDA. Specifically, we reviewed the **Natural Resources Conservation Service** ("NRCS") Web Soil Survey of the Western Riverside Area, California mapped soils on the property. Soil types present on the property are presented below.

The property is historically comprised of four (4) soil series, according to the NRCS *Web Soil Survey: Western Riverside Area, California*. The soils historically present on the property are as follows:

Table 1 - Soil Types

CODE	SOIL TYPE	PROPERTY LOCATION
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	Central saddle area between hilly outcrops
HcC	Hanford course sandy loam, 2 to 8 percent slopes	North Central saddle area between outcrops
CkF2	Cieneba rocky sandy loam, 15 to 50% slopes, eroded	Existing and former rock outcrop areas
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	Northeast corner in the former agricultural field

All of the soils on-site are loams; meaning they have the necessary characteristics to temporarily hold together or support sub-surface, formations, such as a burrow, or the ability to be compressed in the hand and to remain compressed when released. They also drain well. These loams, however, include sand, which generally increases porosity (i.e., percolation of water). Sand alone is highly porous and is not compressible; pure sand will not tolerate burrowing but does so when silt, clay and/or organic material are dominant components of the soil. Soils are also classified and mapped on the basis of slope, for example, the rock outcrops on-site would be expected to host the Cieneba rocky sandy loam and, to a lesser extent, the Greenfield sandy loam.

These soil types have significance when considering whether the property is suitable for seasonal ponding, or for different types of plants and organisms to reside on it. We would consider these soils to be broadly associated with many Riverside County plants and animals, but not those which prefer clayey or alkaline substrates. Clays consist of very fine particles, tightly packed together. They sometimes support surface water by retarding percolation. Clay soils can support organisms specifically adapted to poor drainage and poor aeration. These characteristics are used to help predict presence or absence of certain rare organisms, as discussed later in this report.

2.0 METHODS

An array of field (on-site) and research (off-site) methodologies were utilized to assess and evaluate the different types of biological resources present or potentially present on-site. These specific methodologies included:

- Literature Review for Vascular Vegetation and Vegetation Community Occurrences
- Published Government Geologic and Topographic Mapping
- Literature Review for Animal Occurrences
- State of California *Natural Diversity Data Base* ("CNDDB") Query for Flora, Fauna and Plant Communities with Special Regulatory Designations
- MSHCP species accounts
- California Native Plant Society publications
- Federal and State Protected Species (Endangered, Threatened, Candidate and Others) Lists
- General and Focused Field Investigations and Assessment
- Aerial Biogeographic Analysis (Corridors, Movement Pathways, Connective habitat)

These assessment methodologies are described below in detail to provide background information about information sources and references, survey methods and protocols as applicable and overall approach in identifying resources and assessing impacts that could result to those resources with project implementation. The only established protocol utilized in our assessments was for burrowing owl as the MSCHP has established procedures both for a habitat assessment and for surveys if justified by the Habitat Assessment.

LITERATURE REVIEW

Vascular Vegetation and Vegetation Community Occurrences

Literature reviewed from which plant names and identifications, vegetation communities and associations, and relevant descriptions were derived include: *The Jepson Manual, Vascular Plants of California - Second Edition* (Baldwin et. al. 2012), the CDFW's *California Natural Community List* (2018), and *A Manual of California Vegetation - Second Edition* (Sawyer, Keeler-Wolf and Evens 2009). A complete floral inventory of species observed on-site has been provided as *Appendix A – Floral Compendium*.

Animal Occurrences

The literature review included a query of the CNDDB, which is a computerized inventory of information on the location of California's rare, threatened, endangered, and otherwise regulatory status[1] plants, animals, and natural communities, and the MSHCP. Subscriptions are required in order to access

[1] "Regulatory Status" refers to those species that appear on a federal or state list as defined by the California Environmental Quality Act ("CEQA").

CNDDB occurrences. Information regarding the species occurrence, population numbers, observers, occurrence dates and potential threats to the organism(s) are included for each occurrence record. TERACOR queried the *Perris, California* Quadrangles and surrounding quadrangles in the CNDDB and MSHCP for local records of MSHCP-covered and otherwise regulatory status organisms and habitats. *Exhibit 8 – CNDDB Occurrences* displays nearby sensitive species detections.

The results of these queries are presented in Section 5.0 of this report. A list of the faunal species observed within several decades and/or western Riverside County MSHCP covered species which occur in habitats similar to those found on-site has been provided as *Appendix B – Faunal Compendium*.

California Native Plant Society

The **California Native Plant Society** ("CNPS") is a statewide, non-profit organization dedicated to the preservation of native flora. The *California Native Plant Society's Inventory of Rare and Endangered Plants of California* (2001) includes information regarding the distribution, ecology, rarity, and legal status of over 2,000 rare plants which occur in California. The inventory has been updated and is maintained on a regular basis on the *Inventory of Rare and Endangered Plants Online Database* (2018).

The CNPS regulatory status designation consists of two (2) parts. The first portion of the designation is the rarity code and the second is the threat code. For example, a plant designated as a *Rare Plant Rank 1B.1* is considered rare, threatened, or endangered in California and elsewhere, and is seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat). A description of the rarity and threat code designations is presented below.

The CNPS codes presented for regulatory status flora below include the following:

Rare Plant Rank 1A: Presumed Extirpated in California and Either Rare or Extinct elsewhere
Rare Plant Rank 1B: Rare, Threatened, or Endangered in CA and elsewhere
Rare Plant Rank 2A: Presumed Extirpated in CA, but common elsewhere
Rare Plant Rank 2B: Rare, Threatened, or Endangered in CA but more common elsewhere
Rare Plant Rank 3: Plants about which more information is needed - a review list
Rare Plant Rank 4: Plants of Limited Distribution - a watch list
Rare Plant Rank CBR: Considered But Rejected

The **Threat Code** is as follows:

.1 - Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).
.2 - Moderately threatened in California (20 - 80% of occurrences threatened/moderate degree and immediacy of threat).

.3 - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

MSHCP-covered regulatory status plant species descriptions have been provided in *Section 5.0 – Regulatory Status Species Analysis*, *Table 2 – MSHCP-Covered Species*. These species descriptions are based on plant information provided in the MSHCP, *Jepson Manual*, as well as the *CNPS Online Inventory*. Species information from these sources, such as elevational ranges or blooming periods of regulatory status plant species, is not always consistent. Because the regulatory status plant species listed below in *Table 2* are CNPS-ranked, and the CNPS can provide broader descriptive information relative to distribution, the species information as summarized in the *CNPS Online Inventory* has generally been presented in this biological assessment.

A full list of scientific and background literature references has been provided as *Appendix C - References*.

FEDERAL AND STATE PROTECTED SPECIES

Protected regulatory status species are usually classified by both state and federal resource management agencies as threatened or endangered, under provisions of the State and federal Endangered Species Acts. Vulnerable or "at-risk" species which have been proposed or are being considered for listing as threatened or endangered or "species of special concern" are categorized administratively by the USFWS. The CDFW uses various terminology and classifications to describe regulatory status species. There are also other species classifications and categories used in this report; all are described below.

For some species, the CNDDB designates only specific life history phases or constructs, such as roosts, rookeries, or nest sites, and not the organism itself outside of that phase. Migratory birds are protected under provisions of the Migratory Bird Treaty Act, which prohibits killing any designated bird including disturbing or destroying an active nest of a bird listed under the Act. The list of bird species, in fact, does contain some common birds and birds now considered pests, such as brown-headed cowbird (*Molothrus ater*) and European starling (*Sturnus vulgaris*). Nesting birds are also protected under California Fish and Game Code Sections 3503, 3503,5, and 3512, which prohibit the take of active bird nests.

Federal Protection and Classifications

The federal Endangered Species Act of 1973 ("FESA") defines an endangered species as:

"*any species which is in danger of extinction throughout all or a significant portion of its range*..."

The FESA defines a threatened species as:

"*any species which is likely to become an endangered species in the foreseeable future throughout all or significant portions of its range*..."

Federal regulatory status species' listings are as follows:

Federally listed as Endangered	**= FE**
Federally listed as Threatened	**= FT**
Federally Proposed as Endangered	**= FPE**
Federally Proposed as Threatened	**= FPT**
Federal Candidate Species	**= FC**
Federally Proposed for Delisting	**= FPD**
Federally Delisted as Endangered or Threatened	**= FDL**

State of California Protection and Classifications

California's Endangered Species Act ("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, overexploitation, predation, competition, or disease.*"

CESA defines a threatened species as:

"*a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.*"

California regulatory status species listings are as follows:

State listed as Endangered	**= SE**
State listed as Threatened	**= ST**
State Candidate for Endangered	**= SCE**
State Candidate for Threatened	**= SCT**
State listed as Rare (Plants only)	**= SR**
State Fully Protected	**= SFP**
State Species of Special Concern	**= SSC**
State Delisted as Endangered or Threatened	**= SDL**

Other State classifications are:

State Special Animal	**= SSA**

State Watch List Species **= SWL**

State Candidate Species

Candidate species are defined as:

"a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list."

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species.

State Rare Species

Fish and Game Code §1901 defines a rare plant species as:

"*…although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens*."

State Fully Protected Species

The state defines a "Fully Protected" species as:

"The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Please note that many Fully Protected species have also been listed as Threatened or Endangered species under the more recent endangered species laws and regulations."

The Fish and Game Code sections dealing with Fully Protected species state that these species "*....may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species …*", although take may be authorized for necessary scientific research. This language arguably makes the "Fully Protected" designation the strongest and most restrictive regarding the "take" of these species.

State Species of Special Concern

A Species of Special Concern is defined as:

"a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

a) is extirpated from the State or, in the case of birds, in its primary seasonal or breeding role;

b) is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;

c) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;

d) has naturally small populations exhibiting high susceptibility to risk from any factor(s); that if realized, could lead to declines that would qualify it for State threatened or endangered status."

The Species of Special Concern list is broken down into separate lists for Mammal and Bird species. The Reptile and Amphibian species list is combined as one (1).

Mammal Species

The Mammalian List of Species of Special Concern ("Mammal List") lists such species into three (3) separate categories: "Highest Priority," "Second Priority," and "Third Priority." According to the Mammal List:

"*The definitions for these categories are based on the perceived proximity of threats or extinction. Species listed in the Highest Priority category appear to face a high probability of extinction or extirpation from their entire geographic range in California if current trends continue. Populations of species in the Second Priority category are definitely jeopardized and declining, but the threats of extinction or extirpation appear less imminent. Populations of species listed in the Third Priority category appear not to face extinction in the near future, but they are declining seriously or are otherwise highly vulnerable to extirpation because of human developments, and require special attention in land and resource management decisions. Some species listed in the Second and Third Priority categories are relatively rare and virtually no current data on their distributions and population status are available; when investigated in detail, some of these may be found to face greater or lesser threats*."

Mammal Species of Special Concern which are not listed in the three (3) categories described above are listed in the "Additions to List" category.

Bird Species

The Bird Species of Special Concern List ("Bird List"), similar to the Mammal List described above, is comprised of three (3) priority categories (First Priority, Second Priority, and Third Priority) derived through a scoring and ranking process. In addition to the priority categories, bird species which meet the definition described above and are determined to be either 1) "*Taxa Extirpated from the State Totally or in Their Primary Seasonal or Breeding Role"*, and/or 2) "*Taxa Listed as Federally, but Not State, Threatened or Endangered"* are included on the Bird List.

No formal discussion on the definitions of the First, Second, and Third Priority categories is given. TERACOR, therefore, has preliminarily assigned meanings to the three (3) categories. First Priority bird species are birds which are of highest concern. Second Priority birds are of moderate concern. Third Priority birds are of lowest concern.

Reptile and Amphibian Species

The Reptile and Amphibian List of Species of Special Concern ("Herp List") is relatively simpler than the Mammal or Bird Lists in that it lists regulatory status herp species into five (5) groups: Turtles, Lizards, Snakes, Salamanders, and Frogs. No further categories comprise the Reptile and Amphibian List.

State "Special Animal"

The state defines a "Special Animal" as:

""Special Animals" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species". The Department of Fish and Game considers the taxa on this list to be those of greatest conservation need."

Any species included in the CNDDB is considered a Special Animal, and in addition to SSC, the CNDDB Special Animals List includes species that lack state or federal status, but have been listed by various other state or federal agencies or by various conservation organizations.

State "Watch List" Bird Species

The CDFW has recently created a new designation for species; a "watch list" species. A "watch list" species is defined by CDFW as:

"a new category of "Taxa to Watch" [that] was created in the new California Bird Species of Special Concern report. The birds on this watch list are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of 'fully protected' species."

Other types of species besides bird species are also listed on CDFW's watch list.

GENERAL FIELD INVESTIGATIONS

Fieldwork (combined general and focused surveys) was conducted on foot by TERACOR Principal Biologist S. Reed on 07 April, 11 April I, 11 May, 19 July, 26 July, 07 September 2019. Plants identified in *Appendix A* were identified in the field and questionable identifications was identified by Michael C. Long. Reptile species in *Appendix B* were surveyed by turning debris, and scanning sunning and foraging areas. Particular attention was given to rock outcrops for reptiles during mid-morning hours of the day considered most conducive to detection, although dense brush limited access to some extent. Amphibians were not observed on the property but common amphibian species such as western toad and garden salamander could be expected on-site. Nomenclature follows Stebbins (2003), and was updated in accordance with *The Center for North American Herpetology* website. Bird species in *Appendix B* were identified by field personnel both aurally and visually, with nomenclature following Dunn (1999), Sibley (2003), and updated utilizing the American Ornithological Society's most recent checklist. Mammals were identified initially by sight or sign evidence.

With regard to determining the presence of some organisms, this assessment is, in part, habitat-based and predictive. The evaluation for presence for regulatory status organisms (for example, considered rare or given regulatory status by the USFWS, CDFW, CNPS, or the CNDDB) included such variables as availability of support resources (such as rock outcrops, surface water, specific host plants, nesting sites, etc.), the location and size of the subject property, and the history of disturbance. The likelihood of potential occurrences is further predicated on the known distributions of species, and their overall habitat requirements and preferences.

Current overall conditions on the subject property are depicted in the attached *Exhibit 4 – 2018 Aerial Photograph*.

FOCUSED ASSESSMENT

Burrowing Owl

TERACOR conducted focused burrowing owl (*Athene cunicularia*) ("BUOW") surveys on the subject property during the 2019 season and none were detected. A report entitled "*Step I Habitat Assessment, Step II. Part B Focused Burrowing Owl Survey for Tentative Tract No 37803 a 53.15 Acre Property Located in the City of Perris, Riverside County, California",* dated 13 September 2019 has been prepared. *Exhibit 2 – Suitability and Transect Map – 2018 Photograph*" is contained in said report and illustrates the areas considered unsuitable for the organism as well as depicting the survey routes through suitable areas. No BUOW were detected during the 2019 survey season at any time.

3.0 MSHCP CONSISTENCY ANALYSES

Background: The project site is located within the boundaries of the MSHCP area. All projects within the MSHCP area are required to analyze their consistency with the MSHCP, including analysis of any

organisms (e.g. criteria area or narrow endemic plant species, or animals like burrowing owl or the Los Angeles pocket mouse which, when specified by localized and parcel-specific MSHCP requirements, can trigger the need for preparation of species-specific habitat assessments and, if a given property is found to be suitable for specified species to occur,

The Riverside County Regional Conservation Authority (RCA) MSHCP Information Map outlines, on a parcel by parcel basis, those properties which require habitat assessments and focused surveys. The only organism requiring specific analysis for this property was burrowing owl. A separate burrowing owl survey was conducted and a report prepared entitled *Step I Habitat Assessment, Step II, Part A Focused Burrow Survey And Step II, Part B Focused Burrowing Owl Survey For Tentative Tract No. 37803 A 53.15-Acre Property Located In The City Of Perris, Riverside County, California* (13 September 2019). The results were negative for burrowing owl.

Conservation: When development of property is proposed, the Permittee (in this case the City of Perris) is also required to consult (usually via a qualified biological consultant) the RCA's MSHCP Information Map to determine 1) if a property is located within a MSHCP-designated Cell Group or Criteria Cell (this property is not) and 2) if it is in either a Cell or Cell Group then there will be Conservation Description which outlines how conservation should be organized in that particular area. The property is not in an area which requires conservation outright. Conservation in some manner can be subsequently required if the property in question supports one or more of the target species previously described. Again, this property did not support any of the resources which would be mandated for conservation under the MSHCP.

The site is not located within a Cell or Cell Group targeted for conservation, nor is it in a linkage area or constrained linkage area identified as connective habitat to other conservation areas. No conservation is required on this site.

Riparian Riverine Vernal Pools: Section 6.1.2 of the MSHCP describes the process through which protection of riparian/riverine areas and vernal pools (R/R/VP areas) would occur within the MSHCP Plan Area. Protection of riparian/riverine areas and vernal pools is important to conservation of the amphibian, bird, fish, invertebrate, and plant species which occur primarily or exclusively within these habitats. These species include: amphibians (for example arroyo toad); birds (such as least Bell's vireo), fish (e.g., Santa Ana sucker); invertebrates/crustaceans (e.g., Riverside fairy shrimp) and plants (including species such as California Orcutt grass, Orcutt's brodiaea, and spreading navarretia). These areas, even when they are not located in targeted conservation lands, can sometimes require on-site preservation of R/R/VP areas or additional off-site mitigation as negotiated.

The MSHCP defines a riparian/riverine area 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 6-21).

A vernal pool is described 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. 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 (MSHCP 6-22).

The MSHCP further defines riparian/riverine areas and vernal pools to include the following three types of human-altered/created areas:

1) _*...wetlands created for the purpose of providing wetlands Habitat; or*"

2) *"...resulting from human actions to create open waters or from the alteration of natural stream courses,"* or

3) *"...areas demonstrating characteristics as described above which are artificially created"* (MSHCP 6-22).

The MSHCP requires assessment of riparian/riverine areas and vernal pools including consideration of species composition, topography, and soil analysis. Section 6.1.2 states: *"Factors to be considered include hydrologic regime, flood storage and flood flow modification, nutrient retention and transformation, sediment trapping and transport, toxicant trapping, public use, wildlife Habitat, and aquatic Habitat. The functions and values assessment will focus on those areas that should be considered for priority acquisition for the MSHCP Conservation Area, as well as those functions that may affect downstream values related to Conservation of Covered Species within the MSHCP Conservation Area"* (MSHCP 6-22).

TERACOR Findings Regarding Riparian/Riverine and Vernal Pool Habitat

TERACOR field personnel explored the property thoroughly to determine if riparian/riverine areas or vernal pools were present based on the MSHCP-defined criteria. Field determinations were based on existing conditions, as well as information derived from historic and recent aerial photography research, site specific topographic and edaphic information, and TERACOR's knowledge of the Santa Ana River watershed (and San Jacinto River sub-watershed) systems and tributary and subordinate drainage systems. Often, MSHCP 6.1.2 riparian/riverine areas correspond with and are often co-terminal with CDFW jurisdictional "streambeds."

Our analysis of the property did not yield detection of any vernal pool, riparian or riverine areas. Analysis of historic aerial photography and topographic mapping indicates that drainage occurs via surface sheet flow. Further, soils on-site are comprised of sandy loams that drain well and generally slope broadly from west to east. Some historic mechanical rearrangement of the surface of the south end of the site was noted with we believe was the stimulus for colonization by non-native pepper trees, tree tobacco, scattered senescent Salix and Bacharris shrubs. We found no evidence of streams directed into any infrastructure constructed to protect the manufactured housing site and church property on the east edge of the site. There are also no vernal pools on the property.

MSHCP-Covered Species and Associated Habitat Impacts

Based on *Table 2 – MSHCP-Covered Species* above, the following *Table 3 – Potentially Occurring MSHCP-Covered Species* lists the MSHCP-covered species which either have been detected or may occur on the project site, in addition to all of the other common species that may occur that have been discussed in this report, along with their potentially suitable habitats on the subject property.

REGULATORY STATUS ORGANISMS AND THE SUBJECT PROPERTY

Table 2 presented below is a composite of plants and animals that are covered and considered locally important under the MSHCP.

PRESENCE/ABSENCE AND/OR PROBABILITY OF OCCURRENCE

Each organism presented in Table 2 below will be designated as present, not present, or potentially occurring within the subject property.

TERACOR based its predictive analysis on the known distribution or range of each species, including elevation, the subject property disturbance levels, history of disturbance, and remnant site resources. Each individual is listed in common and scientific name, with habitat and distributional information. An "occurrence probability rating" has been designated for each species based on the above described factors. Species *occurrence has been: 1)* ***Confirmed Present****, 2) determined* ***Not Present****, or 3) potential presence* determined to be one of the following:

- **Low** - The subject property is within the historic range or distribution of the species. Habitat on-site is marginal to suitable, but other conditions may exist (adjacent urbanization, isolation, etc.) to suggest a low probability of occurrence. Transitory presence is not necessarily precluded, but site conditions are such that sustained or seasonal presence is unlikely.
- **Moderate** - The subject property is within the historic range or distribution of the species. The species has a reasonable possibility of occurrence on-site, habitats are suitable, and the species is known to occur in the area. Some areas of habitat may be slightly altered or degraded from original condition but overall conditions are such that sustained or seasonal presence is possible.

- **High** - The subject property is within the historic range or distribution of the species. The subject property contains suitable to very favorable habitat for the species. The organism has recently been recorded in the vicinity, or ecological conditions are such that qualified personnel can reasonably anticipate presence.

4.0 VEGETATION AND PLANT COMMUNITIES

Classification of plant communities on-site generally follows CDFW's *California Natural Community List* (2018) and *A Manual of California Vegetation - Second Edition* (Sawyer, Keeler-Wolf and Evens, 2009). References herein reflect the previously mentioned published materials described in *Section 2.0 – Methods*.

Geographically, the subject property is located within the California Floristic Province Southwestern California region. Specifically, the subject property is within the South Coast subregion. The South Coast subregion extends along the Pacific Coast from Point Conception to Mexico. According to the authoritative work on California native plants, the Jepson Manual, coastal sage scrub and chaparral communities that support numerous endemic species are common, but most of the subregion from Santa Barbara to the Mexican border has been urbanized, with substantial loss of natural habitat (Baldwin et all, 2012).

