

APPENDIX 4a

Biological Resources Assessment, Jurisdictional Delineation Report & MSHCP Consistency Analysis



Jacobs



Corman Leigh

Whitewood Condo/Apartments Project

Biological Resources Assessment, Jurisdictional Delineation Report
And MSHCP Consistency Analysis

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Executive Summary

Jacobs Engineering Group, Inc. was retained by Tom Dodson and Associates to conduct a Biological Resources Assessment, Jurisdictional Delineation and MSHCP Consistency Analysis for a proposed residential development on an approximately 29-acre parcel located in the City of Murrieta, Riverside County, California. The proposed development project would consist of Multi-Family apartment and condominium homes and associated facilities. The Subject Parcel falls entirely within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area and the City of Murrieta is a signatory to the MSHCP.

In April of 2021, Jacobs biologists conducted a Biological Resources Assessment survey to address potential effects of the Project on designated Critical Habitats and/or special status species. Results of the Biological Resources Assessment are intended to provide sufficient baseline information to the Project Proponent and, if required, to City and/or County planning officials and federal and state regulatory agencies to determine if the Project is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects. Data regarding biological resources in the Project vicinity were obtained through literature review and field investigation. Available databases and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species that could potentially occur in the Project vicinity, including the U.S. Fish and Wildlife Service designated Critical Habitat online mapper and Information for Planning and Consultation System, as well as the most recent versions of the California Natural Diversity Database (CNDDB) and California Native Plant Society Electronic Inventory.

The result of the reconnaissance-level field survey was that no state or federally listed species were identified within the Project Area and the Project is not within or adjacent any federal Critical Habitat. Although there is some marginally suitable habitat within the Project Area for several listed species including the Stephens' kangaroo rat, Quino checkerspot butterfly, and coastal California gnatcatcher, these species are all MSHCP "Covered Species." The MSHCP provides "take" authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species. Therefore, "take" authorization is provided for potential Project related impacts to these species.

Although the Subject Parcel is within an MSHCP Criteria Cell (Criteria Cell 5673), the Subject Parcel is excluded from any MSHCP Conservation Areas. According to a May 17, 2016 Settlement and Release Agreement between the City of Murrieta, the Western Riverside County Regional Conservation Authority, and the previous property owner, the Subject Parcel is excluded from the MSHCP reserve assembly and development of the Subject Parcel would not require further conservation requirements or MSHCP application.

The Subject Parcel is within a MSHCP Criteria Area Plant Species Survey Area, as well as a Narrow Endemic Plant Species Survey Area. Therefore, a floristic botanical field survey was also conducted by Jacobs in April of 2021 to determine whether any of the MSHCP Criteria Area Species, Narrow Endemic Plant Species, or any other special status plant species documented in the Project vicinity were present within the Subject Parcel. The result of the floristic botanical field survey was that no MSHCP Criteria Area Species, Narrow Endemic Plant Species, or other special status plant species were found within the Subject Parcel.

The Subject Parcel is mapped within a MSHCP burrowing owl Survey Area. Therefore, a burrowing owl habitat suitability assessment was conducted by Jacobs in April of 2021 that included 100 percent visual coverage of any potentially suitable burrowing owl habitat within and adjacent the Subject Parcel. The result of the survey was that no evidence of burrowing owl was found in the survey area and most of the Subject Parcel is not suitable to support this species.

Jacobs biologists also assessed the Subject Parcel for the presence of state and/or federal jurisdictional waters that may potentially be impacted by the Project. The jurisdictional waters assessment was conducted in accordance with the U.S. Army Corps of Engineers *Wetlands Delineation Manual, Jurisdictional Determination*

Form Instructional Guidebook, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region and the Environmental Protection Agency and the Department of the Army's "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" April 21, 2020 (effective June 22, 2020). The result of the jurisdictional waters assessment is that there are no wetland or non-wetland jurisdictional waters within the Subject Parcel. Therefore, the Project will not impact any jurisdictional waters and no state or federal jurisdictional waters permitting will be required under current regulation.

This report describes delineated resources, provides an aquatic resource delineation map, identifies state and/or federally listed species with potential to occur on site and presents representative site photographs. The delineation results and conclusions presented in this report are considered preliminary and valid under current regulatory context. Additionally, according to protocol and standard practices, the results of the habitat assessment surveys will remain valid for the period of one year, or until April 2022, after which time, if the site has not been disturbed in the interim, another survey may be required to determine the persisting absence of special status species and to verify environmental conditions on site. Regardless of survey results and conclusions given herein, if any state or federally listed species are found on site during Project-related work activities, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions.

1. Introduction

Corman Leigh (Project Proponent) intends to entitle, develop, and construct a residential development on an approximately 29-acre parcel (Subject Parcel) located in the City of Murrieta, Riverside County, California. The proposed development project would consist of Multi-Family apartment and condominium homes and associated facilities. Therefore, on behalf of Tom Dodson and Associates (TDA), Jacobs Engineering Group, Inc. (Jacobs) has prepared this Biological Resources Assessment (BRA) report for the proposed development project (Project). The BRA fieldwork was conducted by Jacobs biologist Daniel Smith in April 2021. The purpose of the BRA survey was to address potential effects of the Project on designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA), as well as any species otherwise designated as sensitive by the California Department of Fish and Wildlife (CDFW [formerly California Department of Fish and Game]) and/or the California Native Plant Society (CNPS).

The Project Area was assessed for sensitive species known to occur locally. Attention was focused on those state and/or federally listed as threatened or endangered species and California Fully Protected species that have been documented in the vicinity of the Project Area, whose habitat requirements are present within or adjacent to the Project Area. Results of the habitat assessment are intended to provide sufficient baseline information to the Project Proponent (Corman Leigh) and, if required, to City, County or other local government planning officials and federal and state regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and CDFW, respectively, to determine if the Project is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects.

In addition to the BRA survey, Jacobs biologists assessed the Project Area for the presence of state and/or federal jurisdictional waters potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1600 of the California Fish and Game Code (FGC), respectively.

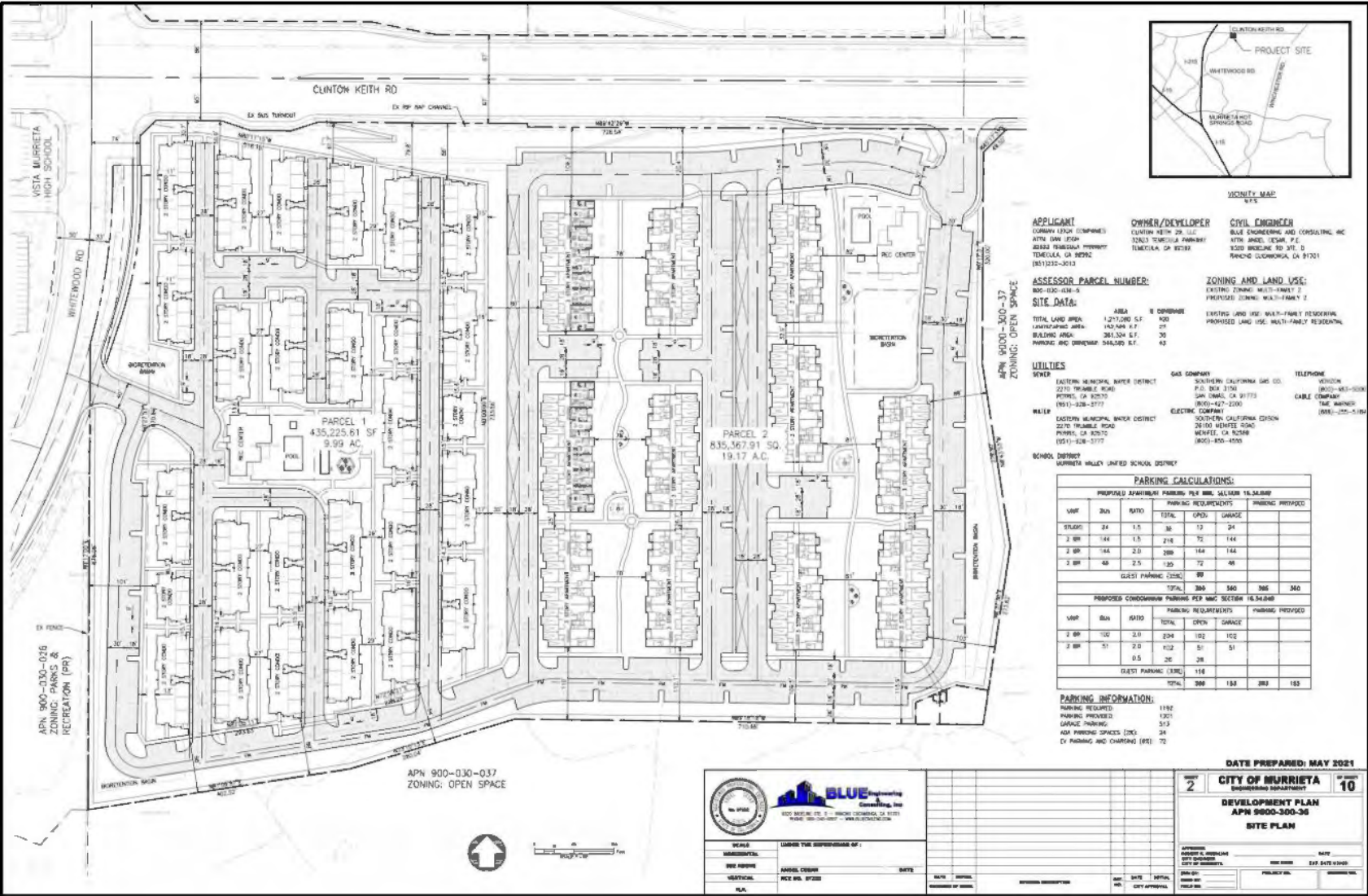
Finally, Jacobs prepared a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis, which is included in the scope of this report. As part of the City of Murrieta's approval process, a Western Riverside County MSHCP compliance report is required. The purpose of this report is to assess whether the proposed Project is consistent with the conditions and provisions identified in the MSHCP. The City of Murrieta is signatory to the MSHCP Implementing Agreement and thereby a permittee responsible for meeting the terms and conditions outlined in the MSHCP and the Biological Opinion issued for the MSHCP. Therefore, the City of Murrieta has the responsibility to ensure the projects they approve are consistent with the MSHCP and will not preclude the overall conservation goals and reserve design from being accomplished.