Two distinct plant communities/landscape types are recognized and considered dominant on-site; a brittlebush/buckwheat alliance and annual grassland/wildflower field. The grassland exists probably because native plant communities have been removed through agricultural operations and weed abatement for fire control in low lying, more level areas of the site, as discussed below. We also identified scattered small, stunted red willow and elderberry and mulefat shrubs and mapped these assemblages usually in conjunction with the dominant non-native pepper trees. There were, however, no streams or discernable washes found on-site. Analysis of historic maps of the property confirm that the site was historically only comprised of sage scrub, and that seasonal non-native grasslands, wildflower stands and trees do not occur naturally on-site.

There are no natural woodland communities on the subject site. There are scattered non-native trees and several scatted larger shrubs which mimic woodland in aerial photography. Woodland communities often occur in cismontane southern California. The term “cismontane” refers to coastal plains and major river valleys such as the Santa Ana River (to which the site is remotely tributary). Woodlands can occur where increased soil moisture allows trees and tree canopies to develop.

Vegetation assemblages present on-site site are shown in the attached *Exhibit 5 - Vegetation Map – 2018 Aerial Photograph*.

Individual vegetation communities and landscape types that comprise the 53.15-acre subject property, as well as their respective California Natural Community Codes ("CaCodes") or CNDDB codes, are described and quantified below.

Brittlebush scrub (CaCode 33.030.01)/California Buckwheat Scrub Alliance (CaCode 32.040.00)

The Brittlebush (*Encelia farinosa*) alliance blends with the California buckwheat scrub alliance on-site to form a scrub community (association) common to western Riverside County, and covers 29.8 acres of the property. It historically has been referred to as **Riversidean sage scrub** (CNDDB Code CTT32710CA). For ease of reference this association will simply be referred to herein as sage scrub. Primarily found on the flanks of rock outcrops, it is in various stages of maturity and mechanical disruption, Additionally, a small but recent Summertime 2019 fire event occurred within the sage scrub on-site; likely a consequence of transient camping or ignition by a resident of the area. Sage scrub would naturally be expected to occur across the entire property, but human actions have confined it mostly to rocky areas. If left to natural processes it would be more abundant on-site, so it sometimes occurs in patches on the intervening saddles between rock outcrops. Vehicular traffic, weed abatement, and fire appear to have limited the sage scrub to mostly higher, rockier sites on the property.

We noted an unfortunate abundance of the non-native invasive plant commonly referred to as stinknet (*Oncosiphon piluliferum*) across the entire site, including the intact sage scrub and rock outcrops. This annual is a relatively new arrival to this area, but it is overtaking native and semi-natural habitat areas quickly in many areas. It has a bright yellow flower and is approximately 12 inches in height. It overtakes open areas like former agricultural fields, as well as sage scrub communities, covering all the normal open space between shrubs in a dense blanket of flowers through which passage for small mammals and reptiles becomes difficult. Because of this and other non-native annual grasses and weeds crowding natural areas, the normal populations of small mammals and reptiles experience declines due to mobility issues and ensuing disruptions in predator-prey relationships.

Red Brome (*Bromus rubens*) Grasslands and Mixed Herbs Semi-Natural Alliance (CaCode 42.024.02)

Non-native grassland (**CNDDB Code CTT42200CA**), or alternatively the red brome grasslands naturalized alliance on the subject property could be considered synonymous with other non-native naturalized grassland communities such as **Ripgut Grass alliance (*B. diandrus*) (CaCode 42.026.21)** or-**Wild oat (*Avena* spp.) (CaCode 42.026.22**) which is also present on-site. Unfortunately, the non-native grassland has been heavily invaded with stinknet and dense matting has resulted. The precise classification has little ecological consequence in the context of this report insofar as which of many variations cover former agricultural fields and disturbed portions of the site; all are ecologically impediments to wildlife utilization.

Non-native grassland, comprised of any of the invasive bromes and herbs, functions at a diminished level of productivity or functionality compared to native grassland. It also negatively affects open substrates surrounding shrubs by crowding in between shrubs and eliminating open areas for small animals to move and forage for food. Annual non-native grassland has several negative characteristics including: 1) it maintains an excessive demand for near-surface soil moisture thereby out-competing native annual plant species; 2) it inhibits passage and access to the soil surface for most smaller ground-dwelling invertebrates, reptiles and small mammals; and 3) over time it forms an impenetrable layer over the soil precluding establishment of annual plants and wildflowers and shrubs. Non-native grassland can, however, have some

positive attributes if managed properly. It can support similar assemblages of plant and animal species as native grasslands, albeit at lower densities for undetermined lengths of time, particularly if it is grazed or burned periodically. Layers of unburned thatch are particularly deleterious to small mammal and reptile presence. These grasslands comprised 22.9 acres of the site.

Blue Elderberry Stands (CaCode 63.410.01)

There are two naturally-occurring small cells of blue elderberry scrub located in what appear to natural stands in lower lying saddle areas where surface sheetflow from rainfall events can seep into the lower, deeper sandy loams on the project site. The stands are quite small, however, and mapping indicated these stands comprise almost 0.2 acre in total on the site.

The presence of elderberries provides some vertical variation in the plant cover within the larger sage scrub community, at times reaching between 12 to 15 feet in height depending on available soil moisture and depth of soil. The shrubs on-site were somewhat smaller and very limited in extent. They nonetheless provide a food source and nesting subsite for bird species resident to the area.

There are small, nearly un-mappable elements of **Red Willow (*Salix laevagata*) (CaCode 61.205.01)** which comprised 0.05 acre or less on the project site. Scrubby red willow (*Salix laevigata*) shrubs are present in disturbed areas on the site, suggesting that gouged and modified substrate collects enough water for scattered willow shrubs and some **Mulefat** shrubs (*Baccharis salicifolia*) (**CaCode 63.510.01)** to occur in conjunction with non-native shrubs and trees. Mulefat occurs naturally in drainages, but also in disturbed sites, dumped dirt piles, and along road margins. None of these shrubs were extensive enough to be considered riparian in extent, and appeared to have resulted from mechanical disturbances to soil substrates and natural sheetflow.

Native woodland communities are absent from the project site, although several non-native invasive **California pepper trees** (*Schinus mole*) intertwined with tree tobacco and other non-native emergent dot the landscape in the southern portion of the site, and were mapped as **Ornamental** landscape, with a corresponding **CaCode.79.200.02**. The Ornamental cells totaled 0.15 acre in extent, and appeared to be utilized by transients who collected discarded items and erected shelters in more shaded areas. In addition to these invasive and nuisance trees, there are numerous non-native species also present within the southern portion of the site, such as star thistle (*Centaurea melitensis*), tumbling pigweed (*Amaranthus albus*), serval brome grassess (*Bromus* sp.), horehound (*Marrubium vulgare*), and tree tobacco (*Nicotiana glauca*) mixed in abundantly with native sage scrub species This southern area is degraded ecologically due to historic dumping, ripping and disassembly of smaller boulder outcrops, and other activities like off-roading which is common to areas on the fringe of urban areas.

SUMMARY

Representative photographs depicting current conditions of the subject property are depicted in *Exhibit 6 - Site Photographs*, attached.

The vegetation communities, their landscape distinctions, and their respective acreages on-site are listed below in *Table 2 – Vegetation Communities, Landscape Distinctions, and Respective Areas*.

Table 2 – Vegetation Alliances and Respective Areas

Annual Grassland/Wildflower Field	22.9 acres
Brittlebush and California buckwheat scrub	29.8 acres
Elderberry Alliance	0.2 acre
Ornamental Alliance	0.15 acre
Mulefat Alliance	0.05 acre
Red Willow Alliance	0.05 acre
Total	**53.15 acres**

5.0 BIOGEOGRAPHY, CORRIDORS, AND WILDLIFE

BACKGROUND AND THEORY

Biogeographic theory as a discipline has given rise to concepts such as biodiversity, extirpation event causes, wildlife corridors, habitat patches and fragmentation, edge effect, and reserve design and management. Land use decisions increasingly must consider not only the direct effects to organisms impacted by project implementation, but longer term and less obvious effects to organismal population vitality and organism dispersal and movement.

Movement pathways (small scale, or "micro-corridors") and corridors (large scale, or "macro-corridors") are differentiated by their roles. Actual wildlife corridors are often "hard-wired" into a species, such as caribou (*Rangifer tarandus*) moving across the tundra in seasonal patterns. Corridors are essential to the maintenance of population vigor, reproduction, and genetic variability. Corridors may be as large and diverse as the Pacific Flyway for migratory bird species, or may be smaller for animals moving between montane and valley environments on a seasonal basis, such as elk or deer seeking food resources. Movement pathways (micro-corridors) are necessary in the short-term success of mobile organisms such as mountain lion (*Puma concolor*), which require large ranges for their survival but are generally reluctant to move through an inhospitable urban landscape. Micro-corridors and movement paths are generally not "hard-wired" into the species. Movement pathways represent paths to needed resources, such as water, forage, or shelter. Movement pathways are necessary variations in the geographic routine of an organism. The path is not necessarily a defined linear segment; it is an area of opportunity that an organism perceives as necessary

and reasonably safe to move through in order to exploit a resource, such as water or shelter.

Biogeographic theory maintains that any habitat patch, or island, which experiences genetic isolation, will undergo eventual extinction if the habitat unit is too small to support genetic variability in any given species. It is not the movement of the individual animal which is important; it is the movement of genetic material (including floral dispersal mechanisms) on a per species basis through an ecosystem which is important over time. The connection is vital not so that individual animals can move freely (although that can be true with mesopredators like bobcat [*Lynx rufus*]) but so that floral and faunal genetic exchange and corresponding genetic variability carried with the individual species can be achieved incrementally throughout the habitat through reproductive processes.

BIOGEOGRAPHIC SETTING

The subject property is located on the western side of the Perris Valley, sitting atop the Perris pluton, a large Mesozoic Era igneous intrusion into the crust of the earth which has, over tens of millions of years, been positioned between and affected by major fault systems. These systems include the San Andreas/San Jacinto system to the east and the Elsinore-Whittier fault system and small local faults to the west.

Numerous fault systems throughout the state have shifted the landscape around to create multiple isolated river valleys and hill systems which support evolved floral and faunal assemblages unique from other nearby areas by virtue of ongoing uplift and isolation. This is the primary reason we find rapid evolution of many genera such as kangaroo rats (*Dipodomys* sp.) and annual tarplants (*Deinandra* sp.) and annual buckwheats (*Eriogonum* sp.). Isolation of species between valleys and montane systems results in unusually high diversity across the southern California, as well as the entire state.

The Perris Valley is generally situated between the Bernasconi Hills (which help form a basin for the Perris Reservoir to the north, the Lakeview Mountains to the east, and the Gavalin Hills to the west (including Gavalin Peak and Steele Peak to the southwest), and Double Buttes to the southeast. The Perris Valley has a long history (over a century) of intensive agricultural use, although the region is gradually becoming more urbanized as the human population within the City of Perris and nearby communities continue to increase. *Exhibit 7 - Biogeographic Aerial Photograph* portrays these mountain and hill systems which form the Perris Valley.

WILDLIFE UTILIZATION OF CORRIDORS

Wildlife use of corridors may be fixed or flexible, depending upon the type of organism and the size and complexity of the corridor zone. Animals that move along corridors as part of an evolutionary-based pattern of migration or dispersal may be genetically programmed to follow predetermined and sometimes ancient migration routes (i.e., "hard-wired", or for example, as with anadromous fish species like spawning salmon [*Oncorhynchus* spp.]). Animals with hard-wired behavior patterns usually have little or no individual ability to modify their behavior, even in the face of abrupt physical changes or barriers. When confronted with impassible barriers, they may have no appropriate alternative response behaviorally. In such cases, actions that physically obstruct corridors may result in population dislocation, inability to reach essential seasonal resource areas, loss of individual animals, and overall population declines.

Organisms are generally driven to disperse through mechanisms such as the scarcity of support resources (for example, food, water, microhabitats, shelter), dispersal of young from parental territories, migratory genetic programming, and accidental dispersal, such as flooding events carrying individuals to downstream locations, fire-driven flight, or similar mechanisms. Organisms sometimes disperse along defined corridors (for example, migratory routes in the Arctic for caribou or through connected stream systems in the case of amphibians dependent on moist environments). Highly mobile terrestrial generalists (for example, mountain lion or mule deer [*Odocoileus hemionus*] can have large ranges but move based on food availability and competition from members of their own species. Rattlesnakes [*Crotalus* spp.], woodrats [*Neotoma* spp.], and pocket mice [*Chaetodipus* spp.]) do not migrate or move substantial distances. Some moderately-mobile organisms (racoons, and jack-rabbits) will move if seasonal, reproductive, or ecological factors necessitate movement in order to locate and exploit critical support resources.

The project site is located near the historic center of Perris, in an area undergoing revitalization and expanding urbanization due to increasing population in Riverside County generally and specifically, as a travel hub for rail commuters. Downtown Perris, Interstate-215, and on-going area urbanization to the south, east and north of the site will present a substantial barrier for wildlife movement. As such, the project site is poorly situated to serve as a movement or migratory corridor, and the MSHCP did not specify any critical habitat connectivity, constrained or otherwise, in the immediate area. We found no evidence to support the possibility that the subject site functions as a corridor or movement pathway for MSHCP-covered animals.

WILDLIFE IN THE VICINITY OF THE SUBJECT PROPERTY

Due to the relatively level terrain of the Perris Valley, much natural habitat area in the general region has been lost due to development. The remaining habitats found on-site and in remnant undeveloped areas of the valley generally provide habitat for a decreased range of southern California wildlife which formerly were more numerous and diverse.

Several MSHCP-covered and regulatory status organisms are known to occur in Perris Valley habitats, including burrowing owl, Stephen's kangaroo rat (*Dipodomys stephensi*), western spadefoot (*Spea hammondii*), ferruginous hawk (*Buteo regalis*), California horned lark (*Eremophila alpestris actia*), San Diego

black-tailed jackrabbit (*Lepus californicus bennettii*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) and others. Of these species, horned lark and black-tailed jack-rabbit both still occur on-site, and a number of kangaroo rat burrows were noted on-site.

For the purpose of this analysis, TERACOR considered overall habitat conditions in the general vicinity of the project, along the westerly fringe of the Perris Valley. Wildlife known to frequently occur in the Perris Valley includes large mobile species such as coyote, bobcat, and numerous species of birds such as red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*Buteo lineatus*) and numerous songbird species. Snakes and lizards would include coastal whiptail (*Aspidoscelis tigris stejnegeri*), western fence lizard (*Sceloporus occidentalis*), site-blotched lizard (*Uta stansburiana*), California striped racer (*Masticophis lateralis lateralis*), southern Pacific rattlesnake (*Crotalus oreganus helleri*), and San Diego gopher snake (*Pituophis catenifer annectens*) among others.

WILDLIFE WITHIN THE SUBJECT PROPERTY

Because a portion of the subject property has historically been utilized for agricultural purposes, natural more level habitat on-site is disturbed and supports dense non-native grasses and herbs. Of course, native species are also found. These grassland areas have a moderate value to sedentary wildlife and high value for raptors foraging, including hawks listed previously and nocturnal owls. The rock outcrops and ornamental trees on-site provide perching habitat for red-tailed hawk, red-shouldered hawk, Cooper's hawk (*Accipiter cooperii*) and even possibly white-tailed kite (*Elanus leucurus*), though only red-tailed hawk was actually detected on-site. The agricultural field on-site also provides suitable foraging habitat for California horned lark, possibly loggerhead shrike (*Lanius ludovicianus*), and coyote, among others.

In addition to bird species that were easily detected and recorded, there are other animals that are less easy to observe that also likely occur within the 53.15-acre property from time to time. These include bobcat, San Diego desert woodrat (*Neotoma lepida intermedia*) and bat species such as western yellow bat (*Lasiurus xanthinus*) and western mastiff bat (*Eumops perotis californicus*). Additionally, there are several species of white-footed mice that could occur, and California kingsnake (*Lampropeltis californiae*), California striped racer (*Masticophis lateralis lateralis*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), southern Pacific rattlesnake, red racer (*Masticophis flagellum piceus*), western toad (*Anaxyrus boreas*), and Pacific tree frog (*Pseudacris regilla*). Granite spiny lizard (*Sceloporus orcutti*) was found to be common on-site.

AVIAN MIGRATORY STOPOVER

The natural habitats on-site serve as a stopover, resting, and foraging area for migratory birds moving along the Pacific Flyway. During the course of 2019 surveys, TERACOR field personnel have detected a total of 39 avian species which utilize habitats on-site either year-round or seasonally. These species include red-tailed hawk, Cooper's hawk, lesser goldfinch (*Spinus psaltria*), California scrub-jay (*Aphelocoma californica*), house finch (*Haemorhous mexicanus*), American kestrel (*Falco sparverius*), and common raven (*Corvus corax*). Appendix B contains a complete list of birds detected as well as those which have the

potential to occur on-site.

SPATIAL ANALYSIS AND BIOGEOGRAPHIC CONDITIONS

Animal movement within the project site's general region, however, is limited due to increasing urban development, I-215 and numerous homes, churches, commercial centers, and roads within the local region. Only habitat generalists like bobcat and coyote would be able to move freely within the remaining natural habitat, and of course undeveloped habitat to the west in the rugged hills to the west.

As shown in the previously-referenced *Exhibit 7 – Biogeographic Aerial Photograph* and discussed in the foregoing analysis, no existing wildlife movement corridors are present in the vicinity of the project site. Project implementation therefore would not result in the removal of any MSHCP-recognized existing corridors. Localized movement of free-ranging animals would of course be affected via development of a residential area on currently vacant and open land.

6.0 REGULATORY STATUS SPECIES ANALYSIS

MSHCP-COVERED SPECIES AND THE SUBJECT PROPERTY

Table 3 – MSHCP-Covered Species, below, discusses the species covered under the MSHCP, their respective status on-site, life history, and habitat description. TERACOR's methodology of predicted probability of occurrence on-site is described above in *Section 2.0 – Presence/Absence and/or Probability of Occurrence*.