Although the Subject Parcel is adjacent MSHCP Conservation Areas, there are no conserved lands within the Subject Parcel. According to a May 17, 2016 Settlement and Release Agreement between the City of Murrieta, the Western Riverside County Regional Conservation Authority, and the previous property owner, the Subject Parcel is excluded from the MSHCP reserve assembly and development of the Subject Parcel would not require further conservation requirements or MSHCP application.

According to the MSHCP, the Subject Parcel is mapped within a burrowing owl (*Athene cunicularia* [BUOW]) Survey Area, as well as a Narrow Endemic Plant Species Survey Area. Additionally, the Project site is within a Criteria Area Plant Species Survey Area. Therefore, in addition to the BRA survey, a BUOW habitat suitability assessment and floristic botanical field survey were conducted for the Project Area in accordance with the MSHCP requirements.

1.1 Project Description

The Project consists of a proposed development plan to construct a 513-unit apartment and condominium complex on two parcels (Figure 1). The proposed Multi-Family residential development would be comprised of 11, 3-story apartment buildings with studio up to 3 bedroom units, 29, 2-story condominiums with 2 and 3 bedroom units, two recreation facilities, 513 garage spaces, 688 open parking spaces, and four bioretention basins (Figure 1).

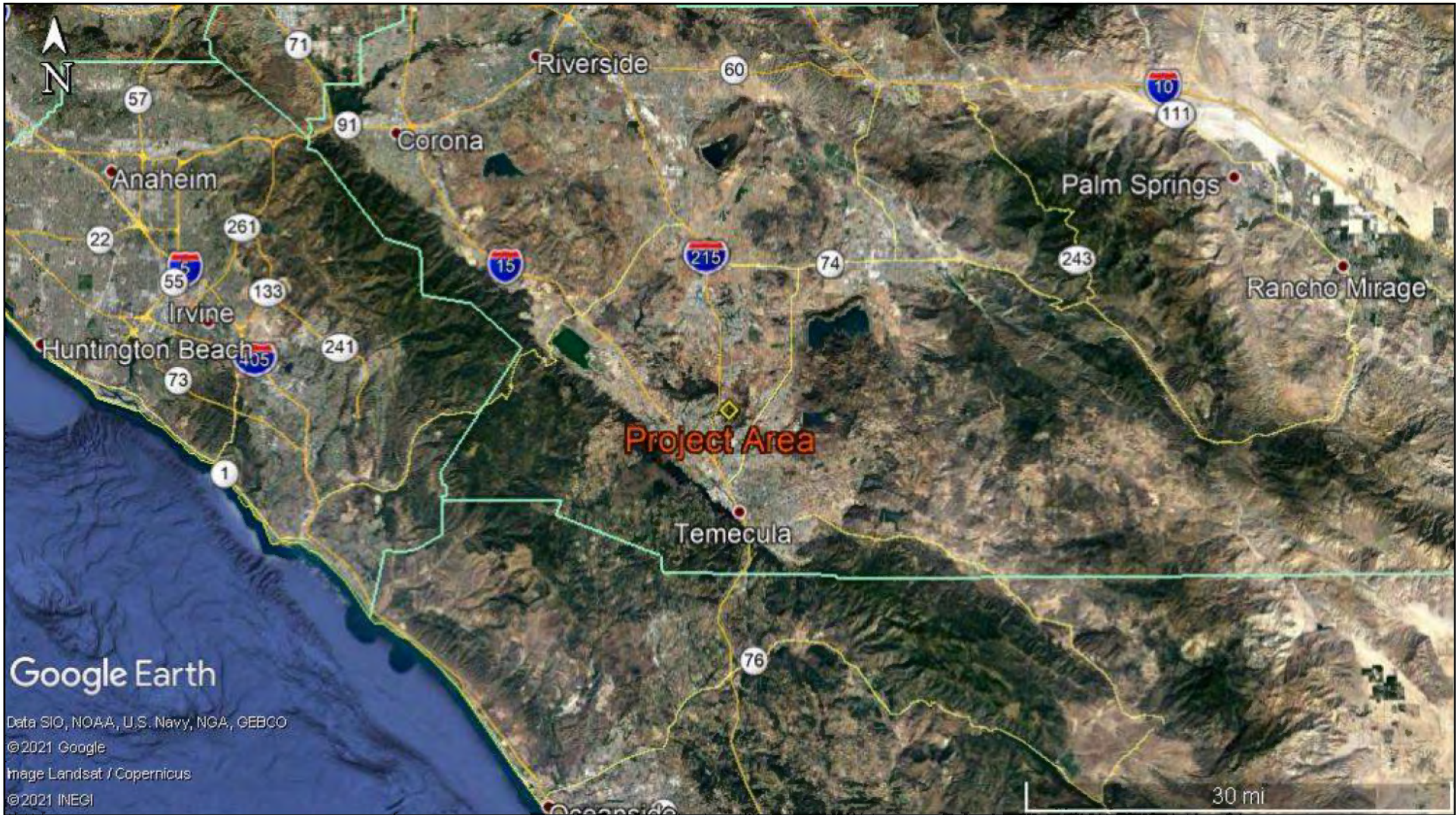


SOURCE: Blue Engineering and Consulting, Inc.

FIGURE 1

1.2 Location

The Project site is on Assessor Parcel Number (APN) 900-030-036. The Subject Parcel is generally located in the City of Murrieta, Riverside County, California, in Section 2 of Township 7 South, Range 3 West, San Bernardino Base Meridian (Figures 2 & 3). The Project Area is depicted on the *Murrieta* U. S. Geological Survey's (USGS) 7.5-Minute Series Quadrangle map. Specifically, the Project site is located approximately 0.7 miles east of the Interstate 215 (I 215) Exit 4 (Clinton Keith Road), on the southeast corner of Clinton Keith Road and Whitewood Road (Figures 3 & 4).



SOURCE: Google Earth

FIGURE 2

Jacobs

Regional Location
Corman Leigh Whitewood Condo/Apartments Project



SOURCE: Google Earth

FIGURE 3



SOURCE: Google Earth

FIGURE 4

1.3 Environmental Setting

The Project Area lies in the geographically based ecological classification known as the Inland Hills of the Southern California/Northern Baja Coast Level 3 ecoregion (Griffith et al. 2016). The goal of regional ecological classifications is to reduce variability based on spatial covariance in climate, geology, topography, climax vegetation, hydrology, and soils. The Inland Hills ecoregion is a moderately steep to steep and relatively hot and dry ecoregion that supports native plant communities comprised mostly of various types of mixed sage scrub, grassland, and chaparral habitats (Griffith et al. 2016).

The Project Area is situated near the north end of the Temecula Valley and east of the southern end of the Santa Ana Mountains, in the hilly area that separates Temecula Valley and French Valley. The topography of the Project Area ranges from gently sloped to hilly and slopes downward from west to east. The elevation of the Subject Parcel ranges from approximately 1,440 feet above mean sea level (amsl) near the eastern limits of the Project Area to 1,530 feet amsl near the westernmost limits.

The Project Area is within a hot semi-arid climate (BSh), characterized by both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures within this region peak at 98.1 degrees Fahrenheit (° F) in July/August and fall to an average annual minimum temperature of 36.4° F in January. Average annual precipitation is greatest from November through March, reaching a peak in February (2.54 inches). Precipitation is lowest in the month of June (0.02 inches). Annual total precipitation averages about 12.01 inches.

Hydrologically, the Project Area is situated within the French Hydrologic Sub-Area (HSA 902.33). The French HSA comprises a 20,685-acre drainage area, within the larger Santa Margarita Watershed (HUC 18070302). The Santa Margarita River is the major hydrogeomorphic feature within the Santa Margarita Watershed. The nearest tributary to the Santa Margarita River is Murrieta Creek, which flows southward through the Murrieta and Temecula Valleys, approximately 4.15 miles southwest of the Subject Parcel at its closest point.

Soils within the Subject Parcel are comprised mostly of Cajalco series, Las Posas series, and Honcut soils. Cajalco soil series consist of fine sandy loam, to loam, to weathered bedrock comprised of residuum weathered from gabbro. This soil series is well-drained, with a medium to high runoff class and does not have a hydric soil rating. Las Posas soil series consist of loam, to clay loam, to weathered bedrock comprised of residuum weathered from gabbro. This soil series is well-drained, with a very high runoff class and does not have a hydric soil rating. Honcut soil series consist of loam comprised of alluvium derived from igneous rock. This soil series is well-drained, with a low runoff class and does not have a hydric soil rating.

The City of Murrieta consists of a mix of urban landscapes and undeveloped sage scrub, grassland, and chaparral habitats. The Subject Parcel is entirely undeveloped and surrounded by urban landscape consisting of residential and commercial development to the north/northwest, and undeveloped land to the east and south/southwest (Figure 4). Habitat on site and within the surrounding undeveloped areas consists mostly of *Adenostoma fasciculatum* Shrubland Alliance (chamise chaparral) and *Eriogonum fasciculatum* Shrubland Alliance (California buckwheat scrub) habitats.

2. Assessment Methodology

2.1 Biological Resources Assessment

Data regarding biological resources in the Project vicinity were obtained through literature review, desktop evaluation and field investigation. Prior to performing the field survey, available databases, and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species that could potentially occur in the Project vicinity. The USFWS designated Critical Habitat online mapper, USFWS threatened and endangered species occurrence data overlay, and the most recent versions of the California Natural Diversity Database (CNDDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data in the *Murrieta*, *Romoland*, *Winchester* and *Bachelor Mountain* USGS 7.5-Minute Series Quadrangles. The Subject Parcel is situated within the *Murrieta* quad and the sites' proximity to the *Romoland*, *Winchester* and *Bachelor Mountain* quads led to their inclusion in the review. These databases contain records of reported occurrences of state and federally listed species or otherwise sensitive species and habitats that may occur within the vicinity of the Project site (approximately 3 miles). Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

2.1.1 Biological Resources Assessment Field Survey

Jacobs biologist Daniel Smith conducted a biological resources assessment of the Project Area on April 7, 2021. The reconnaissance-level field survey and floristic botanical field survey consisted of a pedestrian survey that encompassed the entire Subject Parcel and immediate surrounding area where feasible and appropriate. Wildlife species were detected during field surveys by sight, calls, tracks, scat, and/or other sign. In addition to species observed, expected wildlife usage of the site was determined based on known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species survey was to identify potential habitat for special status wildlife that may occur within the Project vicinity.