Table 3 – MSHCP-Covered Species

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
PLANTS		
Yucaipa onion (*Allium marvinii*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial bulbiferous herb blooms from April through May and occurs on clay soils, dry slopes, ridges and openings in chaparral between 760 and 1,065 meters in elevation. According to the CNPS, this species is known only from the Yucaipa and Beaumont area of the southern San Bernardino Mountains. The subject property, therefore, is located outside of this onion's known geographic distribution. This species was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Munz's onion (*Allium munzii*)	CNPS Rare Plant 1B.1 **FE, ST**	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial bulbiferous herb was listed as federally endangered on 13 October 1998 and as state threatened in January 1990. It occurs on clay soils in mesic grassy openings in coastal sage scrub, chaparral, cismontane woodland and pinyon and juniper woodland between 297 and 1070 meters in elevation. It blooms from March through May. Clay soils are not present on-site; therefore habitat on the subject property is not suitable for this species. Munz's onion was not detected on-site during floral surveys.
San Diego ambrosia (*Ambrosia pumila*)	CNPS Rare Plant Rank 1B.1 **FE**	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial rhizomatous herb was listed as federally endangered on 02 July 2002. It occurs on sandy loam or clay soils in coastal scrub, chaparral, valley and foothill grassland and vernal pools. San Diego ambrosia can often occur in disturbed areas, and sometimes in alkaline areas. The elevational range of this clonal species is 20 to 415 meters above msl. It blooms from April through October. The nearest occurrences to the project site are located on the north and south sides of Nicolas Road and Murrieta Hot Springs Road, east of Winchester Road (Highway 79 North). Sandy loam soils are present on-site, however the subject property lies outside of this species' known elevational range. San Diego ambrosia was not detected on-site.
Rainbow manzanita (*Arctostaphylos rainbowensis*)	CNPS Rare Plant Rank 1B.1 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial evergreen shrub blooms from December through March and occurs on granitic outcrops in chaparral between 205 and 670 meters in elevation. Suitable habitat for this shrub is not present, and this species is not known to occur within the area. Rainbow manzanita is not on the site.
Jaeger's bush milkvetch (*Astragalus pachypus* var. *jaegeri*) Formerly known as Jaeger's milk-vetch	CNPS Rare Plant Rank 1B.1 This variety has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial shrub blooms from December through June and occurs in sandy or rocky areas in chaparral, cismontane woodland, coastal scrub and valley and foothills grassland between 365 and 975 meters in elevation. The subject property is outside this variety's known geographic range, and Jaeger's bush milkvetch has not been detected on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*)	CNPS Rare Plant Rank 1B.1 **FE**	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This annual herb was listed as federally endangered on 13 October 1998. It occurs in alkaline playas, mesic valley and foothill grasslands and vernal pools from 139 to 500 meters in elevation. San Jacinto Valley crownscale blooms from April through August. It is threatened by flood control, agriculture, non-native plants, urbanization, vehicles, road maintenance, and pipeline construction. According to the MSHCP, this species is primarily restricted to the alkali floodplains of the San Jacinto River, Mystic Lake and Salt Creek in association with Willows, Domino and Traver soils. This variety is also known to occur north of Diamond Valley Lake and on Willows soils at Alberhill Creek near Lake Elsinore. Suitable habitat is not present on-site. San Jacinto Valley crownscale was not detected on the subject property.
Parish's brittlescale (*Atriplex parishii*)	CNPS Rare Plant Rank 1B.1 This species has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This species blooms June through October, and occurs on alkaline or clay soils in playas, vernal pools, and chenopod scrub below 1900 meters. In southwest Riverside County, this species is known to occur near Highways 74 and 79 in Winchester and Homeland, Hemet and near Lakeview Hot Springs. Suitable habitat is not present on-site. This species is not on-site.
Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)	CNPS Rare Plant Rank 1B.2 This variety has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. An annual herb which blooms from April through October, this variety occurs below 200 meters in alkaline conditions in coastal bluff scrub and coastal scrub. The nearest known occurrence we know of to the project site is located near Murrieta Creek, south of the intersection of Clinton Keith Road and Palomar Street, west of Interstate 15, a considerable distance. Suitable habitat is not present on-site, and the subject property is outside of this variety's known geographic range. This variety was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Nevin's barberry (*Berberis nevinii*)	CNPS Rare Plant Rank 1B.1 **FE**, **SE**	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This perennial evergreen shrub was listed as federally endangered on 13 October 1998 and as state endangered in January 1987. It blooms from March through June, and occasionally as early as February. It occurs in sandy or gravelly conditions in washes, coastal scrub, chaparral, cismontane woodland, and riparian scrub from 70 to 825 meters msl. The nearest known occurrence we know was near n Temecula south of Temecula Parkway (Highway 79 South) and southwest of Redhawk Parkway. This species was not detected on-site.
Johnston's rockcress (*Boechera johnstonii*) Formerly known as *Arabis johnstonii*	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial herb blooms from February through June and often occurs on eroded clay in chaparral and lower montane coniferous forest between 1,350 and 2,150 meters in elevation. According to the CNPS, Johnston's rockcress is only known from the southern San Jacinto Mountains. The subject property, therefore, is outside of this species' known geographic distribution. This herb was not detected on-site.
thread-leaved brodiaea (*Brodiaea filifolia*)	CNPS Rare Plant Rank 1B.1 **FT, SE**	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This species was listed as federally threatened on 13 October 1998 and as state endangered in January 1982. This bulbiferous perennial herb blooms from March through June and is known to occur in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grasslands, and most often in vernal pool complexes and clay soils between 25 and 1120 meters. The nearest known occurrence to the project site is located near the intersection of Clinton Keith Road and Grand Avenue in Wildomar. This species was not detected on-site.
Orcutt's brodiaea (*Brodiaea orcuttii*)	CNPS Rare Plant Rank 1B.1 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb blooms from May through July and occurs on mesic and clay soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland and vernal pools between 30 and 1,692 meters in elevation. Suitable habitat is not present on-site, and the subject property is not located within the known geographic distribution of this species. Orcutt's brodiaea was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
round-leaved filaree (*California macrophylla*)	CNPS Rare Plant Rank CBR This species has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This annual, biennial herb blooms from March through July and occurs in vertic clay and occasionally serpentine soils in scrub, cismontane woodland and valley and foothill grassland between 15 and 1200 meters above msl. It has a broad distribution throughout central and southern California. The CNPS changed the rare plant rank on this species from 1B.2 to CBR on 11 December 2017 because CNPS considers this species to be too common statewide to include in the rare plant inventory. Clay or serpentine soils required by this species are not present on-site. This species was not detected on-site.
San Jacinto mariposa lily (*Calochortus palmeri* var. *munzii*) Formerly known as Munz's mariposa lily	CNPS Rare Plant Rank 1B.2 This variety has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb blooms from April through July and occurs in chaparral, lower montane coniferous forest and meadows and seeps between 855 and 2,200 meters in elevation. According to the CNPS, this variety is known only from a few occurrences in the San Jacinto Mountains. The subject property, therefore, is located outside of this variety's known geographic distribution. Habitat on-site is not suitable for this mariposa lily, and it was not detected on the subject property.
Plummer's mariposa lily (*Calochortus plummerae*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb is considered to be rare by the *Jepson Manual*; however CNPS notes that this species is more common than originally known. This plant is generally found on granitic, rocky slopes within chaparral, cismontane woodland, coastal scrub, and grassland from 100 to 1700 meters. According to Jepson, the nearest occurrence to the project site is located southeast of the intersection of Highways 74 and 79 near Green Acres, north of Diamond Valley Lake. This species was not detected on-site.
intermediate mariposa lily (*Calochortus weedii* var. *intermedius*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb blooms from May through July and occurs in rocky, calcareous areas in chaparral, coastal scrub and grassland between 105 and 855 meters in elevation. According to Jepson, the nearest occurrence to the subject property was located north of Clinton Keith Road, between I-215 and Whitewood Road. This variety was not detected on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Payson's jewelflower (*Caulanthus simulans*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs between 90 and 2200 meters, and is generally associated with sandy and granitic areas in chaparral, coastal scrub, and pinyon/juniper woodland. Payson's jewelflower blooms from February through June. According to Jepson, the nearest occurrence to the subject site occurred east of I-15 and south of Bundy Canyon Road. This species is not present on-site.
Vail Lake ceanothus (*Ceanothus ophiochilus*)	CNPS Rare Plant Rank 1B.1 **FT, SE**	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. Vail Lake ceanothus was listed as federally threatened on 13 October 1998 and as state endangered in January 1994. This perennial evergreen shrub blooms from February through March and occurs on gabbroic or pyroxenite-rich outcrops in chaparral from 580 to 1,065 meters in elevation. According to the CNPS, this species is known from only three (3) occurrences near Vail Lake. The subject property is outside this shrub's known geographic distribution. Vail Lake ceanothus has not been detected on-site.
smooth tarplant (*Centromadia pungens* ssp. *laevis*)	CNPS Rare Plant Rank 1B.1 This subspecies has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This annual herb blooms from April through September and occurs below 640 meters in elevation. According to Jepson, smooth tarplant occurs in open, poorly drained flats, depressions, waterway banks and beds, grassland and disturbed sites. CNPS states that this subspecies occurs in alkaline areas in chenopod scrub, meadows and seeps, playas, riparian woodland and grassland. We have detected this species in Menifee on Scott Road in 2019, but it has not been detected on-site.
peninsular spineflower (*Chorizanthe leptotheca*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb blooms from May through August and occurs on alluvial fans and granitic areas in chaparral, coastal scrub and lower montane coniferous forests from 300 to 1,900 meters in elevation. This spineflower was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	CNPS Rare Plant Rank 1B.1 This variety has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs in sandy or rocky openings in chaparral, cismontane woodland, coastal scrub and grassland between 275 and 1220 meters in elevation. It blooms from April through June and is currently known from approximately 20 occurrences in Riverside County. As shown in the attached *Exhibit 8 – CNDDB Occurrences*, Parry's spineflower was detected in 2010 as near as approximately 1.5 miles west along Scott Road, south of the intersection of Scott Road and Murrieta Road. Habitat on-site is considered to be too disturbed for this variety to occur on the subject property.
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	CNPS Rare Plant Rank 1B.2 This species has no federal or state formal governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs in sandy and often clayey areas in chaparral, coastal scrub, meadows and seeps, grassland and vernal pools between 30 and 1530 meters in elevation. This variety flowers from April through July. No spineflowers were detected on-site in 2019 surveys.
prostrate spineflower (*Chorizanthe procumbens*)	CNPS Rare Plant Rank CBR This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs in sand or gravel from approximately sea level to 1,300 meters in elevation and is considered common by Jepson. No spineflowers were found on-site.
San Miguel savory (*Clinopodium chandleri*) Formerly known as *Satureja chandleri*	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This perennial shrub occurs in rocky, gabbroic or metavolcanic areas in chaparral, cismontane woodland, coastal scrub, riparian woodland and grassland between 120 and 1075 meters in elevation. It blooms from March through July. Habitat on-site is not particularly suitable for this species on the subject property, and it was not detected.
small-flowered morning-glory (*Convolvulus simulans*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs on wet clay and serpentine ridges within chaparral, coastal scrub, and grasslands between 30 and 740 meters. It blooms from March through July. The CNPS notes that it is rare in southern California. Moist clay and serpentine soils are not present. This species was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Mojave tarplant (*Deinandra mohavensis*)	CNPS Rare Plant Rank 1B.3 **SE**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb blooms from May through January and occurs in mesic areas in chaparral, coastal scrub and riparian scrub between 640 and 1,600 meters in elevation. The subject property is outside this species' known geographic distribution, and this tarplant was not detected on-site.
Cleveland's bush monkeyflower (*Diplacus clevelandii*) Formerly known as *Mimulus clevelandii*	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial rhizomatous herb blooms from April through July and occurs in gabbroic, often in disturbed areas, openings and rocky areas in chaparral, cismontane woodland and lower montane coniferous forest between 450 and 2000 meters in elevation. Suitable habitat is not present, and the subject property is outside this species' known geographic range. This species was not detected on-site.
slender-horned spineflower (*Dodecahema leptoceras*)	CNPS Rare Plant Rank 1B.1 **FE, SE**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. Listed as federally endangered on 28 September 1987 and state endangered in January 1982, this annual herb requires flood deposited terraces and washes in chaparral/coastal scrub and cismontane woodland between 200 and 760 meters. It blooms from April through June and is known to occur as near as Lake Elsinore. Habitat on-site is considered to be too disturbed for this species to occur on the subject property. This species was not detected on-site.
many-stemmed dudleya (*Dudleya multicaulis*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This dudleya grows in heavy or clayey soils and sandstone outcrops in chaparral, coastal scrub and valley and foothill grassland, below 790 meters throughout the south coast (Los Angeles, Orange, San Bernardino, San Diego, and Riverside Counties). It blooms from April through July. Clay and other heavy soils are not present on-site. This species was not detected on-site.
sticky dudleya (*Dudleya viscida*) Formerly known as sticky-leaved dudleya	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial herb blooms from May through June and occurs in rocky areas in coastal bluff scrub, chaparral, cismontane woodland and coastal scrub between ten (10) and 550 meters in elevation. This dudleya was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	CNPS Rare Plant Rank 1B.1 **FE, SE**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Listed as federally endangered on 28 September 1987 and state endangered in January 1987, this perennial herb occurs in sandy or gravelly washes, floodplains, and dry riverbeds in chaparral and alluvial fan sage scrub from 91 to 610 meters in elevation. It blooms from April through September. This subspecies primarily occurs along the Santa Ana River from San Bernardino to Riverside. Suitable habitat is not present on-site. Further, Santa Ana River woollystar was not detected on the subject property.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	CNPS Rare Plant Rank 1B.1 **FE, SE**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Listed as federally endangered on 03 August 1993 and state endangered in July 1979, this herb blooms from April through June and occurs in mesic areas in coastal scrub, valley and foothill grassland, vernal pools and marshes between 20 and 620 meters in elevation. Suitable habitat is not present on-site, and the subject property is located outside of this variety's known geographic distribution. San Diego button-celery was not detected on-site.
Palomar monkeyflower (*Erythranthe diffusa*) Formerly known as *Mimulus diffusus*	CNPS Rare Plant Rank 4.3 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb blooms from April through June and occurs on sandy or gravelly substrates in chaparral and lower montane coniferous forest between 1220 and 1830 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this species' known geographic range. This species was not detected on the subject site.
San Jacinto Mountains bedstraw (*Galium angustifolium* ssp. *jacinticum*)	CNPS Rare Plant Rank 1B.3 This subspecies has no formal federal or state governmental listing status	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial herb blooms from June through August and occurs in lower montane coniferous forest between 1350 and 2100 meters in elevation. The subject property is outside of this subspecies' known geographic distribution, and suitable habitat is not present on-site. This bedstraw was not detected on the subject site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Alvin Meadow bedstraw (*Galium californicum* ssp. *primum*) Formerly known as California bedstraw	CNPS Rare Plant Rank 1B.2 This subspecies has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This subspecies is found on granitic or sandy substrates in chaparral and lower montane coniferous forests. Its blooming period is May through July and elevation range is 1350 to 1700 meters above sea level. Suitable habitat is not present, and the subject property is outside the subspecies' known geographic range. This subspecies was not detected on-site.
Palmer's grappling hook (*Harpagonella palmeri*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species occurs in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb grows on clay substrates and open grassy areas in shrubland in chaparral, coastal scrub, and grassland below 955 meters. It blooms from March through May. The species has a broad distribution throughout the south coast, the Peninsular Ranges, Arizona, and into Mexico. Suitable habitat is not present on-site, and this species was not detected on the subject property.
shaggy-haired alumroot (*Heuchera hirsutissima*)	CNPS Rare Plant Rank 1B.3 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in western Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial rhizomatous herb blooms from May through July and occurs in rocky and granitic areas in subalpine coniferous forest and upper montane coniferous forest between 1520 and 3500 meters in elevation. The subject property is outside of this species' known geographic range, and suitable habitat is not present on-site. This species was not expected to occur and was not detected on the subject site in 2019.
graceful tarplant (*Holocarpha virgata* ssp. *elongata*)	CNPS Rare Plant Rank 4.2 This subspecies has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb blooms from May through November and occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland between 60 and 1100 meters in elevation. It was not detected on-site.
bobtail barley (*Hordeum intercedens*) Formerly known as vernal barley	CNPS Rare Plant Rank 3.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This species occurs in vernal pools, alkali flats and ephemeral saline streams within coastal dunes, coastal scrub and grasslands below 1000 meters throughout southwestern California. This annual herb blooms from March through June. Suitable habitat is not present on-site, and this species was not detected on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
beautiful hulsea (*Hulsea vestita* ssp. *callicarpha*)	CNPS Rare Plant Rank 4.2 This subspecies has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial herb blooms from May through October and occurs on open gravel, talus slopes, rocky and granitic areas in montane chaparral and coniferous forest between 915 and 3050 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this subspecies' known geographic range. Beautiful hulsea was not detected on the site.
Southern California black walnut (*Juglans californica*) Formerly *Juglans californica* var. *californica*	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial deciduous tree occurs on slopes and in canyons between 50 and 900 meters along the south coast, south Transverse Ranges, and north Peninsular Ranges. It blooms from March through August. Walnut forest is a much fragmented, declining natural community. This species was not detected on-site.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	CNPS Rare Plant Rank 1B.1 This subspecies has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this subspecies for this area because it has no potential to occur on-site. Although now quite rare, this subspecies was historically widely distributed across southwestern California and into the western Mojave desert. It occurs in moist saline areas, primarily vernal pools. This plant blossoms February through June. Suitable habitat is not present on-site. This subspecies was not detected on-site.
heart-leaved pitcher sage (*Lepechinia cardiophylla*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This perennial shrub blooms from April through July and occurs in closed-cone coniferous forest, chaparral and cismontane woodland between 520 and 1370 meters in elevation. Suitable habitat is not present, and the subject property is outside of this species' known geographic distribution. This species was not detected on-site.
ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)	CNPS Rare Plant Rank 4.2 This subspecies has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb blooms from March through August and occurs in openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest and riparian woodland between 30 and 1800 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this subspecies' known geographic range. This lily was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
lemon lily (*Lilium parryi*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial bulbiferous herb blooms from July through August and occurs in mesic areas within lower and upper montane coniferous forest, meadows and seeps, and riparian forest between 1220 and 2745 meters in elevation. The subject property is located outside of this species' known geographic range, and suitable habitat is not present on-site. Lemon lily was not detected on the project site.
Parish's meadowfoam (*Limnanthes alba* ssp. *parishii*) Formerly known as *Limnanthes gracilis* var. *parishii*	CNPS Rare Plant Rank 1B.2 **SE**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Parish's meadowfoam was listed as state endangered in July 1979. This annual herb blooms from April through June and occurs in vernally mesic areas and along edges of ephemeral streams in lower montane coniferous forest, meadows and seeps, and vernal pools between 600 and 2000 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this subspecies' known geographic distribution. This subspecies was not detected on-site.
small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)	CNPS Rare Plant Rank 4.2 This subspecies has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Found in clay soils associated with vernal pools, grasslands and similar habitats, this annual herb blooms from March through May and occurs below 1070 meters in the South Coast region, Peninsular Ranges and San Jacinto Mountains. Suitable habitat is not present, and this subspecies was not detected on-site.
Hall's monardella (*Monardella macrantha* ssp. *hallii*)	CNPS Rare Plant Rank 1B.3 This subspecies has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial rhizomatous herb blooms from June through October and occurs in broad-leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland between 730 and 2195 meters in elevation. The subject property is outside this subspecies' known geographic range, and Hall's monardella was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
California muhly (*Muhlenbergia californica*)	CNPS Rare Plant Rank 4.3 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This now uncommon perennial rhizomatous herb blooms from June through September and occurs in seeps and streambanks in chaparral, forests, scrub and meadows throughout the western Transverse Ranges and south coast regions. Its elevation range is between 100 and 2000 meters. Habitat on-site is considered unsuitable and too disturbed for this species to occur on the subject property, and it was not detected on-site.
little mousetail (*Myosurus minimus* ssp. *apus*)	CNPS Rare Plant Rank 3.1 This subspecies has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This annual herb blooms from March through June and occurs in valley and foothill grassland and alkaline vernal pools between 20 and 640 meters in elevation. Habitat on-site is considered to be too disturbed for this subspecies to occur on the subject property, and it was not detected on-site.
mud nama (*Nama stenocarpa*) Formerly known as *Nama stenocarpum*	CNPS Rare Plant Rank 2B.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This herb blooms from January through July and occurs on marshes, swamps, lake margins and streambanks between 5 and 500 meters. Habitat on-site is unsuitable, and it was not detected on-site.
spreading navarretia (*Navarretia fossalis*)	CNPS Rare Plant Rank 1B.1 **FT**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. Listed as federally threatened on 13 October 1998, this annual blooms from April through June and occurs in vernal pools, ditches, chenopod scrub, marshes and swamps with assorted shallow freshwater, and playas. Habitat on-site is not suitable for this species to occur on the subject property, and it was not detected on-site.
prostrate vernal pool navarretia (*Navarretia prostrata*) Formerly known as prostrate navarretia	CNPS Rare Plant Rank 1B.1 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. This annual herb blooms from April through July and occurs in mesic areas in coastal scrub, meadows and seeps, alkaline valley and foothill grassland, and vernal pools between three (3) and 1210 meters in elevation. Suitable habitat is not present on-site, and this species was not detected on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
California Orcutt grass (*Orcuttia californica*)	CNPS Rare Plant Rank 1B.1 **FE, SE**	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This species is broadly distributed geographically, but confined to vernal pool complexes between fifteen (15) and 660 meters. It blooms from April through August. No vernal pools are present on-site; therefore habitat on the subject property is unsuitable for this species, and it was not detected on-site.
California beardtongue (*Penstemon californicus*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial herb blooms from May to August and occurs on sandy substrates in chaparral, lower montane coniferous forest, and pinyon and juniper woodland between 1170 and 2300 meters in elevation. Suitable habitat is not present on-site, and the subject property is outside this species' known geographic range. California beardtongue was not detected on the subject site.
Brand's star phacelia (*Phacelia stellaris*) Formerly known as Brand's phacelia	CNPS Rare Plant Rank 1B.1 This species has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This annual herb blooms from March through June and occurs in open areas within coastal dunes and coastal sage scrub below 400 meters. Habitat on-site is not suitable, and the subject property is outside of this species' known geographic range. Further, this species was not detected on-site.
Fish's milkwort (*Polygala cornuta* var. *fishiae*	CNPS Rare Plant Rank 4.3 This variety has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered variety can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial deciduous shrub blooms from May through August and occurs in chaparral, oak woodland and riparian woodland between 100 and 1000 meters in elevation. Suitable habitat is not present on-site, and this variety was not detected on the subject property.
cliff cinquefoil (*Potentilla rimicola*)	CNPS Rare Plant Rank 2B.3 This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial herb occurs in granitic and rocky crevices in subalpine coniferous forest and upper montane coniferous forest between 2400 and 2800 meters in elevation. This species blooms from July through September. According to the CNPS, cliff cinquefoil is known only to occur in the San Jacinto Mountains. Suitable habitat is not present on-site, and the subject property is outside of this species' known geographic range. This species was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Engelmann oak (*Quercus engelmannii*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species occurs in southwest Riverside County; however, the subject property contains no oak trees of any species. This southern California oak occurs in chaparral, cismontane woodland, riparian woodland and valley and foothill grassland. Its elevation range is 50 to 1300 meters. This perennial deciduous tree blooms from March through June. The subject property is outside of this species' known geographic range. This species was not detected on-site.
Coulter's matilija poppy (*Romneya coulteri*)	CNPS Rare Plant Rank 4.2 This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This perennial rhizomatous herb is distinctive in that it has the largest flowers of any plant native to California. It typically blooms from March to July, and occasionally as late as August. It is often found in burns in chaparral and coastal scrub in the Peninsular Ranges, Western Transverse Ranges, and the south coast area from 20 to 1200 meters in elevation. Suitable habitat is not present, and this species was not detected on-site.
Hammitt's clay-cress (*Sibaropsis hammittii*)	CNPS Rare Plant Rank 1B.2 This species has no formal federal or state governmental listing status	**Not Present**. The MSHCP does not require focused surveys for this species for this area because it has no potential to occur on-site. This annual herb blooms from March through April and occurs on clay soils in chaparral openings and valley and foothill grassland between 720 and 1065 meters in elevation. Clay soils are not present on-site; therefore suitable habitat on the subject property is absent. Further, the project site is outside of this species' known geographic range. This species was not detected on the subject site.
chickweed oxytheca (*Sidotheca caryophylloides*) Formerly known as *Oxytheca caryophylloides*	CNPS Rare Plant Rank 4.3 This species has no formal federal or state governmental listing status.	**Not Present.** This MSHCP-covered species can occur in western Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This annual herb occurs on sandy substrates in lower montane coniferous forest. It blooms from July to October and its elevation range is 1114 to 2600 meters. The subject property is outside of this species' known geographic range, and suitable habitat is not present on-site. This species was not detected on the subject site.
Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*)	CNPS Rare Plant Rank 2B.1 The variety has no formal federal or state governmental listing status	**Not Present.** The MSHCP does not require focused surveys for this variety for this area because it has no potential to occur on-site. This annual herb blooms from May through September and occurs at elevations of five (5) to 435 meters. Habitats for this variety include moist and alkaline places, drying riverbeds, meadows and seeps, marshes and swamps, riparian forests and vernal pools. The subject property is outside of this variety's known elevational range. This variety was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
INVERTEBRATES		
vernal pool fairy shrimp (*Branchinecta lynchi*)	**FT**	**Not Present.** The property contains no vernal pools and thus was determined to be unsuitable for this species in the Habitat Suitability Assessment. Potential habitat includes short lived, cool temperature vernal pools. No vernal pools are present on-site; therefore suitable habitat for this fairy shrimp is not present on the subject property.
Quino checkerspot butterfly (*Euphydryas editha quino*)	**FE**	**Not Present.** The property was determined to be unsuitable for this species due to lack of host plant and the degraded condition of substrates and lack of support resources. The quino checkerspot butterfly occurs in sunny openings in chaparral and coastal sage shrublands in parts of Riverside and San Diego Counties. This subspecies frequents hills and mesas near the coast and hilly areas east of Temecula, and requires high densities of food plants including *Plantago erecta*, *Plantago ovata* var. *insularis* and *Castilleja exserta* ssp. *exserta*. None of the quino checkerspot butterfly's host plants are present on-site; and it has grown progressively more rare with extended drought conditions and deleterious erosion of habitat quality throughout its known range, therefore this subspecies does not occur on the project site.
Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*)	This species has no formal federal or state governmental listing status	**Not Present.** The property was determined to be unsuitable for this species in the Habitat Suitability Assessment. This species of fairy shrimp is restricted to cool-water vernal pools which are formed on Southern Basalt Flows. In the Plan Area, this species, and its microhabitat are only known to occur on the Santa Rosa Plateau. Habitat on the subject property is not suitable, and the project site is outside of this species' known geographic range. Santa Rosa Plateau fairy shrimp was not detected on the subject site.
Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*)	**FE**	**Not Present.** The property was determined to be unsuitable for this species. Suitable habitat includes fine, sandy soils, often with wholly or partly consolidated dunes referred to as the "Delhi" series. The fly is typically found in relatively intact, open, sparse, native habitats with less than 50% vegetative cover and is restricted to the Colton Dunes in northwestern Riverside and southwestern San Bernardino Counties. The subject property is outside this subspecies' known geographic range; therefore the flower-loving fly would not occur on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Riverside fairy shrimp (*Streptocephalus woottoni*)	**FE**	**Not Present.** The property was determined to be unsuitable for this species due to the lack of ponds and vernal pools. This species of fairy shrimp is endemic to western Riverside, Orange, and San Diego Counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. It inhabits seasonally astatic pools filled by winter/spring rains, and hatches in warm water later in the season. Suitable habitat is not present as vernal pools are not present on the subject property. This species is not present on-site.
FISH		
Santa Ana sucker (*Catostomus santaanae*)	**FT**	**Not Present.** The property was determined to be unsuitable for this species in the Habitat Suitability Assessment and no focused surveys were conducted. There are no aquatic resources for fish on-site. This species is not present on the subject property.
arroyo chub (*Gila orcutti*)	**SSC**	**Not Present.** The property was determined to be unsuitable for this species and no focused surveys were conducted. There are no aquatic resources for fish on-site. This species is not present on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
REPTILES		
orange-throated whiptail (*Aspidoscelis hyperythra*) Formerly known as the Belding's orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	**SWL**	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This species inhabits washes, streams, terraces, and other sandy areas often where there are rocks and patches of brush and rocky hillsides. Orange-throated whiptail frequents coastal chaparral, thornscrub, and streamside growth. Marginally suitable habitat is present, although this whiptail was not detected on-site.
coastal whiptail (*Aspidoscelis tigris stejnegeri*) Formerly known as the coastal western whiptail (*Cnemidophorus tigris multiscutatus*)	**SSC**	**Moderate**. This MSHCP-covered subspecies could occur on-site, but the property is not in a conservation cell and not designated for conservation. This species inhabits deserts and semiarid habitats, usually where plants are sparse and there are open areas for running, conditions not really present on the subject site which is densely vegetated. It ranges from deserts to montane pine forests where it prefers warmer, drier areas. Coastal whiptail is also found in woodland and streamside growth and avoids dense grassland and thick growth of shrubs. It uses firm, sandy or rocky soil. Marginally suitable habitat is present, although this whiptail was not detected on-site.
southern rubber boa (*Charina umbratica*) Formerly known as *Charina bottae umbratica*	**ST**	**Low.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The southern rubber boa frequents grassland, broken chaparral, woodland, and forest, in and beneath rotting logs, under rocks, and under bark of fallen and standing dead trees. Habitat on-site is marginally suitable, although this species has not been detected on-site.
San Diego banded gecko (*Coleonyx variegatus abbotti*)	**SSC**	**Not Present.** This MSHCP-covered subspecies can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This subspecies can live in extremely dry parts of the desert due to nocturnal and subterranean habits. It ranges from creosote bush flats and sagebrush desert to pinyon-juniper belt, and from catclaw-cedar-grama grass plant community in the eastern part of its range to chaparral areas in its western range. This gecko is often associated with rocks, and may seek shelter under them or in crevices. Suitable habitat around rock outcrops might be present, but there were no CNDDB records nearby for this subspecies and it was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
red diamond rattlesnake (*Crotalus ruber*) Formerly known as the northern red-diamond rattlesnake (*Crotalus ruber ruber*)	**SSC**	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This species frequents chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains in Riverside County. It occurs in rocky areas and dense vegetation and suitable habitat is on-site; however this species has not been detected on the subject property.
western pond turtle (*Emys marmorata*) Formerly known as *Clemmys marmorata pallida*	**SSC**	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The western pond turtle inhabits permanent or nearly permanent bodies of water in a number of habitat types below 1830 meters. It requires basking sites such as logs, rocks, vegetation mats, or open mud banks. Suitable habitat is not present on the subject property as the blueline stream is ephemeral. This species is not present on-site.
California mountain kingsnake (San Bernardino population) (*Lampropeltis zonata [parvirubra*]) Formerly known as the San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*) **California mountain kingsnake (San Diego population)** (*Lampropeltis zonata [pulchra]*) Formerly known as the San Diego mountain kingsnake (*Lampropeltis zonata pulchra*)	**SWL**	**Not Present**. These MSHCP-covered subspecies can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The California mountain kingsnake inhabits mountainous regions across southern California. It prefers moist woods, coniferous forests, oak woodlands, and chaparral above 1000 meters. They are quite secretive, residing in rock crevices or beneath rock and debris piles. They may also utilize rotting logs and seek cover under dense shrubs. Habitat on-site is not particularly suitable, and the subject property is located below this snake's known elevational range.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
coast horned lizard (*Phrynosoma blainvillii*) Formerly known as the coast (San Diego) horned lizard (*Phrynosoma coronatum*) – *blainvillii* population	**SSC**	**Low**. This MSHCP-covered species occurs in southwest Riverside County. Favorable habitat for this lizard includes open, flat, sandy areas in which several colonies of harvester ants (*Pogonomermex* spp.) are established. Harvester ants are the coast horned lizard's preferred prey item and is necessary to its diet. Plant communities associated with habitation of the coast horned lizard include coastal sage scrub. Slopes do not favor this animal and no harvester ant colonies were noted on-site. Historically, the site would have probably supported horned lizard, but pressures from weed and grass invasion, easy collection, feral pigs, and fragmentation of its habitat have all contributed to the species decline. Suitable habitat for this species is probably no longer present on the subject property, though we occasionally see this animal on sandy substrates in open areas. Coast horned lizard was not detected on-site.
southern sagebrush lizard (*Sceloporus graciosus vandenburgianus*)	This subspecies has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered subspecies can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This lizard is found within the San Jacinto and Santa Rosa Mountains above 1,524 meters in elevation. Suitable habitat includes montane chaparral, sagebrush (*Artemisia* sp.), hardwood and conifer forests and woodlands and juniper woodlands. Habitat on-site is not suitable, and the subject property is outside of this subspecies' known geographic range.
granite spiny lizard (*Sceloporus orcutti*)	This species has no formal federal or state governmental listing status	**Present.** This MSHCP-covered species occurs on-site, but the property is not in a conservation cell and not designated for conservation. This widespread species occurs in a wide variety of habitats but is restricted to granite outcrops and boulder fields in chaparral, coastal sage scrub, riparian areas, yellow pine forest, and pinyon-juniper woodlands at all elevation levels. Suitable habitat is present on-site and the species was found to be abundant.
granite night lizard (*Xantusia henshawi*) Formerly known as *Xantusia henshawi henshawi*	This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This lizard occurs in localized populations distributed east of I-215, but primarily within the eastern portion of the Plan Area. This organism is often found in flaking granite, rock outcrops, and boulder fields most commonly in chaparral, sage scrub, mixed conifer forest, and oak woodland. Marginally suitable habitat is present on-site; however the subject property is outside of this species' known geographic range.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
AMPHIBIANS		
arroyo toad (*Anaxyrus californicus*) Formerly known as (*Bufo californicus*)	**FE, SSC**	**Not Present.** The MSHCP does not require focused surveys for the arroyo toad in this area because this species has no potential to occur on-site. The arroyo toad breeds in sandy river washes and arroyos; hence the name arroyo toad. This species has a very specialized breeding habitat in that it requires shallow, slow moving water or overflow pools within a stream system comprised of silt-free sandy or gravelly substrates. This species also requires streamside terraces for burrowing. Suitable breeding habitat is not present on the subject property, however, the organism is known to occur substantial distances (greater than one [1] mile) from its breeding habitat where it remains. This species is not believed present on-site due to the urbanization of the Perris area and channelization of many stream systems in the area.
California red-legged frog (*Rana draytonii*) Formerly known as *Rana aurora draytonii*	**FT, SSC**	**Not Present.** The MSHCP does not require focused surveys for the California red-legged frog in this area because this species has no potential to occur on-site. Populations of this frog are in serious decline primarily due to the introduction of non-native predators such as the American bullfrog (*Lithobates catesbeianus*), habitat loss, and pollutants. This species prefers pond habitats for breeding; however, it will also utilize slow, permanent streams. Preferred breeding habitat is not present on-site. This species is not present on-site.
southern mountain yellow-legged frog (*Rana muscosa*) Formerly known as the mountain yellow-legged frog	**FE, SE, SWL**	**Not Present.** The MSHCP does not require focused surveys for the southern mountain yellow-legged frog in this area because this species has no potential to occur on-site. This frog species, once abundant, has lost approximately 99% of its former range. Chytrid fungus, introduction of bullfrogs and trout species, airborne pollution, fires, ozone depletion, drought and cattle grazing are just a few of the suspected causes of this, likely fatal, decline of the species. Suitable habitat is not present. This species is not present on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
western spadefoot (*Spea hammondii*) Formerly known as *Scaphiopus hammondii*)	**SSC**	**Low and Unlikely to be Present.** This MSHCP-covered species occurs in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This species is generally found in washes, lowlands stream courses, man-made ponds, floodplains, and vernal pools. Preferred habitat associations include chaparral, oak woodland, coastal sage scrub, riparian woodland, and grassland. The western spadefoot breeds in seasonal ponds and vernal pools in both upland and lowland areas. This species is active later in the season than other amphibians (i.e., April – June). The CNDDB notes several detections in the general area of Perris, the closest being the Motte Rimrock Reserve north-northwest of the site in 2003., The habitat on the subject property is not suitable due to lack of sustained water resources on-site or nearby.
coast range newt (*Taricha torosa*) Formerly known as *Taricha torosa torosa*	**SSC**	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Populations of the coast range newt are scattered throughout the south coast, and are confined to slow-moving streams and pools in which surface flows last year-round, as their larvae require one (1) year to develop. The habitat on the subject property is not suitable due to lack of year-round water sources. This species would not occur on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
BIRDS		
Cooper's hawk (*Accipiter cooperii*)	**SWL (Nesting)**	**Likely Present.** This MSHCP-covered species has not been detected on-site but probably forages in the area, but the property is not in a conservation cell and not designated for conservation. The Cooper's hawk is a crow-sized raptor and typically breeds throughout the state. It is tolerant of human activity and population numbers appear to be on the rise. It nests in open forests, groves, or trees along rivers, or low scrub of treeless areas. The wooded area is often near the edge of a field or water opening. This species has not been detected on-site during nesting season.
northern goshawk (*Accipiter gentilis*)	**SSC (Nesting) Third Priority**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Northern goshawks nest in mature and old-growth forests with more than 60% closed canopy. Breeding sites in its western range include Douglas-fir and pine forests, aspen groves, and stands of paper birch (in Alaska). Goshawks often build nests near breaks in the canopy, such as a forest trail, jeep road, or openings created by a downed tree, and prefer sites with a nearby creek, pond or lake. This species hunts in the forest, along riparian corridors, and in more open habitat such as sagebrush steppes. Suitable nesting habitat is not present, and this hawk was not detected on-site.
sharp-shinned hawk (*Accipiter striatus*)	**SWL (Nesting)**	**Low (Not Nesting – Winter Resident).** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This species is a common winter visitor to southern California. It prefers forested or woodland riparian habitats, but will also occur in urban areas. Garrett and Dunn cite nesting records in the San Gabriel Mountains, San Bernardino Mountains, San Diego County, and the San Jacinto Mountains. This species is unlikely to nest on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
tricolored blackbird (*Agelaius tricolor*)	**SCE, SSC (Nesting Colonies Only) First Priority**	**Not Present.** This MSHCP-covered species could possibly forage on-site, but the property is not in a conservation cell and not designated for conservation. The tricolored blackbird occurs in southern California along the coast and at some inland localities. Nesting habitat for the tricolored blackbird includes both brackish and freshwater marshes. Foraging habitats include cultivated fields, feedlots associated with dairy farms, and wetlands. This species forms the largest nesting colonies of any Passerine bird in the United States. The species has declined primarily from habitat loss, which often results in enormous nest failure due to the colonial nesting habit of this species. Suitable foraging habitat is present on-site, although no breeding habitat is present, nor are there any reported occurrences within the vicinity of the site.
Southern California rufous-crowned sparrow *(Aimophila ruficeps canescens*)	**SWL**	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This secretive, medium-sized sparrow inhabits mainly coastal sage scrub habitats, preferring those dominated by California sagebrush (*Artemisia californica*), and mixed chaparral. It frequents relatively steep, often rocky hillsides with grass and forb patches. Rufous-crowned sparrow has been detected in the hills northwest of the site, and so we cannot rule out it's possible presence. Suitable habitat is present on-site, although this species has not been detected on-site.
grasshopper sparrow (*Ammodramus savannarum*)	**SSC (Nesting) Second Priority**	**Low (Nesting).** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This species, in the west, prefers grasslands with sparse shrub cover. It occurs mainly on hillsides and mesas in coastal districts, but has bred up to 1500 meters in the San Jacinto Mountains. Marginally suitable habitat is present on-site, but this sparrow is uncommonly observed. It was not detected on the subject property.
golden eagle (*Aquila chrysaetos*)	**SFP, SWL (Nesting and Wintering)**	**Low**. This MSHCP-covered species could forage on-site, but the property is not in a conservation cell and not designated for conservation. This species nests and winters in cliff walls, large trees, and foothill and mountain areas supporting sage-juniper and desert vegetation. According to the CNDDB, a nest with one (1) eaglet was found in a Fremont cottonwood in 1974 several miles south of the subject property. No suitable nesting habitat is present on-site, and golden eagle has not been detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
great blue heron (*Ardea herodias*)	**SSA (Nesting Colony)**	**Not Present.** This MSHCP-covered species could fly over the site, but the property is not in a conservation cell and not designated for conservation. This species is the most widespread heron in North America. It commonly occurs along river and lake edges, and forages for fish, amphibians, reptiles, and mammals. Flyovers are common over many habitat types, but this species has not been detected on-site and is not expected due to lack of water resources.
Bell's sage sparrow (*Artemisiospiza belli belli*) Formerly known as *Amphispiza belli belli*	**SWL**	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This subspecies prefers coastal sage scrub and open chaparral habitats in southern California. It nests on the ground beneath shrubs or in shrubs six (6) to 18 inches above ground. Suitable habitat is present on-site, although this sparrow has not been detected on the subject property.
burrowing owl (*Athene cunicularia*) Formerly known as *Athene cunicularia hypugaea*	**SSC (Burrow Sites and some Wintering Sites) Second Priority**	**Moderate.** Focused surveys for this organism were required under the MSHCP; however, the species was not detected on-site. This species is found in the Perris Valley, particularly along the Perris Storm Channel and in appropriate habitats throughout California, excluding the humid northwest coastal forests and high mountains. It occurs as high as 1600 meters in Lassen County. It is found throughout the state during fall and spring migration. The habitat for this species consists of open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. The burrowing owl is a subterranean nester, and is dependent upon burrowing mammals to initiate burrow construction. This species may utilize a site for breeding, wintering, foraging, and/or migration stopovers. This species often exhibits high site fidelity, with family groups reusing burrows year after year. Numerous occurrences of this owl have been detected in the vicinity, but not on-site. Favorable habitat is presentThe burrowing owl, however, has not been detected on-site during focused breeding season surveys in 2019.
American bittern (*Botaurus lentiginosus*)	**SSA**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. American bitterns in California are found almost exclusively in emergent habitat of freshwater marshes and vegetated borders of ponds and lakes, and occasionally sparsely vegetated wetlands. Wetland habitat on-site is not suitable for this species. American bittern has not been detected on the property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
ferruginous hawk (*Buteo regalis*)	**SWL (Wintering)**	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This raptor frequents open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. It eats mostly lagomorphs (rabbits), ground squirrels, and mice. The ferruginous hawk breeds in the northern Midwest in the U.S. and southern Canada, and is only known to occur in California during the winter. Suitable foraging habitat is present, although ferruginous hawk has not been detected on-site.
Swainson's hawk (*Buteo swainsoni*)	**ST (Nesting)**	**Low (Low Migratory Occurrence Potential).** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. This raptor is a summer migrant to North America, and spends the winter in South America, making it the longest migrant of any North American raptor. Habitat preferences for this species include broken woodlands, savannah, higher deserts with scattered groves of trees, and ranch lands with scattered trees. Prey items for this species range from small mammals to insects with small birds and reptiles taken occasionally. The subject property is located outside of this species' known breeding range; therefore, this species does not nest on-site. Swainson's hawk generally migrates in flocks along established flyways, and is not expected to be seen on the project site.
cactus wren (*Campylorhynchus brunneicapillus*)	This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This species is narrowly distributed at relatively few locations within the Plan Area. Preferred habitat includes cactus-dominated coastal sage scrub, desert scrub, and Riversidean alluvial fan sage scrub in the Riverside Lowland and San Jacinto Foothill Bioregions of the Plan Area. Suitable habitat is not present on-site, and this species was not detected on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Wilson's warbler (*Cardellina pusilla*) Formerly *Wilsonia pusilla*	This species has no formal federal or state governmental listing status	**Not Present (Low Migratory Occurrence Potential).** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The Wilson's warbler has a sparse and widespread distribution within almost every habitat within the MSHCP Plan Area. This species forages in lowlands and foothills as a transient in the spring and fall and breeds within the mountains in shrub and scrub habitat, wet and montane meadow, and edges of riparian and forested habitats. It is not known to winter within the Plan Area. The subject property is outside of this warbler's known breeding range, although Wilson's warbler could utilize the subject site as a migratory stopover.
turkey vulture - breeding (*Cathartes aura*)	This species has no formal federal or state governmental listing status	**Low.** This MSHCP-covered species could forage on and above the site, but the property is not in a conservation cell and not designated for conservation. The turkey vulture is generally widely distributed throughout the Plan Area. In western North America, the turkey vulture tends to occur most regularly in areas of pastured rangeland, non-intensive agriculture, or wild areas, with rock outcrops suitable for nesting but generally not in the high mountains. Suitable habitat consists of extensive open areas with protected nest and roost sites provided by large trees, snags, thickets, shrubs, and rock outcrops. Nesting habitat may occur in forests, rocky cliffs or slopes, deciduous forests, and brushy or grassy habitat. This species was not detected on the subject property during surveys in 2019.
mountain plover (*Charadrius montanus*)	**SSC (Wintering) Second Priority**	**Not Present.** This MSHCP-covered species probably would not utilize the site, and the property is not in a conservation cell and not designated for conservation. A winter resident in California, the mountain plover is currently primarily found in the Imperial Valley, California. Historically, large numbers of mountain plovers wintered on dry plain between the Pacific Ocean and Los Angeles. Wintering populations prefer agricultural fields, such as alfalfa; however, historically this species preferred native grassland plains. Marginally suitable habitat is present on the subject property, but invasive plants have probably rendered the site too densely vegetated for this particular species. This species was not detected on-site.
northern harrier (*Circus cyaneus*)	**SSC (Nesting) Third Priority**	**Low**. This MSHCP-covered species could forage on-site, but the property is not in a conservation cell and not designated for conservation. The subject property is located within this species' current breeding range. The. northern harrier has a worldwide distribution and a wide range during migration. This species prefers expansive open, treeless areas. Marginally suitable nesting habitat is present. This species was not detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	**FT, SE (Nesting)**	**Not Present**. The property was determined to be unsuitable for this species in the Habitat Suitability Assessment and no focused surveys were conducted. The western yellow-billed cuckoo prefers dense riverine woodlands. This subspecies is common in parts of its range, but has experienced serious declines due to habitat loss and fragmentation. This subspecies was not detected on-site.
black swift (*Cypseloides niger*)	**SSC (Nesting) Third Priority**	**Not Present (Low Migratory Occurrence Potential)**. This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. In southern California this species breeds in the San Gabriel Mountains, San Bernardino Mountains and San Jacinto Mountains. Most breeding sites are associated with steep cliffs, or near and behind waterfalls. Suitable nesting habitat is not present, and the subject property is located outside of this species' known breeding range; therefore, this species does not nest on-site.
white-tailed kite (*Elanus leucurus*)	**SFP (Nesting)**	**Assumed Present.** This MSHCP-covered has not been seen on-site, but it likely forages from time to time. There was no evidence of kite nesting on-site. The property is not in a conservation cell and not designated for conservation, therefore, potential presence is not problematic. This species is fairly common in open fields, and is a yearlong resident in coastal and valley lowlands throughout California. It occurs in low elevation grassland, agricultural, wetland, or oak-woodland habitats. Riparian areas adjacent to open areas can be used by this species for nesting, although no riparian areas are on or near the project site.
southwestern willow flycatcher (*Empidonax traillii extimus)*	**FE, SE (Nesting)**	**Not Present.** The property was determined to be unsuitable for this species based on the lack of any well-developed willow and/or cottonwood stands, usually accompanied with some standing water at least seasonally. The subspecies southwestern willow flycatcher occupies the southernmost breeding range of the willow flycatcher. It was listed as federally endangered in 1993, and it is estimated that only 900 to 1000 breeding pairs remain. Habitat loss and parasitism from brown-headed cowbirds have reduced the populations to the threshold of extinction. This species could not utilize the site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
California horned lark (*Eremophila alpestris actia*)	**SWL**	**Present.** This MSHCP-covered species was detected on-site, but the property is not in a conservation cell and not designated for conservation. The California horned lark is fairly common in grasslands and open scrublands throughout California; however, numbers have been declining near urbanized areas of southern California. This subspecies generally occurs in grasslands and open habitats. Suitable habitat is present, and this subspecies has been detected on-site.
merlin (*Falco columbarius*)	**SWL (Wintering)**	**Low.** It seems unlikely that this MSHCP-covered species would utilize the site, and the property is not in a conservation cell and not designated for conservation even if it did occur. This species winters mainly in the western half and southern portion of California below 1500 meters. It is seldom found in heavily wooded areas or open deserts. It occurs in coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, and various ecotones (edge habitats). Although somewhat suitable wintering habitat is present, this species was not detected on-site.
prairie falcon (*Falco mexicanus*)	**SWL (Nesting)**	**Low.** This MSHCP-covered species could forage on-site, but the property is not in a conservation cell and not designated for conservation. This species occurs throughout California, and breeds in the northern, central and southeastern portions of the state. This species inhabits primarily open habitats such as grasslands, savannahs, and open shrub habitats. Although suitable foraging habitat is present, this species was not detected.
American peregrine falcon (*Falco peregrinus anatum*) Formerly known as the peregrine falcon (*Falco peregrinus*)	**FDL, SDL, SFP (Nesting)**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County but surveys are not required for the subject property. This subspecies occurs along the coast year-round, breeding from Santa Barbara to northern California. This subspecies also breeds in the Sierra Nevada and the Salton Sea. The wintering range for this subspecies extends into the Central Valley and more inland in southern California. Most commonly occupied habitats contain cliffs for nesting, with open gulfs of air and generally open landscapes for foraging. In addition to natural habitats, many artificial habitats are now used by this subspecies (urban, human-built environments such as towers, buildings, etc.). Suitable habitat is not present, and this subspecies has not been observed to nest on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
MacGillivray's warbler (*Geothlypis tolmiei*) Formerly known as *Oporornis tolmiei*	This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The MacGillivray's warbler has a sparse but widespread distribution throughout the MSHCP Plan Area within a variety of shrubby and riparian habitats. It occurs within the lowland and foothill regions of the Plan Area as a transient in spring and fall but does not winter within these regions. Breeding pairs are typically found in moist brushy areas within coniferous forests between 2,000 and 2,800 meters in elevation but may also be found in clear-cuts or mixed deciduous forests up to 3,000 meters in elevation. The species prefers secondary-growth woodlands, brushy areas near water and dense willow canyon drainages. The habitats on the project site do not support this species, and the subject property is below this warbler's known elevational range. MacGillivray's warbler would not occur on-site.
bald eagle (*Haliaeetus leucocephalus*)	**FDL, SE, SFP (Nesting and wintering)**	**Not Present**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Bald eagles typically nest in forested areas adjacent to large bodies of water and avoid heavily developed areas when possible. This species tolerates human activity when feeding, and may congregate around fish processing plants, dumps, and below dams where fish concentrate. Bald eagles prefer tall, mature coniferous or deciduous trees for perching, and can be seen in open, dry uplands if there is access to open water for fishing in winter; we have observed them foraging along Salt Creek near Menifee in 2019. No areas supporting open water or broad open meadows are present; therefore this eagle would not be expected to occur on-site.
yellow-breasted chat (*Icteria virens*)	**SSC (Nesting) Third Priority**	**Not Present**. This MSHCP-covered species would not occur on-site, and the property is not in a conservation cell and not designated for conservation in any event. This species prefers shrubby riparian habitats, especially in the vicinity of lowland watercourses. The species was not expected to occur on-site and has not been sighted.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
loggerhead shrike (*Lanius ludovicianus*)	**SSC (Nesting) Second Priority**	**Possibly Present.** This MSHCP-covered species has not been detected on-site, but could forage from time to time. The property, however, is not in a conservation cell and not designated for conservation. The subject property lies within the loggerhead shrike's year-round range and habitats are suitable. This species occurs in a variety of habitats, but prefers open areas with short vegetation. The loggerhead shrike is often referred to as the "butcher bird," because of its tendency to impale prey items on thorns, barb wire fencing, other sharp edges, to be consumed later. This species preys on arthropods, amphibians, and small reptiles, birds, and mammals.
Lincoln's sparrow - breeding (*Melospiza lincolnii*)	This species has not formal federal or state governmental listing status	**Low.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The Lincoln's sparrow has a sparse and widespread distribution throughout the MSHCP Plan Area within a wide variety of habitats. This species occurs within the lowland and foothills of the Plan Area as a transient in the spring and fall and may overwinter within the area. This sparrow prefers dense, low underbrush often in disturbed edges with grasses and weeds mixed with shrubs. It occurs in a variety of habitats including willow-sedge swamp, scrub-meadow, and flat land aspen. Breeding in southern California occurs in wet montane meadows of corn lily, sedges and low willows. At lower elevations, this organism prefers mesic willow shrubs and can be found in mixed deciduous groves such as aspen and cottonwoods, mixed shrub-willows, bogs as well as a variety of other riparian habitats. No Lincoln sparrows were observed or heard.
black-crowned night heron (*Nycticorax nycticorax)*	**SSA (Nesting Colony)**	**Not Present.** This MSHCP-covered species would not occur on-site, and the property is not in a conservation cell and not designated for conservation in any event. This bird is a fairly common year-round resident in lowlands and foothills throughout the state. It occurs in freshwater marshes, coastal mudflats, shores of lakes and rivers, estuaries, and rocky shores, where it forages on a variety of organisms including small fish, crustaceans, aquatic invertebrates, amphibians, reptiles, small mammals, and rarely young birds. It breeds from the Oregon border to San Diego County. They roost in tall bulrushes and tules, but will also roost in tall trees including conifers, oaks, and *Eucalyptus*. We would not expect to see the species on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
mountain quail (*Oreortyx pictus*)	This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The mountain quail has a wide distribution within all of the mountain ranges west of the deserts and of the northern interior of California. It inhabits montane chaparral and brushy vegetation within coniferous forests. This species may occur throughout a greater portion of suitable habitat within the MSHCP Plan Area, but no records exist in the MSHCP database. Suitable habitat is not present on-site, and the subject property is below this species' known geographic range. The mountain quail was not detected on-site.
Nashville warbler (*Oreothlypis ruficapilla*) Formerly *Vermivora ruficapilla*	This species has no formal federal or state governmental listing status	**Not Present (Low Migratory Occurrence Potential)**. This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The Nashville warbler likely breeds in the San Bernardino National Forest within the Plan Area. This species is widely distributed but uncommon during migration periods. This warbler uses a variety of habitats within montane regions for breeding, including chaparral, riparian, deciduous woodland and coniferous woodland, and occurs in a variety of habitats during migration in all regions including brush and scrub habitats, desert scrub and wooded areas. The subject property is outside of this species' known breeding range, although this species could utilize this site as a migratory stopover. Nashville warbler was not detected on the subject site.
osprey (*Pandion haliaetus*)	**SWL (Nesting)**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This species is an uncommon winter visitor along the coast of southern California. Breeding for this species is largely limited to northern California. This species is associated strictly with large, fish-bearing waters. Suitable habitat is not present on the subject property. This species does not nest on-site. It would not occur on-site.
double-crested cormorant (*Phalacrocorax auritus*)	**SWL (Nesting Colony)**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The double-crested cormorant is a communal nester and rookeries are located on rock ledges on cliffs, rugged slopes, and tall trees. Rookeries must be within five (5) to ten (10) miles of a dependable food source. No suitable rookery habitat is present on the subject property. This species does not occur on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
downy woodpecker (*Picoides pubescens*)	This species has not formal federal or state governmental listing status	**Low.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The downy woodpecker is sparsely distributed throughout the MSHCP Plan Area. This species utilizes riparian scrub, forest and woodland, and oak woodland and forest. Suitable support habitat is not present, and this woodpecker was not detected on the subject property.
white-faced ibis (*Plegadis chihi*)	**SWL (Nesting Colony)**	**Not Present (Low Foraging Potential)**. This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The white-faced ibis is sparsely distributed throughout the Riverside lowlands of the MSHCP Plan Area. It typically breeds in freshwater marshes. The species utilizes a wide variety of habitats for foraging during winter and transient visits including agricultural land, grassland, and areas at the edges of drainages. Suitable foraging habitat is present on-site, however this species would not be expected to nest on the subject property. The white-faced ibis has not been detected on the project site.
coastal California gnatcatcher (*Polioptila californica californica*)	**FT, SSC**	**Moderate**. This MSHCP-covered species occurs in southwest Riverside County; however, focused surveys are not specified in the MSHCP and were not conducted. The California gnatcatcher is a habitat specialist in that it requires sage scrub such as that present on-site. It is not difficult to detect during breeding season as it vigorously defends established habitat when present. This subspecies was not heard or seen on-site.
purple martin (*Progne subis*)	**SSC (Nesting) Second Priority**	**Not Present.** This MSHCP-covered species would not be expected to occur on-site. The property is not in a conservation cell and not designated for conservation. The purple martin has been recorded in very low numbers spread widely over the Plan Area. This species is typically associated with water, either within a drainage or open water body. Potential nesting habitat includes riparian and oak woodland, montane coniferous forests, and human structures with habitable crevices and openings, and appropriately-sized colonial bird nesting houses. Purple martin is susceptible to harassment from non-native sparrows and starlings, and rare enough that it would not be expected to nest on or near the subject property so close to an urban area. This species has not been detected on the project site.
yellow warbler (*Setophaga petechia*) Formerly known as *Dendroica petechia brewsteri*	**SSC (Nesting) Second Priority**	**Not Present**. This MSHCP-covered species occurs in riparian scrub and woodlands, which are absent on-site. This species breeds in southern California in the dense understory of riparian thickets. Yellow warbler populations have been severely impacted by brown-headed cowbird parasitism. This species has not been detected on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Williamson's sapsucker (*Sphyrapicus thyroideus*)	This species has no formal federal or state governmental listing status	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. This species has declined throughout its' range presumably from loss of large snags for nesting. Habitat includes montane coniferous forest dominated by lodge pole pines and firs, and oak woodlands and forests in the San Bernardino and San Jacinto Mountains. Suitable habitat is not present on-site, and the subject property is outside this species' known range. Williamson's sapsucker was not detected on the project site.
California spotted owl (*Strix occidentalis occidentalis*)	**SSC Second Priority**	**Not Present.** This MSHCP-covered subspecies can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. The California spotted owl has a sparse distribution within the Santa Ana Mountains, San Bernardino Mountains and the San Jacinto Mountains within the MSHCP Plan Area within montane coniferous forest and oak-deciduous woodlands and forests. Suitable habitat is not present on-site, and the subject property is outside this owl's known geographic range. This subspecies would not be expected to occur on the subject property.
tree swallow (*Tachycineta bicolor*)	This species has no formal federal or state governmental listing status	**Moderate.** This MSHCP-covered species was not detected on-site, and the property is not in a conservation cell and not designated for conservation. The tree swallow is widely but sparsely distributed throughout the MSHCP Plan Area. Habitat characteristics include open water for foraging and riparian scrub and water-associated woodland and forest for nesting. This species could forage on-site but would not expect to nest.
least Bell's vireo (*Vireo bellii pusillus*)	**FE, SE**	**Not Present**. The property was determined to be unsuitable for this species in the Habitat Suitability Assessment and no focused surveys were conducted. This riparian-obligate subspecies generally requires less-disturbed areas of dense willow-associated riparian habitat and prefers areas with standing water. Suitable riparian habitat is not present on the subject property. This subspecies does not occur on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
MAMMALS		
coyote (*Canis latrans*)	This species has no formal federal or state governmental listing status	**Present.** This MSHCP-covered species has been detected on-site, but the property is not in a conservation cell and not designated for conservation. The coyote is common and widespread throughout the Plan Area. It occurs in all areas of the Plan Area except the most highly urbanized areas. This species is highly tolerant of human activity and coexists well with humans unless trapped, hunted or otherwise harassed (e.g., disturbance of breeding dens).
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	**SSC**	**Low.** This MSHCP-covered species could occur on-site, but the degraded nature of the grassland and sage scrub on-site due to non-native grass and herb invasion may preclude it from being on the property. The northwestern San Diego pocket mouse occurs in sandy, herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and in sagebrush. The CNDDB reports several nearby detections at the San Jacinto Wildlife Refuge, along the Ramona Expressway near the San Jacinto River, and just east of Lake Perris. Marginally suitable habitat is present on-site, although this subspecies has not been detected on the subject property.
Earthquake Merriam's kangaroo rat (*Dipodomys merriami collinus*) Formerly known as the Aguanga kangaroo rat	**SSA**	**Not Present.** The MSHCP does not require focused surveys for this subspecies in this area because it has no potential to occur on-site. The Earthquake Merriam's kangaroo rat has a narrow distribution within western Riverside County, with known localities in Temecula Creek in the Aguanga area and Wilson Creek in the Sage area. It is typically found in Riversidean alluvial fan sage scrub, but may occur in Riversidean sage scrub, chaparral and grassland in uplands and tributaries near Riversidean alluvial fan sage scrub habitats. Suitable habitat is not present on-site; therefore this subspecies would not be expected to occur on the subject property.
San Bernardino kangaroo rat (*Dipodomys merriami parvus*)	**FE, SSC**	**Not Present.** The MSHCP does not require focused surveys for this subspecies in this area because it has no potential to occur on-site. The San Bernardino kangaroo rat has a narrow distribution within western Riverside County, being primarily restricted to 1) the San Jacinto River from around Highway 79 (Lamb Canyon Road/Sanderson Avenue) and 2) Bautista Creek from around Bautista Dam to the north and the Hixon Flat trailhead to the south. This kangaroo rat primarily utilizes Riversidean alluvial fan sage scrub, but can also frequent nearby Riversidean upland sage scrub, chaparral and grassland in uplands and tributaries. Suitable habitat is not present on-site; therefore, this subspecies would not be expected to occur on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
Dulzura kangaroo rat (*Dipodomys simulans*)	**SSA**	**High.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The Dulzura kangaroo rat occurs throughout western Riverside County in coastal sage scrub (including upland sage scrub and alluvial fan sage scrub), sage scrub/grassland ecotones, chaparral, and desert scrubs up to 2,600 feet in elevation. This species is considered fairly common in suitable habitat. Suitable habitat is present on-site, although this kangaroo rat burrows are present.
Stephens' kangaroo rat (*Dipodomys stephensi*)	**FE, ST**	**High.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The Stephens' kangaroo rat occurs primarily in annual and perennial grasslands, but also occurs in open coastal sage scrub. Preferred habitat species include buckwheat (*Eriogonum* sp.), chamise (*Adenostoma fasciculatum*), brome and filaree (*Erodium* sp.). This kangaroo rat will also burrow into firm soil. According to the CNDDB, this species has been detected a number of times within the area; around Lake Perris around the City of Perris and in the types of soils that occur on-site or nearby like the Cieneba and Hanford sandy loams. Suitable habitat is present on-site, and burrows typical of kangaroo rats are present.
San Bernardino flying squirrel (*Glaucomys oregonensis californicus*) Formerly *Glaucomys sabrinus californicus*	**SSC**	**Not Present.** This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not specified in the MSHCP and are not required for the subject property. Habitat for the San Bernardino flying squirrel in the Plan Area only occurs in the San Jacinto Mountains. This squirrel would therefore not occur on the subject property.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	**SSC Addition to List**	**Present.** This MSHCP-covered species occurs on-site, but the property is not in a conservation cell and not designated for conservation. This subspecies of black-tailed jackrabbit occurs in intermediate canopy stages of shrub habitats and open shrub/herbaceous and tree/herbaceous edges in southern California coastal sage scrub habitats and agricultural lands. The black-tailed jackrabbit is common throughout the state; however, habitat loss and fragmentation in southern California has caused declines. This notwithstanding, all subspecies in California are legally hunted and seasons are open year-round with no limit of take. San Diego black-tailed jackrabbit was observed on the subject property.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
bobcat (*Lynx rufus*)	This species has no formal federal or state governmental listing status	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The bobcat is widespread throughout the Plan Area. This species requires large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources. Suitable habitat is present on-site, although the bobcat was not detected on the subject property.
long-tailed weasel (*Mustela frenata*)	This species has no formal federal or state governmental listing status	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The long-tailed weasel occurs throughout the Plan Area in virtually all types of habitat, including agricultural and disturbed areas. It may occur wherever there is sufficient prey. Suitable habitat is present on-site, although this species was not detected on the subject property.
San Diego desert woodrat (*Neotoma lepida intermedia*)	**SSC Addition to List**	**High.** This MSHCP-covered species probably occurs on-site, but the property is not in a conservation cell and not designated for conservation. This subspecies is rather widely distributed throughout southern California in sage scrub, chaparral and desert regions. It prefers rocky areas, nesting in cracks and crevices. Highly suitable habitat is present, although the San Diego desert woodrat was not confirmed on-site.
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	**SSC Highest Priority**	**Low**. This MSHCP-covered species can occur in southwest Riverside County; however, focused surveys are not required for the subject property. Pocket mice are the smallest members of the family Heteromyidae. Los Angeles pocket mouse is generally believed to occur on open ground with fine, sandy soils in low elevation grasslands and sage scrub. This subspecies may not dig extensive burrows, and prefers hiding under weeds and dead leaves instead. Marginally suitable habitat is present on-site, although trapping was not conducted for this subspecies on the subject property.
mountain lion (*Puma concolor*)	This species has no formal federal or state governmental listing status	**Not Present**. This MSHCP-covered species occurs in more remote areas of southwest Riverside County. The mountain lion is known from the Santa Ana Mountains, San Bernardino Mountains, San Jacinto Mountains, Santa Rosa Mountains, and brushy foothills and riparian areas that may serve as habitat connections between mountainous areas. It has also been seen in lowland areas including Lake Mathews-Estelle Mountain, Lake Skinner-Diamond Valley Lake, the Badlands and the San Jacinto Wildlife Area. This species requires large expanses of relatively undisturbed brushy and rocky habitats where its main prey – mule deer – also occurs. Suitable habitat is present, but mule deer and the mountain lion are not known to occur in the vicinity of the project site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
brush rabbit (*Sylvilagus bachmani*)	This species has no formal federal or state governmental listing status	**Moderate.** This MSHCP-covered species could occur on-site, but the property is not in a conservation cell and not designated for conservation. The brush rabbit occurs throughout the Plan Area. Suitable habitat includes chaparral, coastal sage scrub, riparian and woodland habitats, coniferous forest, and agricultural areas (grove/orchard and field crops). This species occurs at all elevations up to 6,000 feet. Suitable habitat is present on-site, although the brush rabbit was not detected on the subject property.