2.2 Jurisdictional Delineation

On April 7, 2021, Mr. Smith also evaluated the Subject Parcel for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. Waters of the U.S. (WOTUS), as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW. Prior to the field visit, aerial photographs of the Project Area were viewed and compared with the surrounding USGS 7.5-Minute Topographic Quadrangle maps to identify drainage features within the survey area as indicated from topographic changes, blue-line features, or visible drainage patterns. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" Google Earth Pro data layers were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) "Web Soil Survey" was reviewed for soil types found within the Project Area to identify the soil series in the area and to check these soils to determine whether they are regionally identified as hydric soils. Upstream and downstream connectivity of waterways (if present) were reviewed on Google Earth Pro aerial photographs and topographic maps to determine jurisdictional status. The lateral extent of potential USACE jurisdiction was measured at the Ordinary High Water Mark (OHWM) in accordance with regulations set forth in 33CFR part 328 and the USACE guidance documents listed below:

- *USACE – Corps of Engineers Wetlands Delineation Manual, Wetlands Research Program Technical Report Y-87-1 (on-line edition), January 1987 - Final Report.*
- *USACE – Jurisdictional Determination Form Instructional Guidebook (JD Form Guidebook), May 30, 2007.*

- *USACE – A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (A Delineation Manual), August 2008.*
- *USACE – Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), September 2008.*
- *USACE – Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (Minimum Standards), January 2016.*
- *The Environmental Protection Agency (EPA) and the Department of the Army's "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" April 21, 2020 (effective June 22, 2020) (85 FR 22250).*

To be considered a *jurisdictional wetland* under the federal CWA, Section 404, an area must possess three (3) wetland characteristics: *hydrophytic vegetation*, *hydric soils*, and wetland *hydrology*.

- ▶ **Hydrophytic vegetation:** Hydrophytic vegetation is plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) is considered hydrophytic. Hydrophytic species are those included on the 2018 National Wetland Plant Lists for the Arid West Region (USACE 2018). Each species on the lists is rated with a wetland indicator category, as shown in Table 1. To be considered hydrophytic, the species must have *wetland indicator status*, i.e., be rated as OBL, FACW or FAC.

Table 1. Wetland Indicator Vegetation Categories

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (estimated probability 34 to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

- ▶ **Hydric Soil:** Soil maps from the USDA-NRCS Web Soil Survey (USDA 2021) were reviewed for soil types found within the Project Area. Hydric soils are saturated or inundated long enough during the growing season to develop anaerobic conditions that favor growth and regeneration of hydrophytic vegetation. There are several indirect indicators that may signify the presence of hydric soils including hydrogen sulfide generation, the presence of iron and manganese concretions, certain soil colors, gleying, and the presence of mottling. Generally, hydric soils are dark in color or may be gleyed (bluish, greenish, or grayish), resulting from soil development under anoxic (without oxygen) conditions. Bright mottles within an otherwise dark soil matrix indicate periodic saturation with intervening periods of soil aeration. Hydric indicators are particularly difficult to observe in sandy soils, which are often recently deposited soils of flood plains (entisols) and usually lack sufficient fines (clay and silt) and organic material to allow use of soil color as a reliable indicator of hydric conditions. Hydric soil indicators in sandy soils include accumulations of organic matter in the surface horizon, vertical streaking of subsurface horizons by organic matter, and organic pans.

The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions

are most easily assessed using soil color. Soil colors were evaluated using the Munsell Soil Color Charts (Munsell 2000). Soil pits are dug (when necessary) to an approximate depth of 16-20 inches to evaluate soil profiles for indications of anaerobic and redoximorphic (hydric) conditions in the subsurface.

- ▶ Wetland Hydrology: The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987 and USACE 2008).

Evaluation of CDFW jurisdiction followed guidance in the Fish and Game Code and *A Review of Stream Processes and Forms in Dryland Watersheds* (CDFW, 2010). Specifically, CDFW jurisdiction would occur where a stream has a definite course showing evidence of where waters rise to their highest level and to the extent of associated riparian vegetation.

3. Results

3.1 Existing Biological and Physical Conditions

The Project Area consists of the approximately 29-acre Subject Parcel and encompasses the entire extent of the proposed development plan (Figure 1). The Subject Parcel is entirely undeveloped and surrounded by Vista Murrieta High School to the west, commercial and residential development to the west/northwest, low-density residential development to the north and undeveloped land to the east, south and southwest (Figure 4). Existing disturbances within the Subject Parcel consist primarily of several graded access roads, hiking/biking trails, scattered previously graded areas, OHV use, and litter.

3.1.1 Habitat

Habitat within the Subject Parcel consists mostly of *Adenostoma fasciculatum* Shrubland Alliance (chamise chaparral), with some *Eriogonum fasciculatum* Shrubland Alliance (California buckwheat scrub) habitat interspersed along the southern boundary of the parcel. Additionally, there is a disturbed area near the southwest corner of the Subject Parcel that consists of non-native grassland and several elderberry trees (*Sambucus nigra*). Vegetation cover within the Subject Parcel is dense and chamise (*Adenostoma fasciculatum*) is the dominant species throughout most of the site. Other native species that are co-dominant or conspicuous in the shrub layer include California sagebrush (*Artemisia californica*), hoary leaved ceanothus (*Ceanothus crassifolius*), bush sunflower (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), fragrant sumac (*Rhus aromatica*), and black sage (*Salvia mellifera*). A complete list of plant species identified within the Subject Parcel during the floristic botanical field survey is included in Appendix C.

3.1.2 Wildlife

Amphibians and Reptiles

No amphibian species were observed or otherwise detected within the Subject Parcel during the reconnaissance-level survey and none are expected to occur, due to the dry, upland nature of the site and absence of nearby water sources. Reptile species observed within the Subject Parcel during the reconnaissance-level field survey include Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), California striped racer (*Coluber lateralis lateralis*), Blainville's horned lizard (*Phrynosoma blainvillii*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), and western side-blotched lizard (*Uta stansburiana elegans*).

Birds

Birds were the most observed wildlife group during survey and species observed or otherwise detected in the Project Area during the reconnaissance-level survey include rufous-crowned sparrow (*Aimophila ruficeps*), California scrub-jay (*Aphelocoma californica*), Bell's sparrow (*Artemisiospiza belli*), red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), Costa's hummingbird (*Calypte costae*), rock pigeon (*Columba livia*), common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), California towhee (*Melospiza crissalis*), bushtit (*Psaltirparus minimus*), Say's phoebe (*Sayornis saya*), lesser goldfinch (*Spinus psaltria*), mourning dove (*Zenaida macroura*), and white-crowned sparrow (*Zonotrichia leucophrys*).

Mammals

Identification of mammals within the Subject Parcel was generally determined by physical evidence rather than direct visual identification. This is because 1) many of the mammal species that potentially occur onsite are nocturnal and would not have been active during the survey and 2) no small mammal trapping was performed.

The only mammal species observed were coyote (*Canis latrans*), San Diego desert woodrat (*Neotoma lepida intermedia*), and desert cottontail (*Sylvilagus audubonii*). Additionally, domestic dogs were observed on the Subject Parcel.

3.2 Special Status Species and Habitats

According to the CNDDDB, 79 sensitive species (32 plant species, 47 animal species) and five sensitive habitats have been documented in the *Murrieta*, *Romoland*, *Winchester* and *Bachelor Mountain* USGS 7.5-Minute Series Quadrangles. This list of sensitive species and habitats includes any state and/or federally listed threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all the taxa the CNDDDB 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 CDFW considers the taxa on this list to be those of greatest conservation need.

Of the 18 state and/or federally listed species documented within the *Murrieta*, *Romoland*, *Winchester* and *Bachelor Mountain* quads, the following eight state and/or federally listed species have been documented in the Project vicinity (within approximately 3 miles):

- Tricolored blackbird (*Agelaius tricolor*)
- Munz's onion (*Allium munzii*)
- Stephens' kangaroo rat (*Dipodomys stephensi*)
- Quino checkerspot butterfly (*Euphydryas editha quino*)
- Spreading navarretia (*Navarretia fossalis*)
- Coastal California gnatcatcher (*Poliophtila californica californica*)
- Riverside fairy shrimp (*Streptocephalus woottoni*)
- Least Bell's vireo (*Vireo bellii pusillus*)

However, the Subject Parcel does not contain any habitat suitable to support tricolored blackbird (i.e. wetlands, swamps, freshwater marshes), Riverside fairy shrimp (i.e. seasonally astatic pools/vernal pools), or least Bell's vireo (i.e. riparian habitats). Additionally, the habitats associated with spreading navarretia (i.e. vernal-pools, freshwater marshes) are absent from the Subject Parcel. Therefore, no further discussion of these species is warranted.

Although not a state or federally listed as threatened or endangered species, burrowing owl (*Athene cunicularia* [BUOW]) are considered a state and federal SSC and this species is protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California FGC (FGC #3513 & #3503.5). Additionally, the Subject Parcel is within a MSHCP BUOW Survey Area and this species has been documented in the Project vicinity. Therefore, BUOW will be included in the discussion below.

3.2.1 Special Status Species

No state and/or federally listed threatened or endangered species, or other sensitive species were observed within the Project Area during the reconnaissance-level field survey. An analysis of the likelihood for occurrence of all CNDDDB sensitive species documented in the *Murrieta*, *Romoland*, *Winchester* and *Bachelor Mountain* quads is provided in Appendix A. This analysis considers species' range as well as documentation within the vicinity of the Subject Parcel and includes the habitat requirements for each species and the potential for their occurrence on site, based on required habitat elements and range relative to the current site conditions.

Munz's Onion – Endangered (Federal)/Threatened (State)

The federally listed as endangered and state listed as threatened Munz's onion is a bulb-forming perennial herb in the onion family (Alliaceae) that has one cylindrical leaf and a single inflorescence that grows approximately 6 to 14 inches (15 to 35 centimeters) up from the ground (USFWS 2013). The flowers are white or white with red midvein perianth segments, becoming red with age (USFWS 2013). Munz's onion typically occurs on wet clay soils in western Riverside County, along the southern edge of the Riverside-Perris area (USFWS 2013). This species typically blooms from March through May (Calflora 2021).

Findings: This species has not been documented within or adjacent the Subject Parcel. According to the literature review, the nearest documented Munz's onion occurrence (2015) is approximately 2.4 mile to the northeast of the Subject Parcel, on clay soils (CNDDDB 2021). However, the Subject Parcel consists of loamy soils and the mesic clay soils this species requires are absent from the Subject Parcel. Furthermore, Munz's onion was not detected during the floristic botanical field survey conducted by Jacobs in April 2021. Therefore, Munz's onion is considered absent from the Subject Parcel at the time of survey and the Project will not impact this species.