7.0 MSHCP PROJECT IMPACTS AND RECOMMENDED MITIGATION MEASURES

MSHCP PROJECT IMPACTS

Project-associated impacts within the MSHCP-Plan Area are typically offset and mitigated via a number of processes. When projects are within conservation cells (the subject property is not within a Cell), various combinations of fee-payment, land dedication/purchase, and other mechanisms as applicable can be utilized to offset impacts to sensitive species and habitats of all types. The subject project will be subject to MSHCP fee payment, which can fund acquisition and management of lands that are similar to those found within the project site, including grassland and upland scrub community conservation lands.

The proposed project would result in impacts that include direct effects to MSHCP-covered plant and animal species. These impacts, however, are what the Plan foresaw and seeks to adequately offset through fee payment. With the implementation of the mitigation measures described below, none of these effects are considered to be significant.

The project includes two areas of sage scrub covered rock outcrops that would be conserved with project implementation. The conservation of these two areas, Lots C and D, comprise a total of 11.07 acres, or approximately 21% of the subject site. This eleven-acre set-aside is a generous dedication which conserves sage scrub habitat and key visual elements of the site, and partially off-sets the conversion of 42.1 acres of habitat into residential properties. Certain organisms are likely to persist, such as common lizards and snakes and birds, but some animals which are cut off from adjoining habitats (described below) are likely to eventually not occur, especially on the larger of the two conserved lots which will lose connectivity to similar habitat to the west. It must be made clear, however, that MSHCP fee payment is intended to adequately offset these negative consequences of development. Significant critical lands in western Riverside County are being conserved and managed in an effort to maintain habitat for all of the species covered under the MSHCP. One additional benefit of the 11.07 acre conserved lots is the conservation and education value they will have to area residents, particularly children, who will explore these areas and learn appreciate the importance of conservation as responsible citizens.

RECOMMENDED MITIGATION MEASURES

1. Prior to the commencement of grading activities, the developer of the site shall make the appropriate mitigation fee payment into the MSHCP Stephens' kangaroo rat fee payment program for conservation of Stephens' kangaroo rat-occupied habitats in order to offset the loss of potentially suitable Stephens' kangaroo rat habitat on-site through project implementation.

2. Prior to the commencement of grading activities, the developer of the site shall make the appropriate MSHCP mitigation fee payment that will contribute to conservation and management of conservation land for MSHCP-covered organisms.

3. Prior to vegetation clearance, the Project applicant shall retain a qualified biologist to conduct a pre-construction nesting bird survey in accordance with the following:

    a) The survey shall be conducted no more than three (3) days prior to the initiation of clearance/construction work;

    b) If pre-construction surveys indicate that bird nests are not present or are inactive, or if potential habitat is unoccupied, no further mitigation is required;

    c) If active nests of birds are found during the surveys, a species-specific no-disturbance buffer zone shall be established by a qualified biologist around active nests until a qualified biologist determines that all young have fledged (i.e., no longer reliant upon the nest).

    d) It is recommended that close coordination between the developer of the site, the City of Perris, the project engineer, and the consulting qualified biologist to consider vegetation clearance outside of the normal bird nesting season (March 1 – Sept 15) to avoid impacts to nesting birds which would potentially violate the federal Migratory Bird Treaty Act. Removal of vegetation necessitates installation of appropriate Storm Water Pollution Prevention Plan “SWPPP” measures if grading is not undertaken immediately, therefore careful timing of the project schedule and implementation measures is critical to avoid costly delays or regulatory complications.