Stephens' Kangaroo Rat – Endangered (Federal)/Threatened (State)

The federally listed as endangered and state listed as threatened Stephens' kangaroo rat is a small, nocturnal, burrowing rodent species with a small geographic range primarily in western Riverside County and northern San Diego County. Stephens' kangaroo rats occupy open grassland habitats, as well as sparse coastal sage scrub habitats with typically less than 30 percent shrub cover (USFWS 1997). Generally, presence of this species is restricted by perennial shrub cover and dense grasses (USFWS 1997). The CDFW listed Stephens' kangaroo rat as threatened 1971, due to habitat loss throughout its range. The USFWS then listed the species as endangered on September 30, 1988, primarily due to habitat loss, degradation, and fragmentation. In May of 1996, the USFWS issued an incidental take permit for Stephens' kangaroo rat to the Riverside County Habitat Conservation Agency under the MSHCP.

Findings: This species has not been documented within the Subject Parcel but according to the literature review, Stephens' kangaroo rat has been documented adjacent the Subject Parcel (1988) to the west/southwest (CNDDDB 2021). There is some marginally suitable coastal sage scrub habitat for this species adjacent the Subject Parcel to the south and along the southern boundary of the Subject Parcel, as well as some non-native grassland near the southwest corner of the site. However, the habitat within the Subject Parcel consists mostly of dense chamise chaparral, with a shrub cover > 90 percent. Therefore, Stephens' kangaroo rat are not likely to occur within the Subject Parcel. Additionally, the Stephens' kangaroo rat is an MSHCP Covered Species. The MSHCP provides "take" authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species. The City of Murrieta is a signatory to the MSHCP. Since the Stephens' kangaroo rat is a Covered Species under the MSHCP and the Project will not impact any MSHCP Conservation Areas or USFWS designated Critical Habitat for Stephens' kangaroo rat, "take" authorization is provided for any potential Project-related impacts to this species and focused Stephens' kangaroo rat surveys are not required.

Quino Checkerspot Butterfly – Endangered (Federal)

The federally listed as endangered Quino checkerspot butterfly is a butterfly in the checkerspot subfamily (Melitaeinae) of the brushfooted butterfly family (Nymphalidae) that occurs in Riverside and San Diego Counties and the northern areas of Baja California Norte, Mexico. This species occurs in patchy scrubland habitats characterized by mosaics of open areas and dense patches of shrubs (USFWS 2003). Host plants required by Quino checkerspot larvae for food sources include *Plantago erecta*, *Plantago patagonica*, *Anterrhinum coulterianum*, and *Collinsia concolor* (USFWS 2003). Although Quino checkerspot butterfly historically ranged

throughout much of non-montane southern California, this species has been extirpated from more than 75 percent of its former range (USFWS 2003). Due to dramatic declines resulting primarily from habitat loss, degradation, and fragmentation, the USFWS listed the Quino checkerspot butterfly as endangered on January 16, 1997 and the USFWS issued an incidental take permit for this species to the Riverside County Habitat Conservation Agency under the MSHCP on June 22, 2004.

Findings: This species has not been documented within the Subject Parcel but according to the literature review, Quino checkerspot butterfly has been documented adjacent the Subject Parcel (1998) to the southwest (CNDDDB 2021). There is some suitable patchy scrubland habitat for this species adjacent the Subject Parcel to the south and along the southern boundary of the Subject Parcel. However, the required host plants for this species were not observed during survey of the Subject Parcel. The Quino checkerspot butterfly is an MSHCP Covered Species. The MSHCP provides “take” authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species. The City of Murrieta is a signatory to the MSHCP. Since the Quino checkerspot butterfly is a Covered Species under the MSHCP and the Project will not impact any MSHCP Conservation Areas or USFWS designated Critical Habitat for Quino checkerspot butterfly, “take” authorization is provided for any potential Project-related impacts to this species and focused Quino checkerspot butterfly surveys are not required.

Coastal California Gnatcatcher – Threatened (Federal)

The federally listed as threatened coastal California gnatcatcher (CAGN) is a resident (non-migratory) small songbird (passerine) which typically nests and forages in coastal sage scrub vegetation in southern California year-round. CAGN occur in dynamic and successional sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. This species often nests in California sagebrush (USFWS 2010).

CAGN was federally listed as threatened in 1993 and critical habitat for this species was designated by the USFWS in 2000 and revised in 2007. The Primary Constituent Elements (PCEs) identified by the USFWS for CAGN consist of the following: 1) Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, maritime succulent scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and 2) Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

Findings: This species has not been documented within the Subject Parcel but according to the literature review, CAGN has been documented adjacent the Subject Parcel (2002) to the south/southwest (CNDDDB 2021). There is some marginally suitable California buckwheat scrub habitat for this species adjacent the Subject Parcel to the south and along the southern boundary of the Subject Parcel. However, the habitat within the Subject Parcel consists mostly of dense chamise chaparral, with very little California sagebrush present on site. Furthermore, CAGN were not detected on site during the reconnaissance level survey. Therefore, CAGN are not likely to occur within the Subject Parcel. Additionally, the CAGN is an MSHCP Covered Species. The MSHCP provides “take” authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species. The City of Murrieta is a signatory to the MSHCP. Since the CAGN is a Covered Species under the MSHCP and the Project will not impact any MSHCP Conservation Areas or USFWS designated Critical Habitat for CAGN, “take” authorization is provided for any potential Project-related impacts to this species and focused CAGN surveys are not required.

Burrowing Owl – SSC

The burrowing owl (BUOW) is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. According to the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*, "Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey." BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

BUOW have disappeared from significant portions of their range in the last 15 years and, overall, nearly 60 percent of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The BUOW is not listed under the state or federal ESAs but is considered both a state and federal SSC. Additionally, the BUOW is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California FGC (FGC #3513 & #3503.5).

Findings: BUOW have not been documented within the Subject Parcel. According to the literature review, the nearest documented BUOW occurrence (2003) is approximately 2 miles southeast of the Subject Parcel (CNDDDB 2021). The BUOW habitat suitability assessment survey was structured, in part, to detect BUOW. The survey included 100 percent visual coverage of any potentially suitable BUOW habitat within and immediately adjacent the Subject Parcel. The result of the survey was that no evidence of BUOW was found in the survey area and most of the Subject Parcel is not suitable to support this species. BUOW prefer short or sparse vegetation and the habitat within the Subject Parcel consists mostly of dense chamise chaparral, with a shrub cover > 90 percent. The southwestern most corner of the Subject Parcel does consist of non-native grassland, but no BUOW individuals or sign including castings, feathers or whitewash were observed. Therefore, BUOW are considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect this species.

3.2.2 Special Status Habitats

The Subject Parcel does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species. The nearest Critical Habitat unit is approximately 2.75 miles northwest of the Subject Parcel. This Critical Habitat unit is part of the Western Riverside County MSHCP unit (Unit 10) of USFWS designated Critical Habitat for the federally listed as threatened coastal California gnatcatcher. However, no portion of the Subject Parcel is within or adjacent this Critical Habitat unit, or any other sensitive habitats. Therefore, the Project will not result in any loss or adverse modification of USFWS designated Critical Habitat, or any other special status habitats.

3.3 Jurisdictional Delineation

The Subject Parcel is within the French Hydrologic Sub-Area (HSA 902.33). The French HSA comprises a 20,685-acre drainage area, within the larger Santa Margarita Watershed (HUC 18070302). The Santa Margarita Watershed is bound on the north by the San Jacinto and Whitewater River Watersheds, on the east by the San Felipe Creek Watershed, on the south by the San Luis Rey-Escondido Watershed, and on the west by the Aliso-

San Onofre Watershed. The Santa Margarita Watershed encompasses a portion of the Santa Ana Mountains to the west and the northernmost portion of the Peninsular Range to the east, and is approximately 741 square miles in area. The Santa Margarita River is the major hydrogeomorphic feature within the Santa Margarita Watershed. The nearest tributary to the Santa Margarita River is Murrieta Creek, which flows southward through the Murrieta and Temecula Valleys, approximately 4.15 miles southwest of the Subject Parcel at its closest point.

Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. WOTUS are defined as:

"All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters" (Section 404 of the CWA; 33 CFR 328.3 (a)).

Therefore, CWA jurisdiction exists over the following:

1. All traditional navigable waters (TNWs);
2. All wetlands adjacent to TNWs;
3. Non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) i.e., tributaries that typically flow year-round or have continuous flow at least seasonally; and
4. Every water body determined to have a significant nexus with TNWs.

Additionally, areas meeting all three wetland parameters would be designated as USACE wetlands, if they are adjacent to jurisdictional WOTUS, or otherwise determined to have a significant nexus to a TNW.

There are no wetland or non-wetland WOTUS within the Project Area. There is an approximately 70-foot-long roadside swale and culvert near the northwest corner of the Subject Parcel, between the east side of Whitewood Road and the Subject Parcel. However, this roadside swale and associated culvert are part of the City's storm drain system and would not be considered a WOTUS. This storm drain feature is not a TNW or a RPW tributary and does not have a significant nexus with a TNW. Additionally, it is not a wetland, as it does not support any hydrophytic vegetation. Therefore, the roadside swale and culvert near the northwest corner of the Subject Parcel does not meet the definition of a WOTUS, and the Project will not result in any impacts (temporary or permanent) to jurisdictional waters subject to regulation by the USACE or RWQCB under Sections 404/401 of the CWA.

State Lake/Streambed

The man-made storm drain feature consisting of a roadside swale and associated culvert near the northwest corner of the Subject Parcel does not meet the CDFW definition of a lake, river or stream and does not support any aquatic resources, stream-dependent wildlife resources or riparian habitats. Therefore, the Project will not result in any permanent or temporary impacts to jurisdictional "waters of the State."

3.4 Western Riverside County MSHCP Consistency Analysis

The Western Riverside County MSHCP is a criteria-based plan and identification of planning units on which to base the Criteria is necessary for such a criteria-based plan. The MSHCP Conservation Area is comprised of a variety of existing and proposed Cores, Extensions of Existing Cores, Linkages, Constrained Linkages and Non-contiguous Habitat Blocks. The MSHCP coverage area is divided into Area Plans based on the Riverside County's

General Plan Area Plan boundaries. Each of the Area Plans has: 1) established conservation criteria, 2) species specific surveys that may be required based on an on-site Habitat Assessment or field investigation, and 3) resources and areas identified for conservation. In each Area Plan, Core Habitat areas and Linkages have been identified.

The MSHCP is intended to satisfy the legal requirements to authorize the “take” of species covered under the Plan during otherwise lawful activities, by providing for the conservation of the Covered Species. There are 146 species covered by the MSHCP. Surveys are not required for 106 of these covered species. The remaining 40 species are conditionally covered under the MSHCP and may require focused surveys for proposed development projects. The 40 species that are not fully covered under the MSHCP include 4 birds, 3 mammals, 3 amphibians, 3 crustaceans, 14 Narrow Endemic Plants, and 13 Criteria Area plants. The need to conduct focused surveys for all but six of these 40 species is determined by the presence of suitable habitat within designated ‘survey areas’ mapped for each of the species. The remaining six species that require focused surveys throughout the entire MSHCP area are associated with riparian/riverine areas and vernal pools and include 3 riparian obligate bird species and 3 vernal pool associated fairy shrimp species.

The Subject Parcel is located within the French Valley/Lower Sedco Hills Subunit (Subunit 5) of the MSHCP’s Southwest Area Plan. According to the Western Riverside County Regional Conservation Authority’s (RCA) online MSHCP Information Tool query, the Subject Parcel is within the Meniffee Habitat Management Unit (HMU) and is mapped within Criteria Cell 5673. This criteria cell does contain MSHCP Conserved Lands; however, the Subject Parcel is excluded from any Conservation Areas and therefore, not targeted for conservation.

3.4.1 Previous Settlement and Release Agreement

The Subject Parcel is excluded from the MSHCP Conservation Area due to a May 17, 2016 Settlement and Release Agreement (Agreement) between the City of Murrieta, the Western Riverside County RCA, and the previous property owner, Calvary Chapel of Murrieta (Calvary Chapel). The 29-acre Subject Parcel was part of a larger 118-acre property previously owned by Calvary Chapel. According to the Agreement, Calvary Chapel filed an action with the 4th Appellate District Division 2 (Case No. E061554; Riverside County Superior Court Case No. RIC 10004733) claiming certain constitutional and legal rights violations against the City and the RCA, alleging that implementation of the MSHCP through the City and the RCA precluded Calvary Chapel’s proposed development of the property and resulted in the taking of the property. The City, the RCA, and Calvary Chapel later agreed to a Settlement and Release Agreement, whereby the RCA agreed to purchase 89 acres of the property to be included in the MSHCP reserve assembly and the remaining 29 acres (Subject Parcel) would be retained as a separate parcel by Calvary Chapel and/or its successors. According to the Agreement, the retained 29 acres (Subject Parcel) would not be subject to the MSHCP reserve assembly and Calvary Chapel and/or its successors and assigns would be free to develop the Subject Parcel without further conservation requirements or MSHCP application.

3.4.2 MSHCP Consistency Analysis Findings

The Subject Parcel is not mapped within any required survey areas for amphibians, mammals, or invertebrates. However, Burrowing Owl Surveys, Narrow Endemic Plants Species Surveys, and Criteria Area Species Surveys are required within Criteria Cell 5673. Therefore, in addition to the BRA survey, a BUOW habitat suitability assessment survey and floristic botanical field survey were conducted for the Project Area in accordance with the MSHCP requirements.

Subunit Area/Cell Criteria

Pursuant to Section 3.3.12 of the MSHCP, Subunits are areas within an Area Plan that contain target conservation acreages along with a description of the planning species, biological issues, and considerations.

Findings: According to the Western Riverside County MSHCP GIS overlay, the Subject Parcel is located within the French Valley/Lower Sedco Hills Subunit (Subunit 5), Criteria Cell 5673. However, the Subject Parcel is excluded from any Conservation Areas within Criteria Cell 5673 (Figure 5) and no further discussion on this subject is required in this analysis.



SOURCE: Google Earth and Western Riverside County Regional Conservation Authority's GIS Data

FIGURE 5

Jacobs

MSHCP Conserved Lands
Corman Leigh Whitewood Condo/Apartments Project

Amphibian, Mammal, Invertebrate and Other Criteria Area Species

Pursuant to Section 6.3.2 of the MSHCP, additional surveys may be needed for certain species in conjunction with Plan implementation in order to achieve coverage for these species.

Findings: According to the Western Riverside County MSHCP GIS overlay, the Subject Parcel is not located in an area where surveys are required for any amphibian, mammal, or invertebrate species. However, the Project site is within a Criteria Area Plant Species Survey Area. The Criteria Area Species identified for Criteria Cell 5673 are:

- Parish's brittlescale (*Atriplex parishi*)
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*)
- Thread-leaved brodiaea (*Brodiaea filifolia*)
- Round-leaved filaree (*California macrophylla*)
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*)
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)
- Little mousetail (*Myosurus minimus* ssp. *apus*)
- Mud nama (*Nama stenocarpa*)

Coulter's goldfields, little mousetail, and mud nama require more mesic environmental conditions (i.e. marshes, swamps, playas, vernal pools, wet fields, streambanks and/or lake shores) than are present within the Subject Parcel, which consists of xeric upland habitats. Additionally, Parish's brittlescale, Davidson's saltscale and smooth tarplant require alkaline and/or clay soils, rather than the slightly acidic, loamy soils that occur within the Subject Parcel. However, there is some marginally suitable habitat within the Subject Parcel for thread-leaved brodiaea and round-leaved filaree consisting of non-native grassland near the southwest corner of the site. Therefore, the BRA included a floristic botanical field survey of the Subject Parcel conducted by Jacobs biologists on April 7, 2021. The result of the botanical survey was that no Criteria Area Species were detected within the Subject Parcel. Therefore, the eight Criteria Area Species identified for Criteria Cell 5673 are considered absent from the Subject Parcel at the time of survey and the Project is not likely to adversely affect any of these species.

Burrowing Owl

Pursuant to Section 6.3.2 of the MSHCP, surveys shall be conducted within suitable habitat for BUOW, according to accepted protocols.

Findings: According to the Western Riverside County MSHCP GIS overlay, the Subject Parcel is located in an area where surveys are required for BUOW. As discussed in Section 3.2.1 (above), a BUOW habitat suitability assessment survey that included 100 percent visual coverage of any potentially suitable BUOW habitat was conducted within and immediately adjacent the Subject Parcel. The result of the survey was that no evidence of BUOW was found in the survey area and most of the Subject Parcel is not suitable to support this species. BUOW prefer short or sparse vegetation and the habitat within the Subject Parcel consists mostly of dense chamise chaparral, with a shrub cover > 90 percent. The southwestern most corner of the Subject Parcel does consist of non-native grassland, but no BUOW individuals or sign including castings, feathers or whitewash were observed. Therefore, BUOW are considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect this species.

Narrow Endemic Plant Species

Pursuant to Section 6.1.3 of the MSHCP, focused surveys for narrow endemic plant species are required for properties within the mapped areas if the appropriate habitat is present.

Findings: According to the Western Riverside County MSHCP GIS overlay, the Subject Parcel is located in an area where surveys are required for Narrow Endemic Plant Species. The Narrow Endemic Plant Species identified for Criteria Cell 5673 are:

- Munz's onion (*Allium munzii*)
- San Diego ambrosia (*Ambrosia pumila*)
- Many-stemmed dudleya (*Dudleya multicaulis*)
- Spreading navarretia (*Navarretia fossalis*)
- California Orcutt grass (*Orcuttia californica*)
- Wrights's trichocoronis (*Trichocoronis wrightii*)

Munz's onion, spreading navarretia, California Orcutt grass and Wrights's trichocoronis require more mesic environmental conditions (i.e. wet clay, vernal pools, ditches, meadows, seeps, marshes, swamps, and/or riparian forest) than are present within the Subject Parcel, which consists of xeric upland habitats. Although many-stemmed dudleya and San Diego ambrosia have not been documented in the Project vicinity, there is some suitable habitat (i.e. disturbed areas) for San Diego ambrosia and some marginally suitable habitat (i.e. rock outcrops) for many-stemmed dudleya within the Subject Parcel. Therefore, the BRA included a floristic botanical field survey of the Subject Parcel conducted by Jacobs biologists on April 7, 2021. The result of the botanical survey was that no Narrow Endemic Plant Species were detected within the Subject Parcel. Therefore, the six Narrow Endemic Plant Species identified for Criteria Cell 5673 are considered absent from the Subject Parcel at the time of survey and the Project is not likely to adversely affect any of these species.

Riparian/Riverine Areas and Vernal Pools

The MSHCP describes the protection of Riparian/Riverine Areas and Vernal Pools within the MSHCP Plan Area as important to the conservation of certain amphibian, avian, fish, invertebrate and plant species. The MSHCP describes guidelines to ensure that the biological functions and values for species inside the MSHCP Conservation Areas are maintained, as outlined in Volume 1, Section 6.1.2.

Pursuant to Section 6.1.2 of the MSHCP, Riparian/Riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergent vegetation, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from nearby fresh water sources, or areas with freshwater flow during all or a portion of the year. Riverine habitat includes all wetlands and deep-water habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Riverine habitat is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetlands dominated by trees, shrubs, persistent emergents, mosses, or lichens. In braided streams, the system is bounded by the banks forming the outer limits of the depression within which the braiding occurs. Springs discharging into a channel are considered part of the riverine habitat. The term riparian is used to define the type of wildlife habitat found along the banks of a river, stream, lake or other body of water. Riparian habitats are ecologically diverse and can be found in many types of environments including grasslands, wetlands, and forests.

Pursuant to Section 6.1.2 of the MSHCP, Vernal Pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics should consider (1) the length of time the area exhibits upland and wetland characteristics, and (2) 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.

Findings: No Riparian/Riverine areas were found within the Subject Parcel. There are no natural or man-made streams or other aquatic or riparian habitats within the Subject Parcel. Additionally, no vernal pools were identified within the Subject Parcel and based on a review of historic aerial imagery and USGS topographic maps, no vernal pools or other natural wetland features existed historically within the Subject Parcel.

Urban/Wildlands Interface

Section 6.1.4 of the MSHCP presents guidelines to minimize indirect effects of projects adjacent to MSHCP Conservation Areas. These guidelines are intended to reduce potential Edge Effects that could adversely affect biological resources within the MSHCP Conservation Areas. This section provides mitigation measures for impacts associated with Drainage, Toxics, Lighting, Noise, Invasives, Barriers, and Grading/Land Development.

Findings: The Subject Parcel is adjacent Western Riverside County RCA MSHCP Conserved Lands to the south and east, and Public Quasi-Public Conserved Lands to the west, respectively (Figure 5). Therefore, the Project may result in Edge Effects that could adversely affect biological resources within the adjacent MSHCP Conservation Areas and the MSHCP guidelines pertaining to the Urban/Wildlands Interface should be implemented.