4. The Project applicant shall retain a qualified biologist to conduct a 30 day pre-construction survey for BUOW. The results of the survey would be submitted to the City prior to obtaining a grading permit. If BUOW are not detected during the pre-construction survey, no further mitigation is required. If BUOW are detected during the pre-construction survey, the Project applicant and the consulting biologist will be required to prepare and submit for approval a BUOW-relocation program.

5. In accordance with MSHCP provisions limiting the use of exotic and invasive plant species, the Project's landscape plan would exclude invasive species such as, but not limited to crimson fountain

grass (*Pennisetum setaceum*), pampas grass (*Cortaderia selloana*), giant reed (*Arundo donax*), tree of heaven (*Ailanthus altissima*), and other ornamental landscape elements that have to potential to spread into adjoining or nearby habitat areas..

6. The Project applicant would implement dust control and all other project-specific Storm Water Pollution Prevention Plan ("SWPPP") measures during grading and construction.

7. Prior to the initiation of vegetation clearance and grading activities, the conserved lots C and D shall be fenced temporarily with orange construction fencing to avoid any accidental incursions by equipment operators or site workers into the conserved open space lots C and D.

8. All grading and construction contractors shall receive copies of all mitigation measures required to reduce impacts to biological resources. Additionally, verbal instruction shall be provided by the Project biologist to all site workers to ensure clear understanding that biological resources are to be protected on the subject property in accordance with the mitigation measures. A brochure depicting the regulatory status biological resources on-site shall be provided to all grading and construction contractors.

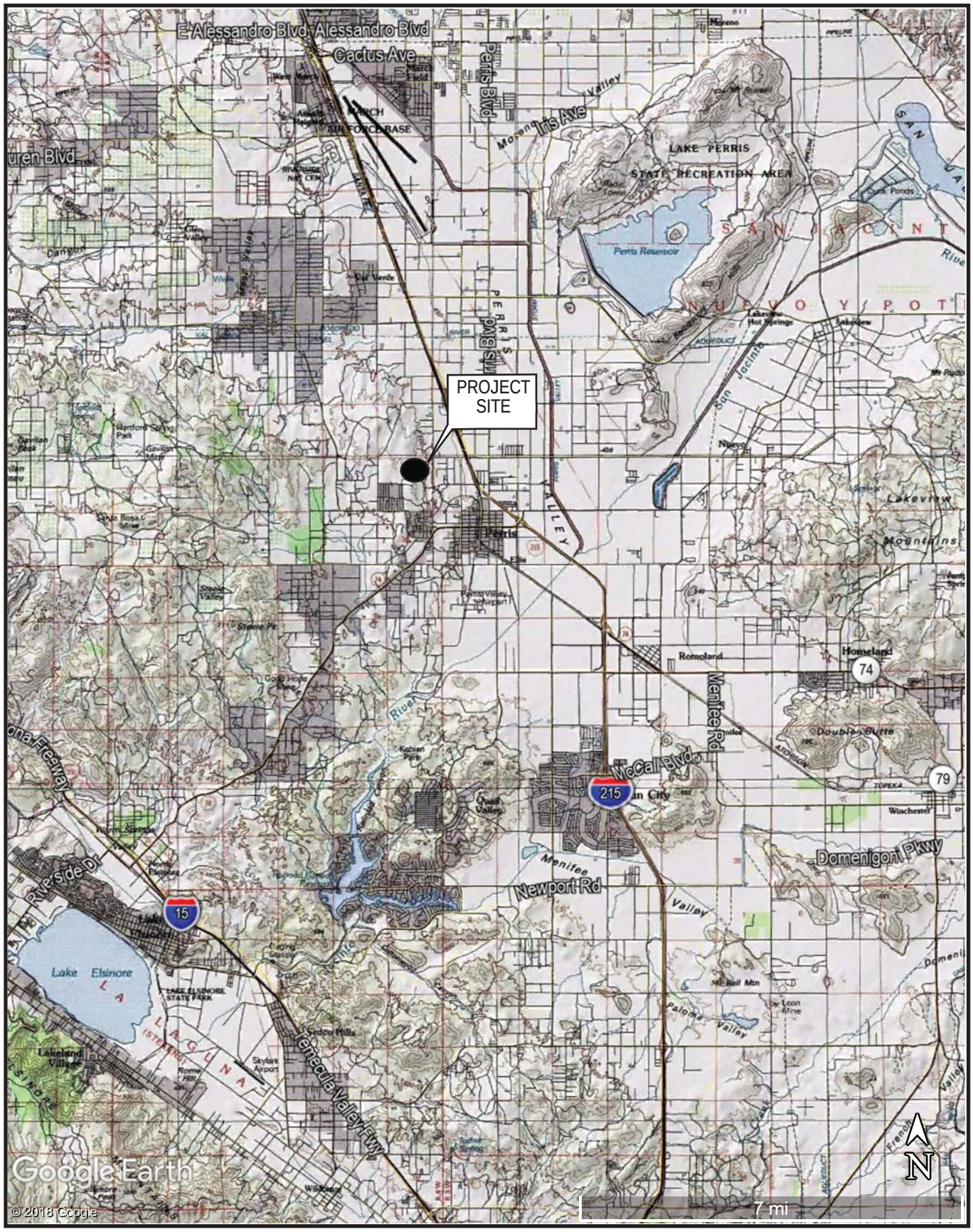
LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the proposed mitigation measures described above would reduce all the impacts to the biological resources discussed in this biological assessment to a level considered not significant.

CERTIFICATION: I hereby certify that the statements and exhibits contained in this report present data and information required for this General Biological Assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

30 September 2019

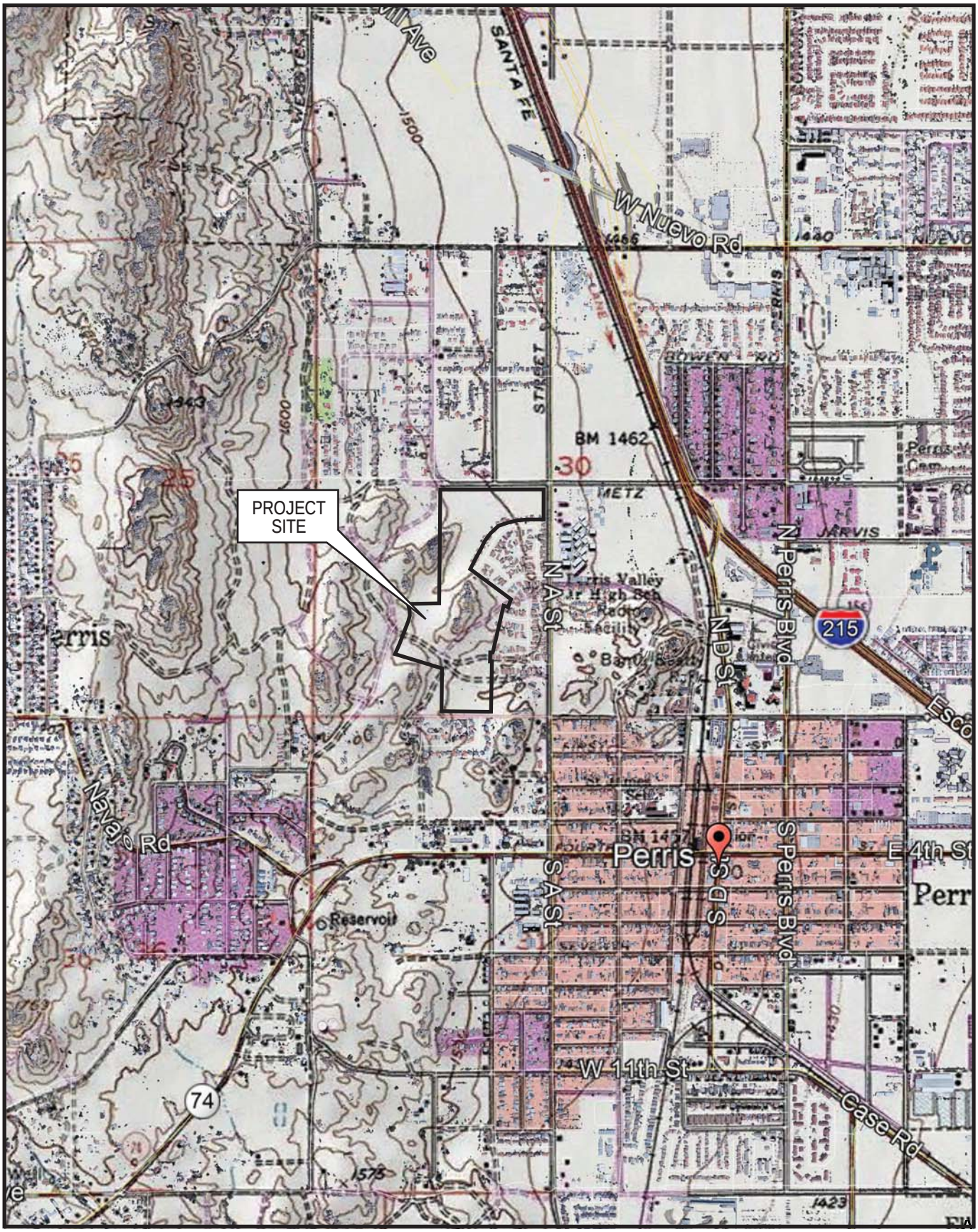
Samuel Reed, Principal, Scientific Collecting Permit No. 002267 — Date
USFWS Recovery Permit No. TE839896-6



TERACOR RESOURCE MANAGEMENT

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019
SOURCE: GOOGLE EARTH POINT TOPO

Exhibit 1
Regional Location Map



TERACOR RESOURCE MANAGEMENT

TN 13½°

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019
SOURCE: PERRIS, CALIFORNIA QUADRANGLE

0 5 1 MILE

North

Exhibit 2
USGS Topographic Map

TERACOR RESOURCE MANAGEMENT

North

ABA BUILDERS - PERRIS
SEPTEMBER 2019
SOURCE: USDA NRCS Web Soil Survey

0 1/2
Mile

Exhibit 3
Soil Survey Map

TERACOR RESOURCE MANAGEMENT

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019
SOURCE: GOOGLE EARTH PRO

Exhibit 4
Aerial Photograph 2018

- Property Configuration

LEGEND

Vegetation Alliance	Acres
AG - Annual Grassland/Wildflower Field Alliance	22.9
BB/BW - Brittlebush/Buckwheat Alliance	29.8
E - Elderberry Alliance	0.2
M - Mulefat Alliance	0.05
O - Ornamental Trees	0.15
W - Red Willow Alliance	0.05
TOTAL	53.15

TERACOR RESOURCE MANAGEMENT

North

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019

Exhibit 5
Vegetation Communities - 2018 Aerial Photograph

Photo 1 - This early-April photo depicts the different landscapes on the site; rugged outcrops blanketed with sage scrub interspersed with grasslands and wildflower fields between topographic rises.

Photo 2 - North-facing photo of an ecotone comprised of grasslands with wildflower fields and sage scrub on and surrounding granite outcrops.

Photo 3 - This east-facing view was taken from the outcrop in the center of the project area. It shows sage scrub in bloom as well as invasion by the non-native stinknet weed.

Photo 4 - The north section of property (facing west) is shown. The hills in the background are not part of the project site. The green plant seen in the foreground is native vinegar weed, but the brown mat of dead vegetation is mostly the non-native “stinknet”.

Photo 5 - The highest point of “Lot D”, which will be conserved, is shown after a small brush fire in Summer 2019.

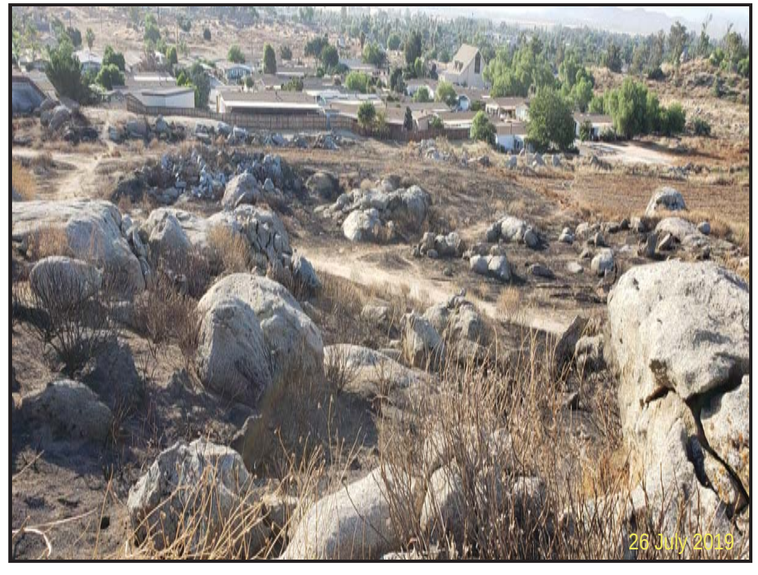


Photo 6 - In Summer 2019 a fire occurred on-site in the natural open space “Lot D”. Fire at infrequent intervals is usually considered beneficial for natural areas.

Photo date: 2018

LEGEND

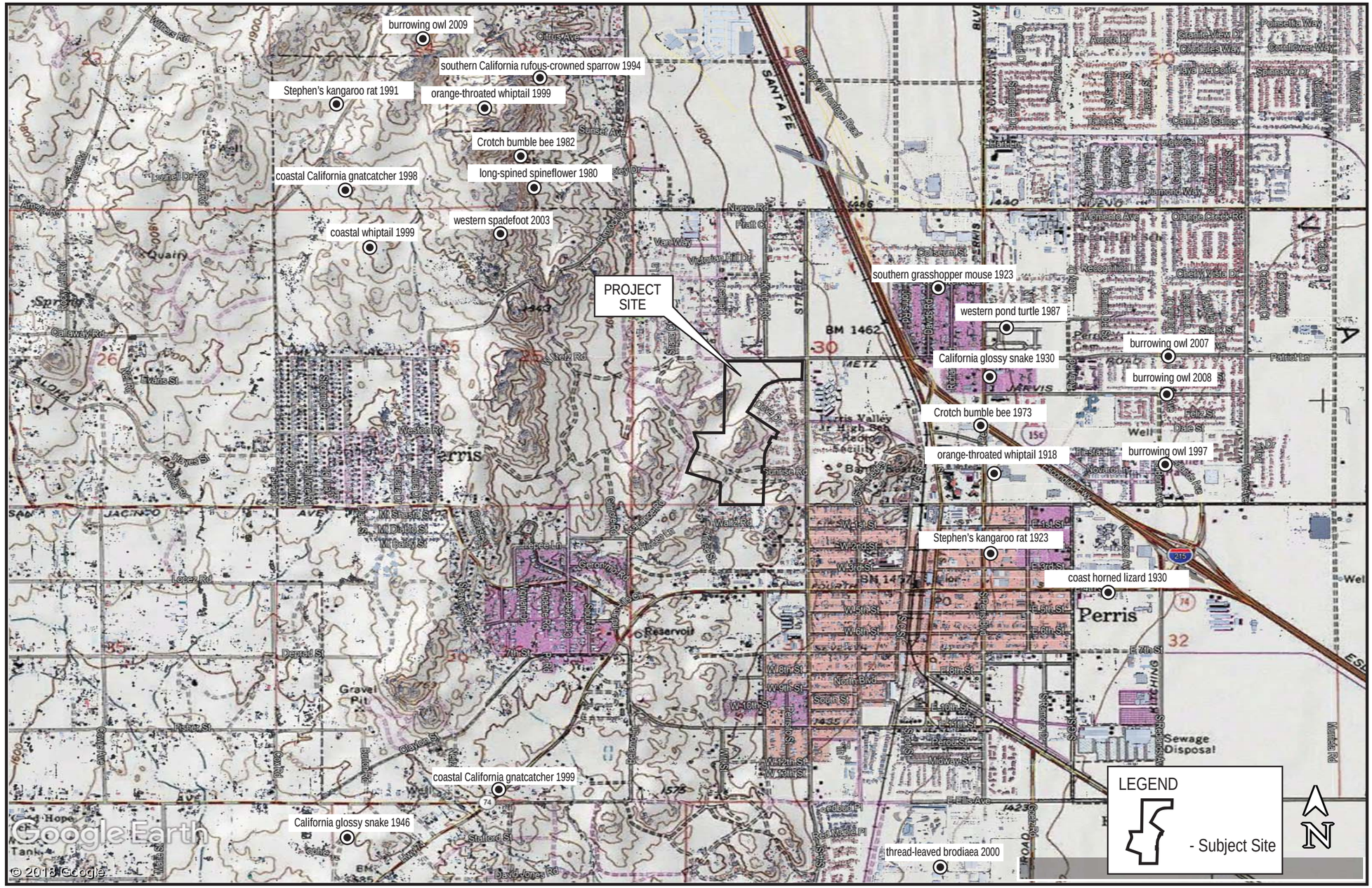
Subject Site -

TERACOR RESOURCE MANAGEMENT

North

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019

Exhibit 7
Biogeographic Aerial



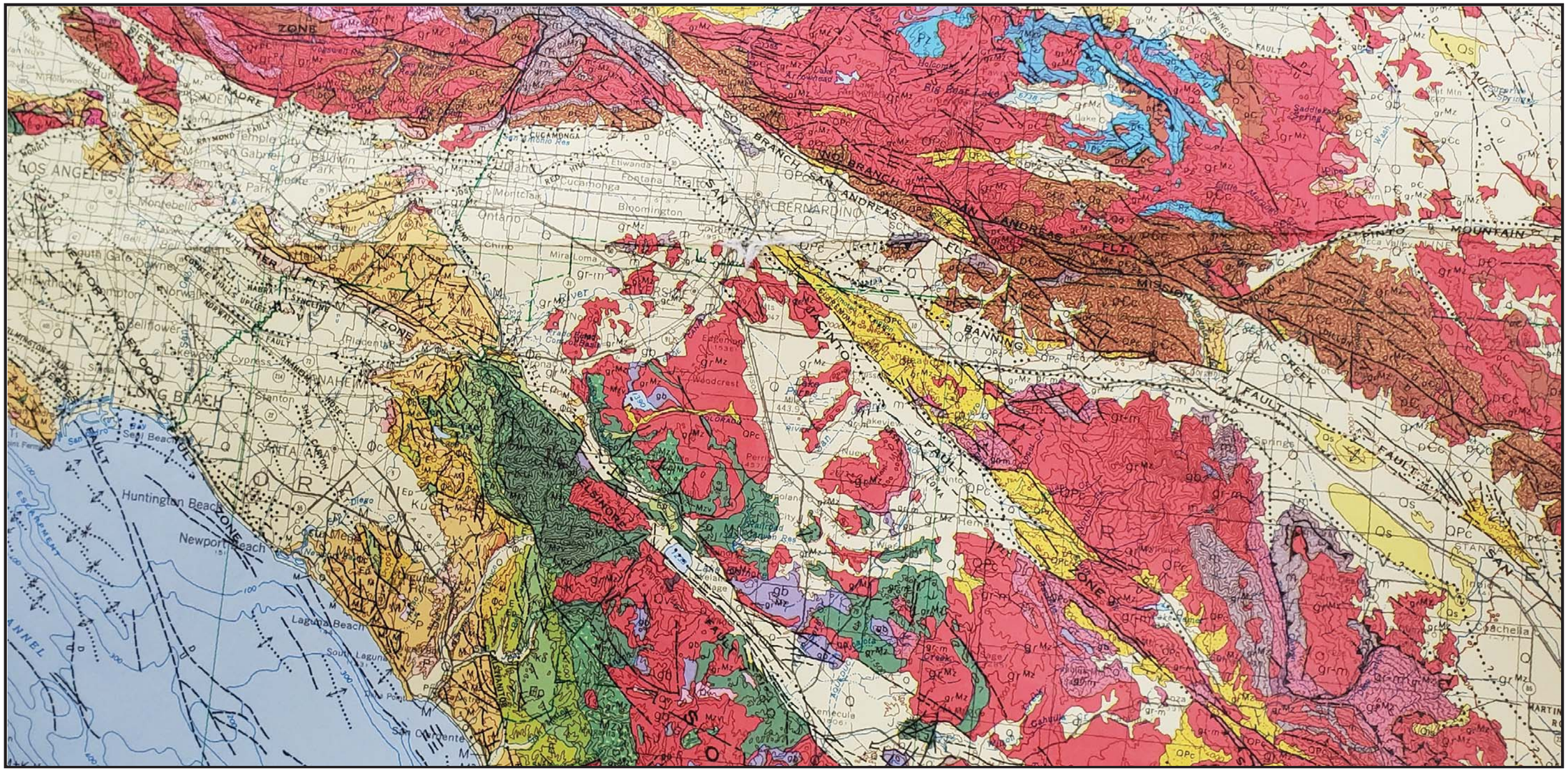
TERACOR RESOURCE MANAGEMENT

North

ABA BUILDERS - PERRIS
REPORT DATE: SEPTEMBER 2019

0 .5 1 MILE

Exhibit 8
CNDDB Occurrences



Q - Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarice, but includes marine deposits near the coast.

Mzv - undivided Mesozoic volcanic and metavolcanic rocks. Addesite and rhyolite flow rocks, greenstone, volcanic breccia and other pyroclastic rocks; of Franciscan Complex: basaltic pillow lava, diabase, greenstone, and minor pyroclastic rocks.

grMz - Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite.

TERACOR RESOURCE MANAGEMENT

North

ABA BUILDERS - PERRIS
Source: Geologic Map of California, California Department of Resources, 1977
0 .5 1 MILE

Exhibit 9
Regional Geologic Map of California

RESIDENTIAL LOT SUMMARY

Lot Number	Gross SF	Usable Pad SF	Lot Number	Gross SF	Usable Pad SF	Lot Number	Gross SF	Usable Pad SF
1	10,815	9,724	51	7,049	6,706	101	7,954	5,662
2	10,340	9,678	52	7,052	6,572	102	6,700	5,558
3	10,027	9,433	53	6,500	6,000	103	6,700	6,419
4	9,413	8,838	54	6,582	6,068	104	6,712	6,430
5	9,027	8,475	55	6,644	6,644	105	8,855	7,081
6	9,000	8,435	56	6,425	6,020	106	8,172	7,119
7	8,884	8,325	57	12,657	10,653	107	8,100	6,689
8	9,840	9,261	58	6,399	5,285	108	7,866	6,465
9	7,254	6,570	59	14,122	9,298	109	8,329	6,623
10	7,208	6,489	60	10,333	7,516	110	9,581	7,114
11	8,545	7,752	61	8,685	6,650	111	7,947	7,450
12	9,513	8,219	62	7,333	5,689	112	8,313	7,704
13	8,448	7,626	63	7,383	7,300	113	7,565	6,472
14	8,048	7,131	64	6,538	6,538	114	7,442	5,942
15	11,106	8,887	65	6,548	6,348	115	7,078	4,947
16	10,770	10,770	66	6,836	6,296	116	7,397	5,292
17	10,400	8,914	67	7,500	6,980	117	8,472	5,390
18	8,295	6,498	68	6,730	6,190	118	8,568	5,220
19	7,807	5,979	69	11,587	10,057	119	7,364	5,059
20	7,687	5,682	70	11,058	9,974	120	9,122	6,436
21	6,524	4,875	71	9,451	8,137	121	8,082	6,329
22	6,524	4,851	72	9,297	6,756	122	9,961	8,388
23	6,532	4,862	73	8,696	5,836	123	11,144	9,076
24	6,626	4,883	74	7,263	5,586	124	7,360	6,799
25	6,626	4,963	75	6,834	5,265	125	9,524	8,124
26	7,129	5,433	76	19,246	10,854	126	7,637	7,275
27	14,367	10,522	77	17,298	11,869	127	7,050	6,453
28	11,674	9,771	78	9,172	9,172	128	6,420	5,208
29	11,105	9,068	79	7,112	7,112	129	6,591	5,744
30	14,747	7,897	80	8,176	7,292	130	7,535	7,535
31	8,078	6,501	81	7,140	6,754	131	6,905	6,905
32	7,609	6,165	82	9,478	8,642	132	11,630	9,702
33	11,466	7,348	83	7,485	7,282	133	13,811	11,551
34	9,307	7,454	84	6,538	6,538	134	7,649	7,165
35	9,762	8,339	85	6,249	6,249	135	8,137	7,564
36	8,822	7,917	86	8,906	8,782	136	11,775	10,761
37	8,213	8,213	87	13,195	9,300	137	7,606	7,103
38	8,166	6,065	88	12,654	9,333	138	13,531	11,620
39	8,274	6,518	89	9,627	8,288	139	7,967	6,964
40	8,681	5,878	90	7,739	6,419	140	6,198	5,496
41	7,104	5,846	91	7,919	6,339	141	6,094	5,064
42	7,126	5,918	92	7,920	6,187	142	6,094	5,063
43	7,104	6,025	93	7,920	6,191	143	6,043	4,966
44	6,709	6,287	94	7,995	6,274	144	6,549	5,476
45	11,378	7,763	95	6,452	6,280	145	7,736	7,709
46	10,756	6,940	96	6,000	6,000			
47	7,379	6,645	97	6,000	6,000			
48	6,656	5,750	98	6,000	6,000			
49	6,484	5,698	99	6,200	5,980			
50	6,464	5,807	100	6,996	6,417			

Total Gross SF	996,991	SF	22.9	AC
Total Usable Pad SF	830,181	SF	19.1	AC
Average Gross SF	6,872	SF		
Average Usable Pad SF	5,725	SF		

OPEN SPACE LOT SUMMARY

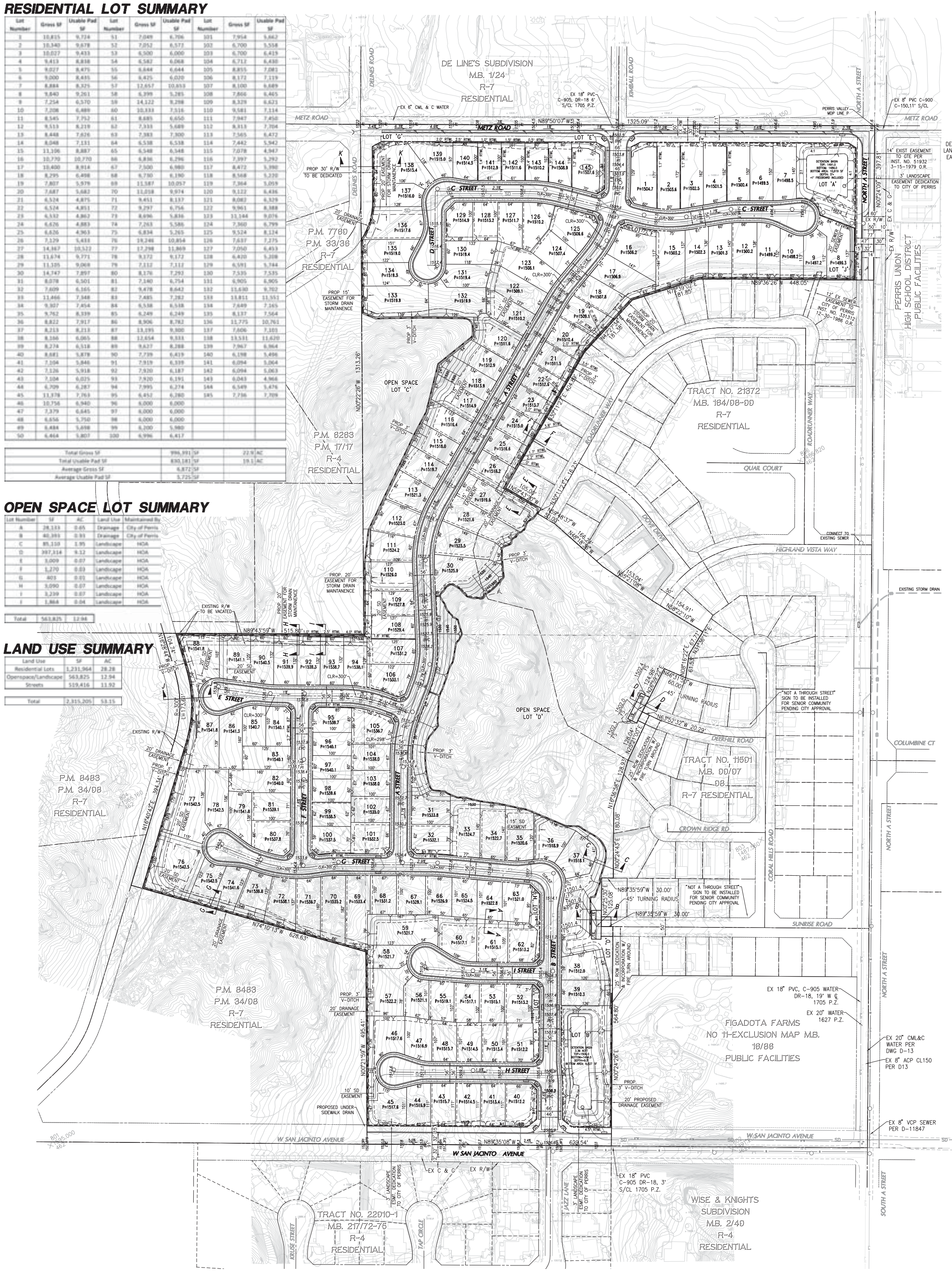
Lot Number	SF	AC	Land Use	Maintained By
A	28,133	0.65	Drainage	City of Perris
B	40,393	0.93	Drainage	City of Perris
C	85,110	1.95	Landscape	HOA
D	397,314	9.12	Landscape	HOA
E	3,009	0.07	Landscape	HOA
F	1,270	0.03	Landscape	HOA
G	403	0.01	Landscape	HOA
H	3,090	0.07	Landscape	HOA
I	3,239	0.07	Landscape	HOA
J	1,864	0.04	Landscape	HOA

Total	563,825	12.94

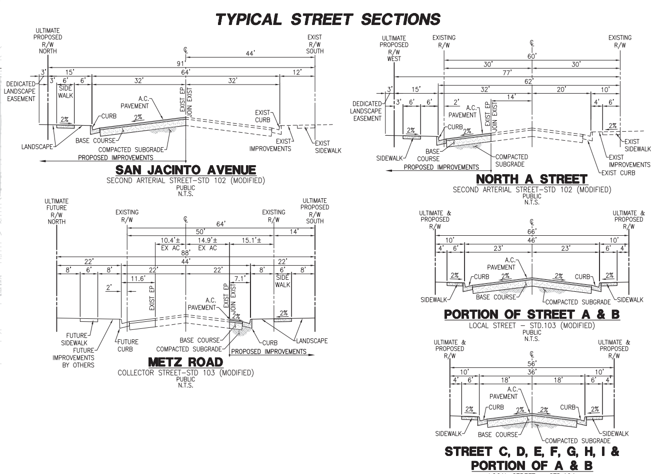
LAND USE SUMMARY

Land Use	SF	AC
Residential Lots	1,231,964	28.28
Openspace/Landscape	563,825	12.94
Streets	519,416	11.92

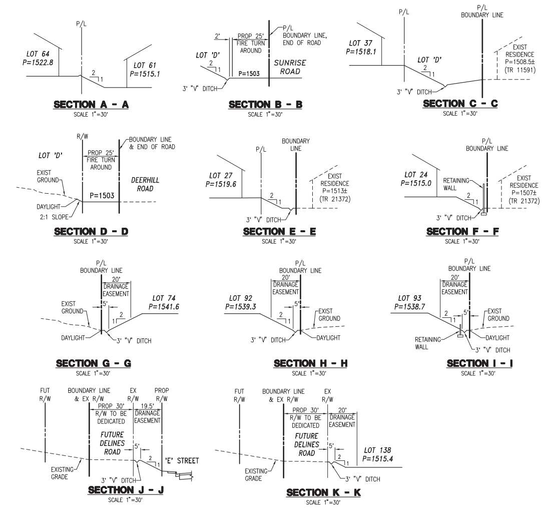
Total	2,315,205	53.15



TYPICAL STREET SECTIONS



CROSS SECTIONS



ENGINEER/REPRESENTATIVE:

HUNSAKER & ASSOCIATES IRVINE, INC
INLAND EMPIRE DIVISION
ATTN: BRAD HAY
2900 ADAMS STREET, STE A-15
RIVERSIDE, CA 92504
PH. (951) 352-7200
FAX: (951) 352-8269

LEGAL DESCRIPTION:

REAL PROPERTY IN THE CITY OF PERRIS, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, DESCRIBES AS FOLLOWS:

PARCEL A: THAT PORTION OF THE EAST ONE-HALF OF THE SOUTHWEST ONE-QUATER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN.

PARCEL B; THAT PORTION OF THE EAST ONE-HALF OF THE SOUTHWEST ONE-QUATER OF SECTION 30, TOWNSHIP 4 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN.

AS MODIFIED BY LOT LINE ADJUSTMENT NO. 08-90 RECORDED JANUARY 30, 1991 AS INSTRUMENT NO. 91-34131 OF OFFICIAL RECORDS.

GENERAL NOTES:

1. ASSESSOR'S PARCEL NO. (APN): 311-080-033, 035, 311-090-009, 016, 020
2. MAP SCALE: 1" = 100'
3. MAP PREPARATION DATE: 8/20/19
4. TENTATIVE TRACT MAP NO. 37803
5. APPROXIMATE AREA: GROSS = +/- 53.15 ACRES
   NET = +/- 50.82 ACRES
6. THOMAS GUIDE: RIVERSIDE COUNTY (2004 ED.) PG. 807, F-1, F-2
7. TOPOGRAPHY SOURCE: INLAND AERIAL SURVEYS, INC., FLOWN: 10/18/2018
8. NUMBER OF LOTS: 145 SINGLE FAMILY RESIDENTIAL, 8 OPEN SPACE LOTS, 2 DRAINAGE LOTS
   DENSITY: 2.4 DU/AC
9. NO PHASING IS PROPOSED.
10. SEWER IS INTENDED FOR THIS SITE.
11. THERE ARE NO EXISTING BUILDINGS ON THIS SITE.
12. NO EXISTING OR PROPOSED PUBLIC UTILITY EASEMENTS, TRANSMISSION LINES, POWER OR TELEPHONE POLES OR UNDERGROUND UTILITIES ARE KNOWN TO EXIST ON OR ABUTTING THE PROPERTY, EXCEPT AS SHOWN HEREON.
13. ALL STREETS WITHIN DEVELOPMENT TO BE DEDICATED PUBLIC STREETS.
14. LOT A & B TO BE DRAINAGE LOTS
15. OPEN SPACE LOT C, D, E, F, G, H, & I TO BE DEDICATED AS OPEN SPACE
16. ALL PROPOSED DEVELOPMENT TO COMPLY WITH THE R-7 ZONING STANDARDS (PERRIS M.C. SEC. 19.25)
17. LENGTH OF "C" (EAST) STREET CUL-DE-SAC IS 441'
18. LENGTH OF "C" (WEST)-"D" STREET CUL-DE-SAC IS 659'
19. LENGTH OF "E" STREET CUL-DE-SAC IS 217'
20. LENGTH OF "G" STREET CUL-DE-SAC IS 215'
21. LENGTH OF "H" STREET CUL-DE-SAC IS 402'
22. LENGTH OF "I" STREET CUL-DE-SAC IS 325'
23. V-DITCHES & SLOPES TO BE MAINTAINED BY HOMEWONER AS DETAILED IN CROSS SECTIONS G-G & H-H
24. FIRE HYDRANTS ARE PLACED 330 FEET ON CENTER WITH NO LOT FURTHER THAN 165 FEET. PERIMETER FIRE HYDRANTS ARE SPACED 660 FEET ON CENTER. EACH INTERSECTION HAS 1 FIRE HYDRANT.

ZONING AND LAND USE SUMMARY:

DESCRIPTION	ON-SITE	NORTH	SOUTH	EAST	WEST
EXISTING ZONING	R-7	R-7	R-4	R-7, P/PF	R-7, R-4
PROPOSED ZONING	N/A	N/A	N/A	N/A	N/A
EXISTING LAND USE	VACANT	SFR/VACANT	SFR/VACANT	SFR/PUBLIC FACILITIES	VACANT
PROPOSED LAND USE	SINGLE FAMILY RESIDENTIAL	N/A	N/A	N/A	N/A

PUBLIC UTILITIES/SERVICES:

SCHOOL DISTRICT
PERRIS UNION HIGH SCHOOL DISTRICT
155 E. 4TH STREET
PERRIS, CA 92570
(951) 943-6369

WATER
CITY OF PERRIS
101 NORTH D STREET
PERRIS, CA 92570
(951) 657-3280

SEWER
CITY OF PERRIS
101 NORTH D STREET
PERRIS, CA 92570
(951) 657-3280

CABLE
SPECTRUM CABLE
1820 N. PERRIS BLVD., STE 15
PERRIS, CA 92571
(951) 423-2166

ELECTRIC
SOUTHERN CALIFORNIA EDISON
P.O. BOX 6400
RANCHO CUCAMONGA, CA 91729
(800) 655-4555

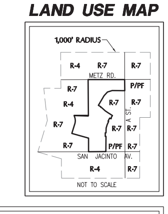
GAS
SOUTHERN CALIFORNIA GAS COMPANY
P.O. BOX 3150
SAN DIMAS, CA 91773
(800) 427-2200

TELEPHONE
VERIZON
P.O. BOX 30001
INGLEWOOD, CA 90313
(800) 483-5000

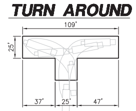
LEGEND

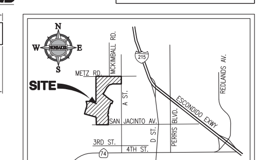
- PROPOSED SEWER MANHOLE
- PROPOSED STORM DRAIN HEADWALL
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN CATCH BASIN
- EXISTING FENCE
- UTILITY POLE
- LIGHT POST
- EXISTING STRUCTURE

LAND USE MAP



STANDARD FIRE TURN AROUND





VICINITY MAP
NOT TO SCALE

OWNER:

UCI PROPERTY DEVELOPMENT, INC.
17700 CASTLETON STREET, #128
CITY OF INDUSTRY, CA 91706
(626) 757-1605

APPLICANT:

ABA BUILDERS, INC.
32823 TEMECULA PARKWAY
TEMECULA, CA 92592
(951) 491-6035

PREPARED BY:

H&A
HUNSAKER & ASSOCIATES IRVINE, INC.
INLAND EMPIRE REGION
PLANNING • ENGINEERING • SURVEYING
2900 ADAMS STREET, SUITE A-15
RIVERSIDE, CA 92590 • PH: (951)352-7200

NOTE:

GROSS AREA..........................53.15AC±
CONTOUR INTERVAL................5'
TOTAL RESIDENTIAL LOTS.........143

EARTHWORK QUANTITIES

CUT=...................... 946,211
C.Y. FILL=...................... 946,211
C.Y. BALANCE=...................... 0 C.Y.

REGISTERED PROFESSIONAL ENGINEER DANIELLE SAUCEDO FREGOSO NO. 65501 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:

DANIELLE SAUCEDO FREGOSO
R.C.E. 65501

N S E W — HUNSAKER

0 50 100 200

DATE	REVISION	BY

DESIGNED BY: J.S.
DRAFTED BY: J.S.
PROCESSED BY: B.H.

DATE: 8/20/19

TENTATIVE TRACT MAP NO. 37803

CITY OF PERRIS, CA

W.O. 4315-1

PLOTTED BY: Jake Smith DATE: Aug. 21, 2019 10:58:32 AM FILE: \\rs3\Projects\00648\Planning\Maps\TTM-37803.dwg

APPENDIX A
FLORAL COMPENDIUM

VEGETATION LIST

The species listed below were detected within the subject property during the 16 April 2018 field survey and over the past twelve (12) years. Field identifications are a composite list prepared by TERACOR personnel and M. Long, Biologist. Scientific names follow *The Jepson Manual, Vascular Plants of California - Second Edition*, 2012, and have been updated following the Jepson Online Interchange for California Floristics database (2014). Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Adoxaceae	**Muskroot Family**
Sambucus nigra ssp. *caerulea*	blue elderberry
Amaranthaceae	**Amaranth Family**
*Amaranthus albus**	tumbleweed
Anacardiaceae	**Sumac Family**
*Schinus molle**	pepper tree
Arecaceae	**Palm Family**
*Washingtonia robusta**	Mexican fan palm
Asteraceae	**Sunflower Family**
Ambrosia acanthicarpa	Annual bur-sage
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Baccharis salicifolia ssp. *salicifolia*	mule fat
*Carthamus tinctorius**	safflower
Centaurea benedicta	blessed thistle
Corethrogyne filaginifolia	common sandaster
Deinandra fasciculata	fascicled tarplant
Deinandra paniculata	paniculate tarplant
Encelia farinose	brittle bush
Erigeron canadensis	horseweed
Helianthus annuus	common sunflower
Heterotheca grandiflora	Telegraph weed
Isocoma menziesii	Menzies' goldenbush
*Lactuca serriola**	prickly lettuce
Lasthenia gracilis	goldfields

SCIENTIFIC NAME	COMMON NAME
Malacothrix saxatalis var. tenuifolia	cliff aster
Matricaria discoidea	pineapple weed
*Oncosiphon piluliferum**	stinknet
Pseudognaphalium californicum	California everlasting
*Sonchus asper**	prickly sow thistle
*Taraxacum officinale**	common dandelion
Uropappus lindleyi	silver puffs
Xanthium strumarium	cocklebur
Boraginaceae	**Borage Family**
Amsinckia intermedia	common fiddleneck
Amsinckia menziesii	small-flowered fiddleneck
Cryptantha intermedia	popcorn flower (common)
Heliotropium curassavicum var. *oculatum*	alkali heliotrope
Pectocarya linearis ssp. ferocula	slender combbur
Phacelia cicutaria ssp. hispida	caterpillar phacelia
Phacelia distans	distant phacelia
Phacelia minor	Canterbury bells
Plagiobothrys collinus	California popcorn flower
Brassicaceae	**Mustard Family**
*Brassica nigra**	black mustard
*Hirschfeldia incana**	short-pod mustard
*Raphanus sativus**	radish
*Sisymbrium irio**	London rocket
Cactaceae	**Cactus Family**
Opuntia parryi	cane cholla
Chenopodiaceae	**Goosefoot Family**
*Chenopodium album**	Lamb's quarters
*Salsola tragus**	Russian thistle
Convolvulaceae	**Morning-glory Family**
Calystegia macrostegia	morning-glory
Convolvulus arvensis	field bindweed
Cuscuta californica var. *californica*	California dodder
Crassulaceae	**Crassila Family**
Crassula connata	sand pygmy-stonecrop
Cucurbitaceae	**Gourd Family**
Cucurbita foetidissima	buffalo gourd

SCIENTIFIC NAME	COMMON NAME
Marah macrocarpus	wild cucumber
Euphorbiaceae	**Spurge Family**
Croton setiger (formally Eremocarpus)	doveweed
Euphorbia polycarpa	smallseed sandmat
Fabaceae	**Legume Family**
Acmispon glaber	deerweed
*Cercidium sp.**	Palo Verde
Lupinus bicolor	miniature lupine
*Melilotus officinalis**	yellow sweetclover
Geraniaceae	**Geranium Family**
*Erodium cicutarium**	redstem filaree
Hydrophyllaceae	**Water Leaf Family**
Nemophilia menziesii	baby blue eyes
Lamiaceae	**Mint Family**
*Marrubium vulgare**	horehound
Salvia columbariae	chia
Salvia mellifera	black sage
Trichostemma lanceolatum	vinegar weed
Liliaceae	**Lily Family**
Dichelostemma capitatum	bluedicks
Malvaceae	**Mallow Family**
*Malva parviflora**	cheeseweed
Moraceae	**Mulberry Family**
*Ficus carica**	edible fig
Nyctaginaceae	**Four O'Clock Family**
Mirabilis laevis var. *crassifolia*	wishbone bush
Onagraceae	**Evening Primrose Family**
Camissoniopsis bistorta	southern sun cup
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Phrymaceae	**Monkeyflower Family**