4. Conclusions and Recommendations

4.1 Sensitive Biological Resources

A reconnaissance level BRA survey of the Subject Parcel was conducted by Jacobs in April of 2021 to identify potential habitat for special status wildlife within the Project Area. No special status wildlife species, including any state and/or federally listed threatened or endangered species, were observed or otherwise detected within the Project Area during the reconnaissance-level assessment survey. There is no suitable habitat for tricolored blackbird, Riverside fairy shrimp, or least Bell's vireo within the Project Area. Although there is some marginally suitable habitat for Stephens' kangaroo rat, Quino checkerspot butterfly, and CAGN, these species are all MSHCP "Covered Species." The MSHCP provides "take" authorization for Covered Species during otherwise lawful activities, by providing for the conservation of the Covered Species. The City of Murrieta is a signatory to the MSHCP, and the Project will not impact any MSHCP Conservation Areas or USFWS designated Critical Habitat. Therefore, "take" authorization is provided for any potential Project-related impacts to Stephens' kangaroo rat, Quino checkerspot butterfly, and/or CAGN and focused surveys for these species are not required.

The Subject Parcel is within a MSHCP Criteria Area Plant Species Survey Area for eight special status plant species, as well as a Narrow Endemic Plant Species Survey Area for six narrow endemic plant species. The environmental conditions within the Subject Parcel are not suitable for 10 of the 14 Criteria Area or Narrow Endemic Plant Species identified for Criteria Cell 5673. However, there is some marginally suitable habitat within the Subject Parcel for thread-leaved brodiaea, round-leaved filaree, many-stemmed dudleya, and San Diego ambrosia. Therefore, a floristic botanical field survey was also conducted by Jacobs in April of 2021 to determine whether any of the MSHCP Criteria Area Species, Narrow Endemic Plant Species, or any other special status plant species documented in the Project vicinity were present within the Subject Parcel (see Appendix C). The result of the floristic botanical field survey was that no MSHCP Criteria Area Species, Narrow Endemic Plant Species, or other special status plant species were found within the Subject Parcel.

The Project Area does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species, and the Project will not result in any loss or adverse modification of Critical Habitat. Additionally, the Project will not impact any MSHCP Conservation Areas. The Subject Parcel is located within Criteria Cell 5673 of the French Valley/Lower Sedco Hills MSHCP Subunit (Subunit 5). However, the Subject Parcel is excluded from any Conservation Areas within Criteria Cell 5673 (Figure 5).

Burrowing Owl

A BUOW habitat suitability assessment was conducted by Jacobs in April of 2021 that included 100 percent visual coverage of any potentially suitable BUOW habitat within and adjacent the Subject Parcel. The result of the survey was that no evidence of BUOW was found in the survey area and most of the Subject Parcel is not suitable to support this species. No BUOW individuals or sign including castings, feathers or whitewash were observed and BUOW are considered absent from the Project Area at the time of survey. Although the Project is not likely to adversely affect this species, there is still a low potential for the Subject Parcel to become occupied by BUOW between the time the survey was conducted and the commencement of Project-related site disturbance. Therefore, the following precautionary avoidance measures are recommended to ensure the Project does not result in any impacts to BUOW:

- Ø Pre-construction surveys for BUOW should be conducted no more than 3 days prior to commencement of Project-related ground disturbance to verify that BUOW remain absent from the Project Area.

The BUOW is a state and federal SSC and is also protected under the MBTA and by state law under the California FGC (FGC #3513 & #3503.5). In general, impacts to BUOW can be avoided by avoiding occupied burrows and conducting work outside of their nesting season (peak BUOW breeding season is identified as April 15th to August

15th). However, if all work cannot be conducted outside of nesting season and occupied burrows cannot be avoided, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations to minimize impacts to this species. Regardless of survey results and conclusions given herein, BUOW are protected by applicable state and federal laws. As such, if a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report is intended to authorize any form of disturbance to BUOW. Such authorization must come from the appropriate regulatory agencies, including CDFW and/or USFWS.

Nesting Birds

The habitat within the Project Area is suitable to support nesting birds. Most native bird species are protected from unlawful take by the MBTA (Appendix D). In December 2017, the Department of the Interior (DOI) issued a memorandum concluding that the MBTA's prohibitions on take apply "[...] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Then in April 2018, the USFWS issued a guidance memorandum that further clarified that the take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA (USFWS 2018).

However, the State of California provides additional protection for native bird species and their nests in the FGC (Appendix D). Bird nesting protections in the FGC include the following (Sections 3503, 3503.5, 3511, 3513 and 3800):

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), and Strigiformes (owls).
- Section 3511 prohibits the take or possession of Fully Protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that Project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.
- Section 3800 prohibits the take of any any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally February 1st through August 31st. However, if all work cannot be conducted outside of nesting season, the following is recommended:

- Ø To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre-construction nesting bird surveys prior to Project-related disturbance to suitable nesting areas to identify any active nests. If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no-work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

4.2 Jurisdictional Waters

In addition to the BRA and focused botanical field survey, Jacobs also assessed the Subject Parcel for the presence of any state and/or federal jurisdictional waters. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland WOTUS or waters of the State potentially subject to regulation by the USACE under Section 404 of the CWA, the RWQCB under Section 401 of the CWA and/or Porter Cologne Water Quality Control Act, or the CDFW under Section 1602 of the California FGC, respectively. Therefore, the Project will not impact any jurisdictional waters and no state or federal jurisdictional waters permitting will be required.

4.3 MSHCP Consistency Analysis

The Project is consistent with the MSHCP policies found in Section 6 of the MSHCP, which include Riparian/Riverine Areas/Vernal Pools, Narrow Endemic Plant Species, Criteria Area Species, Urban/Wildlands Interface, and Surveys for Special Status Species (BUOW). The Subject Parcel is within the Western Riverside County MSHCP boundary and is within a Criteria Cell (Criteria Cell 5673). The Subject Parcel is excluded from any MSHCP Conservation Areas (Figure 5). However, the Subject Parcel is adjacent Western Riverside County RCA MSHCP Conserved Lands to the south and east, and Public Quasi-Public Conserved Lands to the west, respectively (Figure 5). Therefore, the Project Proponent will need to implement the following MSHCP Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface:

- Ø *Drainages* – Proposed developments in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions.
- Ø *Toxics* – Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area.
- Ø *Lighting* – Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.
- Ø *Noise* – Proposed noise generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.
- Ø *Invasives* – The Project shall avoid the use of invasive species (MSHCP Section 6.1.4 – Table 6-2) for landscaping portions of development that are adjacent to the MSHCP Conservation Area.
- Ø *Barriers* – Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass or dumping in the MSHCP Conservation Area.
- Ø *Grading/Land Development* – Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

The Project Proponent should be prepared to pay the MSHCP Local Development Mitigation Fee and restrict all Project related impacts to existing right-of-way and/or other areas outside of the adjacent Conserved Lands. No other conservation or avoidance measures are expected, and the Project as described, is consistent with the Southwest Area Plan conservation criteria and overall conservation goals and objectives set forth in the MSHCP.

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Appendix A. CNDDDB Species and Habitats Documented Within the *Murrieta, Romoland, Winchester and Bachelor* *Mountain* USGS 7.5-Minute Quadrangles

Special Status Species Occurrence Potential Analysis

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand- verbena	None/ None	G5T2?; S2; CNPS: 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m.	Some of the habitats and environmental conditions this species is associated with are present within the Subject Parcel. Occurrence potential is moderate.
<i>Accipiter cooperii</i>	Cooper's hawk	None/ None	G5; S4; CDFW: WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	There are some suitable nesting sites for this species adjacent the Subject Parcel. Occurrence potential is moderate.
<i>Agelaius tricolor</i>	tricolored blackbird	None/ Threatened	G1G2; S1S2; CDFW: SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.
<i>Aimophila ruficeps</i> <i>canescens</i>	southern California rufous-crowned sparrow	None/ None	G5T3; S3; CDFW: WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	This species is present within the Subject Parcel.
<i>Allium munzii</i>	Munz's onion	Endangered/ Threatened	G1; S1; CNPS: 1B.1	Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 375-1040 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Almutaster</i> <i>pauciflorus</i>	alkali marsh aster	None/ None	G4; S1S2; CNPS: 2B.2	Meadow and seeps. Alkaline. 60-765 m.	The conditions and habitats associated with this species are absent from the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Ambrosia pumila</i>	San Diego ambrosia	Endangered/ None	G1; S1; CNPS: 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	The nearest documented occurrence for this species is approx. 3.8 miles SE of the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Anniella stebbinsi</i>	Southern California legless lizard	None/ None	G3; S3; CDFW: SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	There is some suitable habitat for this species near the eastern portion of the Subject Parcel, but the nearest documented occurrence for this species (2000) is approx. 4.5 miles SE of the Subject Parcel. Occurrence potential is low-moderate.
<i>Aquila chrysaetos</i>	golden eagle	None/ None	G5; S3; CDFW: FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	There are no suitable nesting sites for this species in the Project Area. Occurrence potential is low.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	None/ None	G2; S2; CNPS: 1B.1	Chaparral. Usually found in gabbro chaparral. 100-870 m.	This species was not observed within the Subject Parcel during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Arizona elegans occidentalis</i>	California glossy snake	None/ None	G5T2; S2; CDFW: SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	There is some suitable habitat for this species near the eastern portion of the Subject Parcel, but the nearest documented occurrence for this species (1946) is approx. 3.9 miles SW of the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Artemisiospiza belli</i> <i>belli</i>	Bell's sage sparrow	None/ None	G5T2T3; S3; CDFW: WL	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	This species is present within the Subject Parcel.
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None/ None	G5; S2S3; CDFW: WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	This species is present within the Subject Parcel.
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None/ None	G5T5; S3; CDFW: SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	This species is present within the Subject Parcel.
<i>Athene cunicularia</i>	burrowing owl	None/ None	G4; S3; CDFW: SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	There is some marginally suitable habitat for this species in the Project Area but no evidence of BUOW was found in the survey area and most of the Subject Parcel is not suitable to support this species. Occurrence potential is low.
<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crowscale	Endangered/ None	G4T1; S1; CNPS: 1B.1	Playas, valley and foothill grassland, vernal pools. Alkaline areas in the San Jacinto River Valley. 35-460 m.	The conditions and habitats associated with this species are absent from the Subject Parcel. Occurrence potential is low.
<i>Atriplex parishii</i>	Parish's brittlescale	None/ None	G1G2; S1; CNPS: 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 4-1420 m.	The conditions and habitats associated with this species are absent from the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	None/ None	G5T1; S1; CNPS: 1B.2	Coastal bluff scrub, coastal scrub. Alkaline soil. 0-480 m.	The conditions and habitats associated with this species are absent from the Subject Parcel. Occurrence potential is low.
<i>Bombus crotchii</i>	Crotch bumble bee	None/ Candidate Endangered	G3G4; S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Some of the food plants required by this species are present within the Subject Parcel but the nearest documented occurrence is approx. 6.6 miles E of the Subject Parcel. Occurrence potential is low.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Threatened/ None	G3; S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	The aquatic habitats required by this species are absent from the Subject Parcel. Therefore, this species is considered absent from the Subject Parcel.
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	Endangered/ None	G2; S2	Endemic to San Diego and Orange County mesas. Vernal pools.	The aquatic habitats required by this species are absent from the Subject Parcel. Therefore, this species is considered absent from the Subject Parcel.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	Threatened/ Endangered	G2; S2; CNPS: 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	This species was not observed within the Subject Parcel during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Brodiaea santarosae</i>	Santa Rosa Basalt brodiaea	None/ None	G1; S1; CNPS: 1B.2	Valley and foothill grassland. Santa Rosa Basalt. 585-1045 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Buteo regalis</i>	ferruginous hawk	None/ None	G4; S3S4; CDFW: WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.
<i>Buteo swainsoni</i>	Swainson's hawk	None/ Threatened	G5; S3	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None/ None	G4; S4; CNPS: 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	The environmental conditions this species is associated with are present on the Subject Parcel, but this species has not been documented in the Project vicinity. Occurrence potential is low.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	None/ None	G3G4T2; S2; CNPS: 1B.2	Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	The environmental conditions this species is associated with are present on the Subject Parcel and this species has been documented in the Project vicinity. Occurrence potential is moderate.
<i>Caulanthus simulans</i>	Payson's jewelflower	None/ None	G4; S4; CNPS: 4.2	Chaparral, coastal scrub. Frequently in burned areas, or in disturbed sites such as streambeds; also, on rocky, steep slopes. Sandy, granitic soils. 90-2200 m.	The environmental conditions this species is associated with are present on the Subject Parcel, but this species has not been documented in the Project vicinity. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/ None	G3G4T2; S2; CNPS: 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also, in disturbed places. 5-1170 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/ None	G5T3; S3; CDFW: SSC	Variety of habitats including coastal scrub, chaparral & grassland in San Diego County. Attracted to grass- chaparral edges.	The Subject Parcel contains suitable habitat for this species. Occurrence potential is high.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/ None	G5T3T4; S3S4; CDFW: SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	The Subject Parcel contains suitable habitat for this species. Occurrence potential is high.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/ None	G3T2; S2; CNPS: 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of two vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90- 1220 m.	The environmental conditions this species is associated with are present on the Subject Parcel and this species has been documented adjacent the Subject Parcel. Occurrence potential is high.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/ None	G5T3; S3; CNPS: 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1630 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Circus hudsonius</i>	northern harrier	None/ None	G5; S3; CDFW: SSC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Clinopodium chandleri</i>	San Miguel savory	None/ None	G3; S2; CNPS: 1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Rocky, gabbroic or metavolcanic substrate. 120-975 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	None/ None	G5T5; S1S2; CDFW: SSC	Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	The Subject Parcel contains suitable habitat for this species. Occurrence potential is high.
<i>Crotalus ruber</i>	red-diamond rattlesnake	None/ None	G4; S3; CDFW: SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	The Subject Parcel contains suitable habitat for this species. Occurrence potential is high.
<i>Cryptantha wigginsii</i>	Wiggins' cryptantha	None/ None	G2; S1; CNPS: 1B.2	Coastal scrub. Often on clay soils. 45-110 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	None/ None	G5T2T3; S2?	Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg.	There is some suitable habitat for this species in the Subject Parcel. Occurrence potential is moderate.
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	Endangered/ Candidate Endangered	G5T1; S1; CDFW: SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	There is no suitable habitat for this species in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	Endangered/ Threatened	G2; S2	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	There is some marginally suitable habitat for this species in the Project Area and this species has been documented (1988) adjacent the Subject Parcel to the W/SW. However, most of the Subject Parcel is not suitable for this species. Occurrence potential is low.
<i>Elanus leucurus</i>	white-tailed kite	None/ None	G5; S3S4; CDFW: FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.
<i>Emys marmorata</i>	western pond turtle	None/ None	G3G4; S3; CDFW: SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered absent from the Project Area.
<i>Eremophila alpestris actia</i>	California horned lark	None/ None	G5T4Q; S4; CDFW: WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also, main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	There is no suitable habitat for this species in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button- celery	Endangered/ Endangered	G5T1; S1; CNPS: 1B.1	Vernal pools, coastal scrub, valley and foothill grassland. San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; usually surrounded by scrub. 15- 880 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Eumops perotis californicus</i>	western mastiff bat	None/ None	G4G5T4; S3S4; CDFW: SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	There are no suitable roosting sites for this species in the Subject Parcel. Occurrence potential is low.
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	Endangered/ None	G5T1T2; S1S2	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants <i>Plantago erecta</i> , <i>P. insularis</i> , and <i>Orthocarpus purpurescens</i> .	There is some marginally suitable habitat for this species in the Project Area and this species has been documented (1998) adjacent the Subject Parcel to the SW. Occurrence potential is moderate.
<i>Gila orcuttii</i>	arroyo chub	None/ None	G2; S2; CDFW: SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered absent from the Project Area.
<i>Haliaeetus leucocephalus</i>	bald eagle	Delisted/ Endangered	G5; S3; CDFW: FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	There are no suitable nesting sites or foraging habitat for this species in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/ None	G4; S3; CNPS: 4.2	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 20-955 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	None/ None	G3; S3; CNPS: 1B.2	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and stream sides. 280-2035 m.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Lanius ludovicianus</i>	loggerhead shrike	None/ None	G4; S4; CDFW: SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	The Subject Parcel contains suitable habitat for this species. Occurrence potential is high.
<i>Lasiurus xanthinus</i>	western yellow bat	None/ None	G4G5; S3; CDFW: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	There are no suitable roosting sites or aquatic foraging habitats for this species in the Subject Parcel. Occurrence potential is low.
<i>Lasthenia glabrata</i> <i>ssp. coulteri</i>	Coulter's goldfields	None/ None	G4T2; S2; CNPS: 1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Lepidium virginicum</i> <i>var. robinsonii</i>	Robinson's pepper-grass	None/ None	G5T3; S3; CNPS: 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	The environmental conditions this species is associated with are present on the Subject Parcel and this species has been documented in the Project vicinity. Occurrence potential is moderate.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/ None	G5T3T4; S3S4; CDFW: SSC	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	There is some suitable habitat for this species in the Project Area. Occurrence potential is moderate.
<i>Linderiella occidentalis</i>	California linderiella	None/ None	G2G3; S2S3	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	The environmental conditions this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
<i>Linderiella santarosae</i>	Santa Rosa Plateau fairy shrimp	None/ None	G1G2; S1	Found only in the vernal pools on Santa Rosa Plateau in Riverside County. Southern basalt flow vernal pools.	The Subject Parcel is outside the known range for this species and the aquatic habitats required by this species are absent from the Subject Parcel. Therefore, this species is considered absent from the Subject Parcel.
<i>Myosurus minimus ssp. apus</i>	little mousetail	None/ None	G5T2Q; S2; CNPS: 3.1	Vernal pools, valley and foothill grassland. Alkaline soils. 20-640 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Navarretia fossalis</i>	spreading navarretia	Threatened/ None	G2; S2; CNPS: 1B.1	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. 15-850 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/ None	G2; S2; CNPS: 1B.2	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3- 1235 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/ None	G5T3T4; S3S4; CDFW: SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	This species is present within the Subject Parcel.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	None/ None	G5T3; S3; CDFW: SSC	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.	The only documented occurrence for this species in the 4-quad CNDDB query is a historical occurrence (1932) from approx. 9.1 miles N of the Subject Parcel. Occurrence potential is low.
<i>Orcuttia californica</i>	California Orcutt grass	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Vernal pools. 10-660 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/ None	G5T2; S1S2; CDFW: SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	There is some marginally suitable habitat for this species near the eastern portion of the Subject Parcel, but the nearest documented occurrence for this species (1993) is approx. 3.5 miles SE of the Subject Parcel. Occurrence potential is low- moderate.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Perognathus longimembris internationalis</i>	Jacumba pocket mouse	None/ None	G5T2T3; S2; CDFW: SSC	Desert riparian, desert scrub, desert wash, coastal scrub and sagebrush. Rarely found on rocky sites; uses all canopy coverages.	The only documented occurrence for this species (1993) in the 4-quadrant CNDDDB query is approx. 10.3 miles SE of the Subject Parcel. Occurrence potential is low.
<i>Phrynosoma blainvillii</i>	coast horned lizard	None/ None	G3G4; S3S4; CDFW: SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	This species is present within the Subject Parcel.
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	Threatened/ None	G4G5T3Q; S2; CDFW: SSC	Obligate, permanent resident of coastal sage scrub below 2,500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	There is some marginally suitable habitat for this species in the Project Area and this species has been documented (2002) adjacent the Subject Parcel to the SW. Occurrence potential is moderate.
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/ None	G4; S2; CNPS: 2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35-515 m.	The only documented occurrence for this species (1995) in the 4-quadrant CNDDDB query is approx. 5 miles SW of the Subject Parcel. Occurrence potential is low.
<i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	southern mountains skullcap	None/ None	G4T3; S3; CNPS: 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 425-2000 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.
<i>Socalchemmis icenoglei</i>	Icenogle's socalchemmis spider	None/ None	G1; S1	Known only from the type locality in the vicinity of Winchester, Riverside County.	Occurrence potential is low.
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	None/ None	G4; S4		This habitat type is absent from the Subject Parcel.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	None/ None	G3; S3.2		This habitat type is absent from the Subject Parcel.
Southern Interior Basalt Flow Vernal Pool	Southern Interior Basalt Flow Vernal Pool	None/ None	G1; S1.2		This habitat type is absent from the Subject Parcel.
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None/ None	G4; S4		This habitat type is absent from the Subject Parcel.
<i>Spea hammondi</i>	western spadefoot	None/ None	G2G3; S3; CDFW: SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered absent from the Project Area.
<i>Sphaerocarpos drewiae</i>	bottle liverwort	None/ None	G1; S1; CNPS: 1B.1	Chaparral, coastal scrub. Liverwort in openings; on soil. 60-585 m.	The only documented occurrence for this species (2001) in the 4-quadrant CNDDDB query is approx. 6.4 miles SW of the Subject Parcel. Occurrence potential is low.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	Endangered/ None	G1G2; S1S2	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	The aquatic habitats required by this species are absent from the Subject Parcel. Therefore, this species is considered absent from the Subject Parcel.
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	None/ None	G2; S2; CNPS: 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernal mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	The environmental conditions this species is associated with are absent from the Subject Parcel and this species was not detected on site during the floristic botanical survey conducted by Jacobs in April 2021. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Taricha torosa</i>	Coast Range newt	None/ None	G4; S4; CDFW: SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow-moving streams.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered absent from the Project Area.
<i>Texosporium sancti-jacobi</i>	woven-spored lichen	None/ None	G3; S2; CNPS: 3	Chaparral. Open sites; in California with <i>Adenostoma fasciculatum</i> , <i>Eriogonum</i> , <i>Selaginella</i> . Found on soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> . 60-870 m.	The only documented occurrence for this species (1998) in the 4-quadrant CNDDDB query is approx. 8.1 miles SE of the Subject Parcel. Occurrence potential is low.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/ None	G4; S3S4; CDFW: SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	The aquatic habitats required by this species are absent from the Project Area. Therefore, this species is considered absent from the Project Area.
Valley Needlegrass Grassland	Valley Needlegrass Grassland	None/ None	G3; S3.1		This habitat type is absent from the Subject Parcel.
<i>Vireo bellii pusillus</i>	least Bell's vireo	Endangered/ Endangered	G5T2; S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, <i>Baccharis</i> , mesquite.	There is no suitable habitat for this species in the Project Area. Occurrence potential is low.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: 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, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa*. The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.

S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.

S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.

S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.

S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A = Plants presumed extirpated in California, but common elsewhere.

2B = Plants rare, threatened, or endangered in California, but more common elsewhere.

3 = Plants about which more information is needed; a review list.

4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

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

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

Appendix B. Site Photos



Photo 1. Northwest corner of Subject Parcel, looking east. Clinton Keith Road on the far left.



Photo 2. Northwest corner of Subject Parcel, looking south. Whitewood Road on the far right.



Photo 3. Non-jurisdictional storm drain feature near northwest corner of Subject Parcel, looking south. Whitewood Road on the far right.



Photo 4. Non-jurisdictional storm drain feature near northwest corner of Subject Parcel, looking north. Whitewood Road on the left; Clinton Keith Road in the far ground.



Photo 5. Southwest corner of Subject Parcel, looking north. Whitewood Road on the far left.



Photo 6. Southwest corner of Subject Parcel, looking east.



Photo 7. Southern portion of Subject Parcel, looking northeast toward the middle of the site from the southern boundary of the Subject Parcel.



Photo 8. Northeast corner of Subject Parcel, looking south.



Photo 9. Eastern portion of the site, looking west from east of the Subject Parcel.



Photo 10. Southeast corner of Subject Parcel, looking north.

Appendix C. Plant List

List of Plant Species Observed within the Subject Parcel

Scientific Name	Common Name	Life Form
Adoxaceae	Moschatel Family	
<i>Sambucus nigra</i>	black elderberry	shrub
Anacardiaceae	Sumac Family	
<i>Rhus aromatica</i>	fragrant sumac	shrub
Apiaceae	Parsley Family	
<i>Apiastrum angustifolium</i>	wild celery	annual herb
Asteraceae	Aster Family	
<i>Artemisia californica</i>	California sagebrush	shrub
<i>Encelia californica</i>	bush sunflower	shrub
<i>Encelia farinosa</i>	brittlebush	shrub, sub-shrub
<i>Eriophyllum multicaule</i>	branched woolly sunflower	annual herb
<i>Lasthenia californica</i>	common goldfields	annual herb
<i>Oncosiphon piluliferum</i> *	stinknet*	annual herb
Brassicaceae	Mustard Family	
<i>Hirschfeldia incana</i> **	short podded mustard **	perennial herb
Boraginaceae	Borage family	
<i>Amsinckia intermedia</i>	common fiddleneck	annual herb
<i>Cryptantha</i> spp.	cryptantha	annual herb
<i>Nemophila menziesii</i>	baby blue eyes	annual herb
<i>Phacelia cicutaria</i>	caterpillar phacelia	annual herb
<i>Phacelia minor</i>	California bluebell	annual herb
Cucurbitaceae	Gourd Family	
<i>Marah macrocarpa</i>	Chilicothe	perennial herb or vine
Fabaceae	Pea Family	
<i>Acmispon glaber</i>	deerweed	perennial herb
<i>Lupinus bicolor</i>	lupine	annual or perennial herb
Geraniaceae	Walnut Family	
<i>Erodium cicutarium</i> **	redstem fillaree**	annual herb
Lamiaceae	Mint family	
<i>Salvia columbariae</i>	chia sage	annual herb

Scientific Name	Common Name	Life Form
<i>Salvia mellifera</i>	black sage	shrub
Montiaceae	Miner's Lettuce family	
<i>Claytonia perfoliata</i>	miner's lettuce	annual herb
<i>Claytonia</i> sp.	claytonia	annual herb
Onagraceae	Evening Primrose Family	
<i>Camissoniopsis bistorta</i>	California sun cup	annual herb
<i>Clarkia purpurea</i> ssp. <i>quadrivulnera</i>	purple clarkia	annual herb
Papaveraceae	Poppy Family	
<i>Eschscholzia californica</i>	California poppy	annual or perennial herb
Phrymaceae	Lopseed Family	
<i>Diplacus puniceus</i>	sticky monkeyflower	shrub
Poaceae	Grass Family	
<i>Bromus</i> spp.**	brome grasses**	annual grasses
Polemoniaceae	Phlox Family	
<i>Allophyllum glutinosum</i>	sticky false gilia	annual herb
<i>Eriastrum sapphirinum</i> ssp. <i>dasyanthum</i>	sapphire woollystar	annual herb
<i>Gilia angelensis</i>	chaparral gilia	annual herb
<i>Leptosiphon lemmonii</i>	Lemmon's linanthus	annual herb
<i>Linanthus dianthiflorus</i>	fringed linanthus	annual herb
Polygonaceae	Buckwheat Family	
<i>Chorizanthe</i> spp.	spineflower	annual herb
<i>Eriogonum fasciculatum</i> var. <i>foliolosum</i>	California buckwheat	shrub
<i>Lastarriaea coriacea</i>	leather spineflower	annual herb
<i>Navarretia atractylodes</i>	holly leaf navarretia	annual herb
Rhamnaceae	Buckthorn Family	
<i>Ceanothus crassifolius</i>	hoary leaved ceanothus	shrub
Rosaceae	Rose Family	
<i>Adenostoma fasciculatum</i>	chamise	tree or shrub
Themidaceae	Brodiaea Family	

Scientific Name	Common Name	Life Form
<i>Dipterostemon capitatus</i>	blue dicks	perennial herb

*non-native

**invasive species

Appendix D. Regulatory Framework

Federal Regulations

Clean Water Act

The purpose of the Clean Water Act (CWA) of 1977 is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Section 404 of the CWA prohibits the discharge of dredged or fill material into “waters of the United States” (WOTUS) without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas “that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] 328.3 7b). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

Navigable Waters Protection Rule

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. According to the EPA and the Department of the Army’s April 21, 2020 (effective June 22, 2020) “Navigable Waters Protection Rule: Definition of ‘Waters of the United States,’” WOTUS are defined as: “The territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters.” (85 FR 22250). The Navigable Waters Protection Rule specifically excludes from the definition of WOTUS:

- “Groundwater, including groundwater drained through subsurface drainage systems;
- ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- diffuse stormwater runoff and directional sheet flow over upland;
- ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- prior converted cropland;
- artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

- stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- waste treatment systems.” (85 FR 22250).

Federal Endangered Species Act (ESA)

The federal Endangered Species Act (ESA) of 1973 protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of the ESA (USA) prohibits the taking of endangered wildlife, where taking is defined as any effort to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. The ESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features “essential to the conservation of the species,” or which may require “special Management consideration or protection...” (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the ESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in “the destruction or adverse modification of habitat determined to be critical” (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of ESA provides a means for authorizing the “take” of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or National Marine Fisheries Service (NMFS), as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a Proposed Project “may affect” a listed species or destroy or modify critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans

Section 10 of the federal ESA requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or “take”) endangered or threatened wildlife on their land. To obtain a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal Project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 implements international treaties between the United States and other nations created to protect migratory birds, any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).

However, on December 22, 2017 the U.S. Department of the Interior (DOI) issued a memorandum concluding that MBTA's prohibitions on take apply "[...] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Therefore, take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA. Then, on April 11, 2018, the USFWS issued a guidance memorandum that provided further clarification on their interpretation:

"We interpret the M-Opinion to mean that the MBTA's prohibitions on take apply when the purpose of an action is to take migratory birds, their eggs, or their nests. Conversely, the take of birds, eggs or nests occurring as the result of an activity, the purpose of which is not to take birds, eggs or nests, is not prohibited by the MBTA" (USFWS 2018).

Therefore, the MBTA is currently interpreted to prohibit the take of birds, nests or eggs when the *purpose* or *intent* of the action is to take birds, eggs or nests, not when the take of birds, eggs or nests is incidental to but not the intended purpose of an otherwise lawful action.

Executive Orders (EO)

Invasive Species – EO 13112 (1999): Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

Migratory Bird – EO 13186 (2001): Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act

The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108-447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior, through the USFWS, to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973” (USFWS, 2008a).

State Regulations

California Fish and Game Code Sections 1600 through 1606 of the CFGC

This section requires that a Streambed Alteration Application be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, Projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Endangered Species Act

The California Endangered Species Act (CESA) (Sections 2050 to 2085) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats by protecting “all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation.” Animal species are listed by the CDFW as threatened or endangered, and plants are listed as rare, threatened, or endangered. However, only those plant species listed as threatened or endangered receive protection under the California ESA.

CESA mandates that state agencies do not approve a Project that would jeopardize the continued existence of these species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. There are no state agency consultation procedures under the California ESA. For Projects that would affect a species that is federally and State listed, compliance with ESA satisfies the California ESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the California ESA under Section 2080.1. For Projects that would result in take of a species that is state listed only, the Project sponsor must apply for a take permit, in accordance with Section 2081(b).

Fully Protected Species

Four sections of the California Fish and Game Code (CFGF) list 37 fully protected species (CFGF Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and state that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

Bird Nesting Protections

Bird nesting protections (Sections 3503, 3503.5, 3511, 3513 and 3800) in the CFGF include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), and Strigiformes (owls).
- Section 3511 prohibits the take or possession of Fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that Project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

Section 3800 prohibits the take of any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGF Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA (CFGF 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.