SCIENTIFIC NAME	COMMON NAME
Diplacus aurantiacus	bush monkeyflower
Poaceae	**Grass Family**
*Avena barbata**	slender wild oat
*Bromus diandrus**	ripgut grass
Bromus madritensis ssp. *rubens**	red brome
Distichlis spicata	salt grass
Elymus triticoides	beardless wild rye
*Festuca myuros**	rattail sixweeks grass
*Festuca perennis**	rye grass
*Hordeum murinum**	wall barley
Melica imperfecta	smallflowered Melic grass
Muhlenbergia californica	California Muhly
*Schismus barbatus**	common Mediterranean grass
*Triticum aestivum**	cultivated wheat
Polemoniaceae	**Phlox Family**
Gilia anelensis	Los Angeles Gilia
Navarretia atractyloides	No common name
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum var. *fasciculatum*	coastal California buckwheat
*Rumex crispus**	curly dock
Portulacaceae	**Purslane Family**
Calandrinia ciliata	redmaids
Salicaceae	**Salix Family**
Salix laevigata	red willow
Salix lasiolepis	arroyo willow
Scrophulariaceae	**Figwort Family**
Antirrhinum nuttallianum ssp. nuttallianum	Nuttall's snapdragon
Nuttallanthus texanus (formally Lanaria canadensis)	blue toad flax
Solanaceae	**Nightshade Family**
Datura wrightii	jimson weed
*Nicotiana glauca**	tree tobacco
Solanum xanti	chaparral nightshade
Tamaricaceae	**Tamarisk Family**
Tamarix sp.*	tamarisk

SCIENTIFIC NAME	COMMON NAME
Urticaceae	**Nettle Family**
*Urtica urens**	dwarf nettle
Zygophyllaceae	**Caltrop Family**
*Tribulus terrestris**	common puncture vine

APPENDIX B
FAUNAL COMPENDIUM

BIRDS

Birds were observed with 10x42 binoculars. Birds were identified following The Sibley Field Guide to Birds of Western North America (2003), and updated to conform to changes in nomenclature consistent with the most recent American Ornithological Society checklist. Species observed on the subject property are noted by a bold dot (●). Bird species not observed but could occur foraging on the subject site, or as a migratory stopover have also been included. Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Accipitridae	**Hawks, Eagles, Kites**
Accipiter cooperii	Cooper's hawk
Accipiter striatus	sharp-shinned hawk
Aquila chrysaetos	golden eagle
Buteo jamaicensis●	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Buteo regalis	ferruginous hawk
Buteo swainsoni	Swainson's hawk
Circus cyaneus	northern harrier
Elanus leucurus	white-tailed kite
Aegithalidae	**Bushtits**
Psaltriparus minimus●	bushtit
Alaudidae	**Larks**
Eremophila alpestris actia●	California horned lark
Apodidae	**Swifts**
Aeronautes saxatalis	white-throated swift
Bombycillidae	**Waxwings**
Bombycilla cedrorum	cedar waxwing
Caprimulgidae	**Nightjars, Goatsuckers**
Phalaenoptilus nuttallii	common poorwill

SCIENTIFIC NAME	COMMON NAME
Cardinalidae	**Cardinals**
Passerina caerulea	blue grosbeak
Pheucticus melanocephalus	black-headed grosbeak
Cathartidae	**American Vultures**
Cathartes aura	turkey vulture
Charadriidae	**Plovers**
Charadrius vociferus●	killdeer
Columbidae	**Pigeons, Doves**
*Columba livia**●	rock pigeon
Columbina passerina	common ground-dove
Patagioenas fasciata	band-tailed pigeon
*Streptopelia decaocto**	Eurasian collared-dove
Zenaida macroura●	mourning dove
Corvidae	**Crows, Jays**
Aphelocoma californica●	California scrub-jay
Corvus brachyrhynchos●	American crow
Corvus corax●	common raven
Cuculidae	**Cuckoos and Roadrunners**
Geococcyx californianus●	greater roadrunner
Falconidae	**Falcons**
Falco columbarius	merlin
Falco mexicanus	prairie falcon
Falco sparverius●	American kestrel
Fringillidae	**Finches**
Haemorhous mexicanus●	house finch
Haemorhous purpureus	purple finch
Spinus lawrencei	Lawrence's goldfinch
Spinus psaltria●	lesser goldfinch
Spinus tristis	American goldfinch
Hirundinidae	**Swallows, Martins**
Hirundo pyrrhonota●	cliff swallow
Hirundo rustica●	barn swallow
Stelgidopteryx seripennis●	northern rough-winged swallow
Tachycineta bicolor●	tree swallow

SCIENTIFIC NAME	COMMON NAME
Icteridae	**Blackbirds**
Euphagus cyanocephalus●	Brewer's blackbird
Icterus bullockii●	Bullock's oriole
Icterus cucullatus	hooded oriole
Quiscalus mexicanus	great-tailed grackle
Molothrus ater●	brown-headed cowbird
Sturnella neglecta●	western meadowlark
Laniidae	**Shrikes**
Lanius ludovicianus	loggerhead shrike
Mimidae	**Mockingbirds, Thrashers**
Mimus polyglottos●	northern mockingbird
Toxostoma redivivum	California thrasher
Parulidae	**Wood Warblers**
Geothlypis trichas	common yellowthroat
Oreothlypis celata	orange-crowned warbler
Setophaga coronata	yellow-rumped warbler
Passerellidae	**New World Sparrows**
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow
Ammodramus savannarum	grasshopper sparrow
Amphispiza bellii bellii	Bell's sage sparrow
Chondestes grammacus	lark sparrow
Junco hyemalis	dark-eyed junco
Melospiza lincolnii	Lincoln's sparrow
Melospiza melodia	song sparrow
Melozone crissalis●	California towhee
Passerculus sandwichensis●	savannah sparrow
Pipilo maculatus	spotted towhee
Pooecetes gramineus	vesper sparrow
Spizella passerina	chipping sparrow
Zonotrichia atricapilla	golden-crowned sparrow
Zonotrichia leucophrys●	white-crowned sparrow
Passeridae	**Old World Sparrows**
*Passer domesticus**●	house sparrow
Phasianidae	**Pheasant Family**
Callipepla californica●	California quail
Picidae	**Woodpeckers**
Colaptes auratus	northern flicker

SCIENTIFIC NAME	COMMON NAME
Picoides nuttallii●	Nuttall's woodpecker
Polioptilidae	**Gnatcatchers**
Polioptila caerulea	blue-gray gnatcatcher
Polioptila californica	California gnatcatcher
Ptiliogonatidae	**Silky Flycatchers**
Phainopepla nitens●	phainopepla
Strigidae	**Typical Owls**
Asio flammeus	short-eared owl
Asio otus	long-eared owl
Athene cunicularia	burrowing owl
Bubo virginiensis	great horned owl
Megascops kennicottii	western screech-owl
Sturnidae	**Starlings**
*Sturnus vulgaris**●	European starling
Trochilidae	**Hummingbirds**
Archilochus alexandri	black-chinned hummingbird
Calypte anna●	Anna's hummingbird
Calypte costae	Costa's hummingbird
Selasphorus sasin	Allen's hummingbird
Troglodytidae	**Wrens**
Catherpes mexicanus	canyon wren
Salpinctes obsoletus●	rock wren
Thryomanes bewickii●	Bewick's wren
Troglodytes aedon●	house wren
Turdidae	**Thrushes**
Sialia mexicana	western bluebird
Turdus migratorius	American robin
Tyrannidae	**Tyrant Flycatchers**
Contopus cooperi	olive-sided flycatcher
Contopus sordidulus	western wood pewee
Empidonax oberholseri	dusky flycatcher
Sayornis nigricans●	black phoebe
Sayornis saya●	Say's phoebe
Tyrannus verticalis●	western kingbird
Tyrannus vociferans●	Cassin's kingbird

SCIENTIFIC NAME	COMMON NAME
Tytonidae	**Barn Owls**
Tyto alba	barn owl

MAMMALS

Records included herein were derived from TERACOR field observations and peer-reviewed literature. Species seen or otherwise detected are noted with a bold dot (●). Nomenclature follows *Peterson Field Guides: Mammals of North America* (Reid 2006). Non-native species have been noted below with an asterisk (*) following the scientific name.

SCIENTIFIC NAME	COMMON NAME
Canidae	**Coyotes, Dogs, Foxes, Jackals, and Wolves**
Canis latrans●	coyote
Cricetidae	**Hamsters, Voles, New World Rats and Mice**
Microtus californicus	California vole
*Mus musculus**	house mouse
Neotoma lepida intermedia	San Diego desert woodrat
Neotoma macrotis	big-eared woodrat
Onychomys torridus ramona	southern grasshopper mouse
Peromyscus californicus	California mouse
Peromyscus maniculatus	American deer mouse
*Rattus norvegicus**	Norway rat
*Rattus rattus**	black rat
Reithrodontomys megalotis	western harvest mouse
Didelphidae	**American Opossums**
*Didelphis virginiana**	Virginia opossum
Felidae	**Cats**
*Felis silvestris catus**	domestic cat
Lynx rufus	bobcat
Geomyidae	**Pocket Gophers**
Thomomys bottae●	Botta's pocket gopher
Heteromyidae	**Pocket Mice and Kangaroo Rats**
Chaetodipus californicus	California pocket mouse
Chaetodipus fallax fallax	northwestern San Diego pocket mouse
Dipodomys simulans	Dulzura kangaroo rat
Dipodomys stephensi	Stephens' kangaroo rat
Perognathus longimembris brevinasus	Los Angeles pocket mouse

SCIENTIFIC NAME	COMMON NAME
Leporidae	**Rabbits and Hares**
Lepus californicus bennettii●	San Diego black-tailed jackrabbit
Sylvilagus audubonii●	Audubon's cottontail
Sylvilagus bachmani	brush rabbit
Mephitidae	**Skunks and Stink Badgers**
Mephitis mephitis	striped skunk
Spilogale gracilis	western spotted skunk
Molossidae	**Free-Tailed Bats**
Eumops perotis californicus	western mastiff bat
Nyctinomops femorosaccus	pocketed free-tailed bat
Nyctinomops macrotis	big free-tailed bat
Tadarida brasiliensis	Brazilian free-tailed bat
Mustelidae	**Badgers, Otters, Weasels, and Relatives**
Mustela frenata	long-tailed weasel
Taxidea taxus	American badger
Procyonidae	**Raccoons and Relatives**
Procyon lotor	northern raccoon
Sciuridae	**Squirrels, Chipmunks and Marmots**
Ostospermophilus beecheyi●	California ground squirrel
Soricidae	**Shrews**
Sorex ornatus	ornate shrew
Vespertilionidae	**Vesper Bats**
Antrozous pallidus	pallid bat
Corynorhinus townsendii	Townsend's big-eared bat
Eptesicus fuscus	big brown bat
Euderma maculatum	spotted bat
Lasionycteris noctivagans	silver-haired bat
Lasiurus blossevillii	western red bat
Lasiurus cinereus	hoary bat
Lasiurus xanthinus	western yellow bat
Myotis californicus	California myotis
Myotis ciliolabrum	western small-footed myotis
Myotis evotis	long-eared myotis
Myotis velifer	cave myotis
Myotis yumamensis	Yuma myotis
Parastrellus hesperus	canyon bat

AMPHIBIANS AND REPTILES

Identification of amphibians and reptile species were made visually, with nomenclature following R.C. Stebbins (2003) *A Field Guide to Western Reptiles and Amphibians,* third edition, updated to conform to the most recent changes in nomenclature utilizing The Center for North American Herpetology. Species seen or otherwise detected are noted with a bold dot (●).

SCIENTIFIC NAME	COMMON NAME
AMPHIBIANS	
Frogs and Toads	
Bufonidae	**True Toads**
Anaxyrus boreas	western toad
Hylidae	**Treefrogs and Allies**
Pseudacris regilla	Pacific treefrog
Salamanders	
Plethodontidae	**Lungless Salamanders**
Batrachoseps major major	garden slender salamander
Ensatina eschscholtzii eschscholtzii	Monterey ensatina
REPTILES	
Lizards	
Anguidae	**Glass Lizards and Alligator Lizards**
Elgaria multicarinata webbii	San Diego alligator lizard
Anniellidae	**North American Legless Lizards**
Anniella stebbinsi	southern California or San Diegan legless lizard
Phrynosomatidae	**Zebra-tailed, Fringe-toed, Spiny, Tree, Side-Blotched, and Horned Lizards**
Phrynosoma blainvillii	coast horned lizard
Sceloporus occidentalis●	western fence lizard
Uta stansburiana●	common side-blotched lizard
Sceloporus orcutti	granite spiny lizard
Scincidae	**Skinks**
Plestiodon gilberti rubricaudatus	western red-tailed skink
Plestiodon skiltonianus skiltonianus	Skilton's skink

SCIENTIFIC NAME	COMMON NAME
Teiidae	**Whiptails and Allies**
Aspidoscelis hyperythra	orange-throated whiptail
Aspidoscelis tigris stejnegeri●	coastal whiptail
Snakes	
Boidae	**Boas**
Charina umbratica	southern rubber boa
Lichanura trivirgata	rosy boa
Colubridae	**Harmless Egg-Laying Snakes**
Arizona elegans occidentalis	California glossy snake
Coluber constrictor mormon	western yellow-bellied racer
Lampropeltis californiae	California kingsnake
Masticophis flagellum piceus	red racer
Masticophis lateralis lateralis	California striped racer
Pituophis catenifer annectens	San Diego gophersnake
Rhinocheilus lecontei	long-nosed snake
Salvadora hexalepis virgultea	coast patch-nosed snake
Tantilla planiceps	western black-headed snake
Crotalidae	**Pitvipers**
Crotalus oreganus helleri	southern Pacific rattlesnake
Crotalus ruber	red diamond rattlesnake
Dipsadidae	**Rear-Fanged Snakes**
Diadophis punctatus modestus	San Bernardino ring-necked snake
Hypsiglena ochrorhyncha	coast nightsnake
Leptotyphlopidae	**Threadsnakes**
Rena humilis humilis	southwestern threadsnake
Natricidae	**Harmless Live-Bearing Snakes**
Thamnophis hammondii	two-striped gartersnake

APPENDIX C
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APPENDIX D
STATE SPECIAL ANIMALS

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
INVERTEBRATES		
Crotch bumble bee (*Bombus crotchii*)	**SSA**	**High.** This species ranges from coastal California east to the Sierra-Cascade Crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*. As depicted by the attached *Exhibit 8 – CNDDB Occurrences*, this bumble bee has been detected miles west-northwest of the subject property. This species has not been detected on-site.
monarch – California overwintering population (*Danaus plexippus pop. 1*) Formerly known as monarch butterfly (*Danaus plexippus*)	**SSA**	**Not Present.** The monarch is perhaps the most well-known insect in North America. This species spends summers in the northern portion of the United States and southern Canada, and migrates several thousand miles south to overwinter in Southern California, Mexico, and many southern states in the United States. They host on several species of milkweed (*Asclepias* spp.), and sequester cardiac glycosides from these plants, making them unpalatable to predators. Milkweed has not been detected on-site, but could be from time to time as it is a common Genus. Roosting sites are generally coastal, and do not occur on-site.
REPTILES		
San Bernardino ring-necked snake (*Diadophis punctatus modestus*)	**SSA**	**Moderate**. This small, slender snake is a secretive subspecies. It prefers moist areas and will inhabit moist meadows, rocky hillsides, gardens, grassland, chaparral, and mixed woodlands. Marginally suitable habitat is present on the subject property. This subspecies was not detected on-site.
BIRDS		
great egret (*Ardea alba)*	**SSA (Nesting Colony)**	**Low – Not Nesting.** The great egret is found worldwide. They nest in colonies in trees and shrubs over water, and on islands. They prefer to feed in wetland habitats including streams, lakes, ponds, marshes, and tide flats, but will take prey opportunistically. Prey items include fish, reptiles, amphibians, birds, and small mammals. Nesting colonies are not present on-site due to lack of ponds or streams.
oak titmouse (*Baeolophus inornatus*)	**SSA (Nesting)**	**Not Present.** The oak titmouse resides in warm, open, dry oak or oak-pine woodlands from southern Oregon to Baja California. It will use scrub oaks or other brush as long as woodlands are nearby. Oak titmice eat seeds and other plant materials as well as insects and other invertebrates. Oak trees are not present on-site; therefore this species has no potential of occurrence on-site.
Costa's hummingbird (*Calypte costae*)	**SSA (Nesting)**	**Moderate.** The subject property is located within the year-round range of this hummingbird species. Costa's hummingbird primarily occurs in the desert and semi-desert; but also occurs in arid brushy foothills and chaparral, and in adjacent mountains, open meadows and gardens during migration and winter. This species has a low probability of occurrence on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
snowy egret (*Egretta thula)*	**SSA (Nesting Colony)**	**Not Present.** The snowy egret is generally found along the coast, but does occasionally occur inland along rivers, streams, and the Salton Sea. Preferred habitats include saltwater marshes, tidal flats, coastal lagoons, and the margins of lakes, rivers, and streams. Their preferred diet is aquatic invertebrates and insects. Nesting colonies are not present on the subject property. Foraging habitats are not particularly suitable. This species has not been detected on-site.
red-breasted sapsucker (*Sphyrapicus ruber)*	**SSA (Nesting)**	**Not Present.** This sap-dependent species occurs in mixed coniferous forests near the coast, and mixed deciduous woodlands in the interior mountains of California. They forage by drilling holes in trees, then later returning to drink sap and eat insects attracted to the sap. They commonly breed in Northern California and the Sierra-Nevada Mountains from sea level to about 2750 meters in elevation. In Southern California this species is limited to breeding in higher mountainous regions (i.e., San Gabriel Mountains, San Bernardino Mountains, and San Jacinto Mountains). Suitable nesting habitat is not present, and the subject property is located outside of this species' known breeding range; therefore, this species does not nest on the subject property.
Lawrence's goldfinch (*Spinus lawrencei*)	**SSA (Nesting)**	**Low (Moderate Migratory Occurrence Potential).** This species occurs in the vicinity of the subject property during the nesting season. Suitable habitat is comprised of open woodlands, chaparral and weedy fields. Although marginally suitable nesting habitat is present, this species has a low probability of nesting on the subject property due to the limited extent of suitable habitat present. Additionally, this species has not been detected on-site. This notwithstanding, Lawrence's Goldfinch has a moderate potential of utilizing the subject property as a migratory stopover.
MAMMALS		
silver-haired bat (*Lasionycteris noctivagans*)	**SSA**	**Low.** This species occurs primarily within or near forested or woodland areas, usually near a water source. It roosts in loose bark, secondary cavities (i.e., unused woodpecker holes), and hollow trees. The habitat on the subject property is marginal, suggesting a low probability of occurrence.
hoary bat (*Lasiurus cinereus*)	**SSA**	**Low.** This species prefers deciduous and coniferous forests, and often roosts in those types of trees. Moths are the preferred food item; however, other species of flying insects and occasionally small bat species will be consumed. This species has a low potential of occurring and potentially roosting on the subject property. Marginally suitable habitat for this species is present on-site.

SPECIES	REGULATORY STATUS	STATUS OF THE SPECIES ON THE SUBJECT PROPERTY/LIFE HISTORY/HABITAT DESCRIPTION
western small-footed myotis (*Myotis ciliolabrum*)	**SSA**	**Moderate**. The western small-footed myotis roosts singly or in small communal groups in rock crevices, mines, caves, under exfoliating bark, or in buildings. This species consumes a wide variety of flying insects including moths and beetles. Suitable habitat includes desert, short-grass prairies, riparian areas, and coniferous forests. Marginally suitable roost sites, such as rock crevices and the Bailey Farmstead, are present on the subject property. Habitats on the subject property are marginal; therefore, this species has a low possibility of occurrence on-site.
long-eared myotis (*Myotis evotis*)	**SSA**	**Low.** The long-eared myotis occurs mainly in forested areas up to 3000 meters. This species gleans moths and beetles from vegetation. Researchers believe that this species may rely more upon hearing to locate prey, rather than echolocation. The long-eared myotis roosts in a variety of areas. The habitat on the subject property is not optimal. Site conditions are such that sustained presence is unlikely for this species on the subject property.
fringed myotis (*Myotis thysanodes*)	**SSA**	**Not Present.** The fringed myotis occurs in oak, pinyon, and ponderosa pine forests and desert scrub from 1,200 to 2,750 meters in elevation. This species captures prey in flight; however, it may also glean moths and beetles from vegetation. The fringed myotis roosts in caves, mines, and buildings. The habitat on the subject property is not suitable; therefore this bat would not be expected to occur on-site.
Yuma myotis (*Myotis yumanensis*)	**SSA**	**Low**. The Yuma myotis roosts in large groups in vertical cracks in cliff faces, buildings, and under bridges. This species' distribution is often closely tied to bodies of water. Suitable habitat includes humid forest to desert. This species has a low potential of occurring on the subject property. Marginally suitable habitat for this species is present on-site.

APPENDIX E
LIST OF ABBREVIATIONS/ACRONYMS

ACRONYMS	
BUOW	Burrowing owl
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
FC	Federal Candidate Species
FDL	Federally Delisted
FE	Federally listed as Endangered
FESA	Federal Endangered Species Act
FPD	Federally Proposed for delisting
FPE	Federally Proposed as Endangered
FPT	Federally Proposed as Threatened
FT	Federally listed as Threatened
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MSL	Mean Sea Level
RWQCB	California Regional Water Quality Control Board – Santa Ana
SCE	State Candidate for Endangered
SCT	State Candidate for Threatened
SDL	State Delisted
SE	State listed as Endangered
SFP	State Fully Protected
SSA	State Special Animal
SSC	Species of Special Concern
ST	State listed as Threatened
SWL	State Watch List Species
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey