

APPENDIX 2

Biological Resources Assessment And MSHCP Consistency Analysis For the Vesting Tentative Parcel Map 30394 (VTPM 01-194) / Development Plan (01-195)

City of Murrieta, California
USGS – *Murrieta* 7.5-Minute Quadrangle
California Section 7 of Township 7 S, Range 3 W

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Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Lisa Patterson, National Senior Environmental Project Manager

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Table 1 – CNDDDB Results for the *Murrieta* USGS 7.5-Minute Quadrangle

Site Photos

Appendix A – Regulatory Framework

1 Introduction

On behalf of Tom Dodson and Associates (TDA), Jacobs Engineering Group, Inc. (Jacobs) has prepared this Biological Resources Assessment for the Vesting Tentative Parcel Map 30394 (VTPM 01-194) / Development Plan (01-195) (Project). This infill Project consists of a 210-unit apartment complex comprised of 17 buildings with associated parking facilities and recreational amenities located in the City of Murrieta, Riverside County, California.

The purpose of the BRA is to address potential effects of the Project to 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 the California Endangered Species Act (CESA) or species 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). As part of the BRA, the Project site was also assessed to determine the extent (if any) of State and federal jurisdictional waters (i.e. Waters of the U.S. and Waters of the State) within the Project Area 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 1602 of the California Fish and Game Code (FGC), respectively.

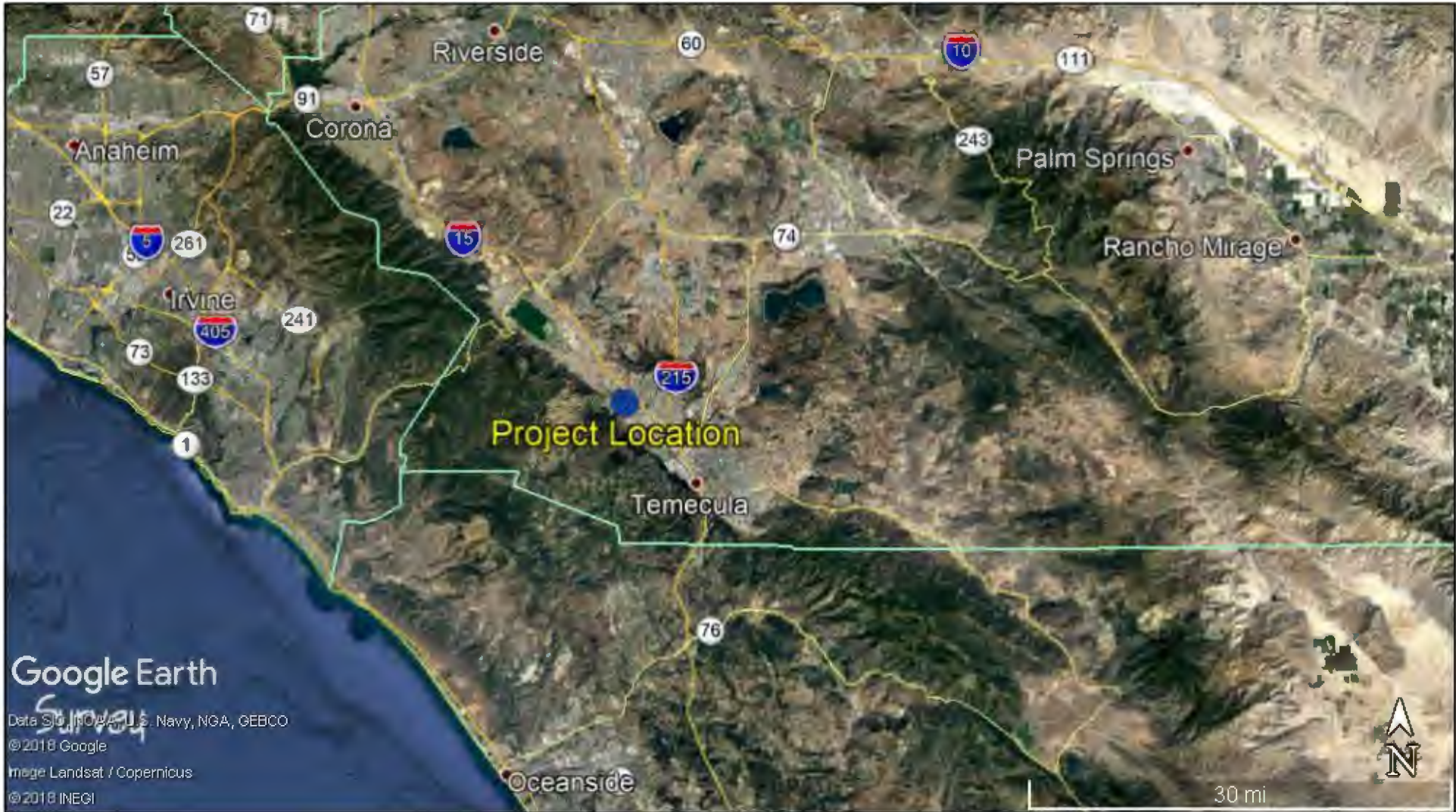
In addition to the BRA, Jacobs prepared a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis, which is included in the scope of this report. As part of the City of Murrieta's approval process, a Western Riverside County MSCHP compliance report is required. The purpose of this report is to assess whether the proposed Project is consistent with the conditions and provisions identified in the MSCHP. 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 County of Riverside 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.

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 Project vicinity, whose habitat requirements are present within or immediately adjacent to the Project site. Results of the habitat assessment are intended to provide sufficient baseline information to the Project proponent and, if required, to federal and State regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and CDFW, respectively, to determine if impacts will occur to sensitive biological resources and to identify mitigation measures to offset those impacts. Per the MSHCP, the Project site is mapped within a burrowing owl (*Athene cunicularia* [BUOW]) survey requirement area. Therefore, in addition to the BRA survey, a BUOW habitat suitability assessment survey was conducted for the Project Area in accordance with the MSHCP requirements.

1.1 Location

The proposed Project is generally located in Section 7 of Township 7 South, Range 3 West, San Bernardino Base Meridian (SBBM), within the City of Murrieta, Riverside County, California (Figures 1&2). 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 on the northeast corner of the intersection of Nutmeg Street and Washington Avenue (Figures 2&3). The Project site consists of a 14.4-acre parcel that is bordered on the northwest and northeast by existing single-family residential developments, on the southwest by Washington Avenue and on the southeast by Nutmeg Street (Figure 3).

The Project Area is defined as all areas that may be impacted directly or indirectly by the proposed Project. It encompasses the geographic extent of environmental changes (i.e. the physical, chemical and biotic effects) that will result directly and indirectly from the Project.



SOURCE: Google Earth

FIGURE 1

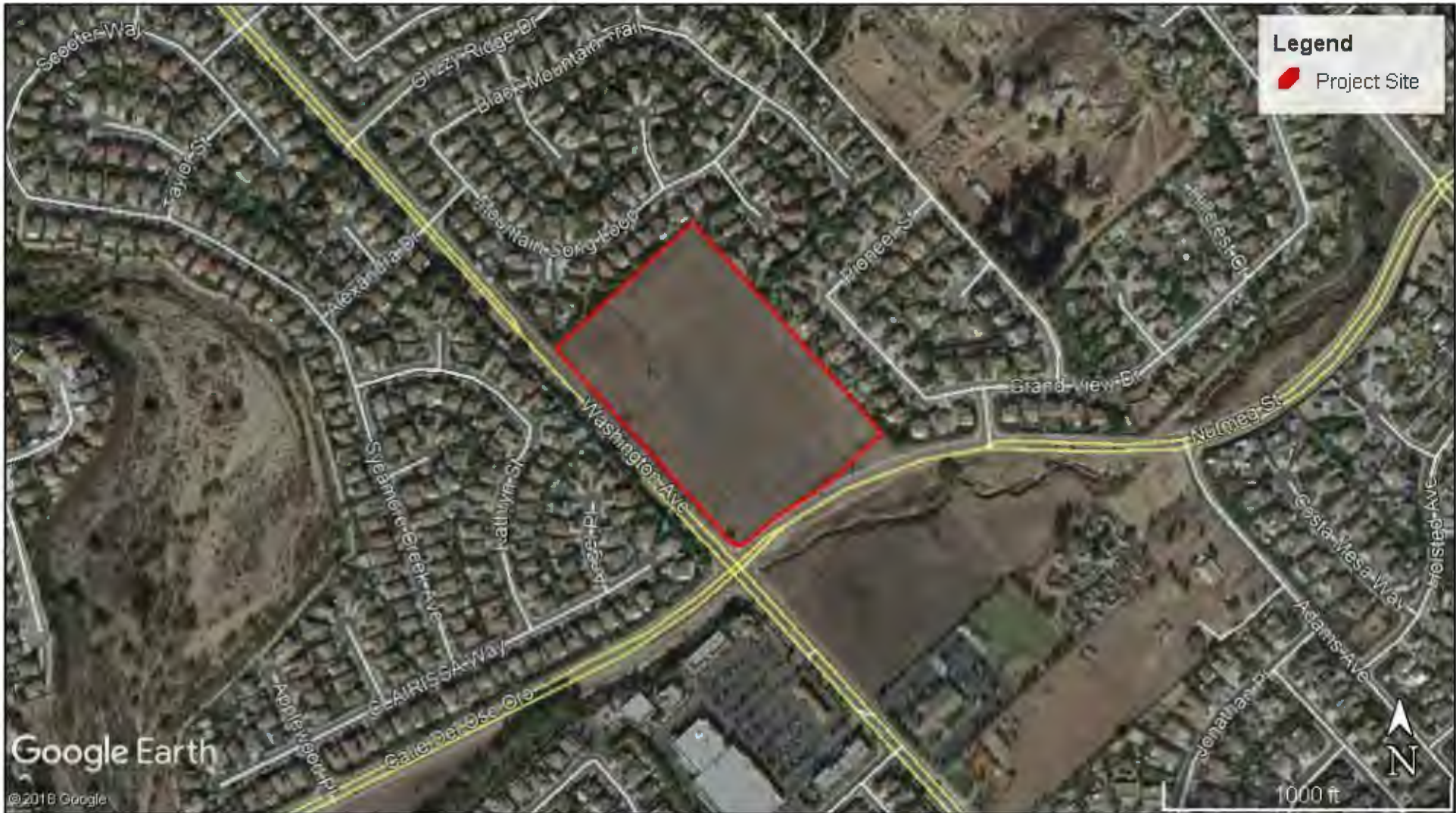
JACOBS Regional Location Vesting Tentative Parcel Map 30394 (VTPM 01-194) / Development Plan (01-195)



SOURCE: Google Earth

FIGURE 2

JACOBS **Topographic Map of Project Area**
 Vesting Tentative Parcel Map 30394 (VTPM 01-194) / Development Plan (01-195)



SOURCE: Google Earth

FIGURE 3

JACOBS **Aerial Photograph of Project Area**
 Vesting Tentative Parcel Map 30394 (VTPM 01-194) / Development Plan (01-195)

1.2 Environmental Setting

The Project Area is within an urban environment that is situated at the north end of the Temecula Valley, approximately 7.5 miles southeast of Lake Elsinore and east of the southern end of the Santa Ana Mountains. The topography within the Project Area is generally flat and the elevation within the Project Area is approximately 1,160 feet above mean sea level (amsl).

The Murrieta area is subject to 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 12.01 inches.

Hydrologically, the Project Area is situated within an undefined Hydrologic Sub-Area (HSA 902.32). This HSA comprises a 32,148-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 0.17 miles west of the Project site at its closest point.

Soils within the Project Area are comprised primarily of Hanford coarse sandy loam (2 to 8 percent slopes), Greenfield sandy loam (0 to 2 percent slopes), Placentia fine sandy loam (5 to 15 percent slopes) and Monserate sandy loam, shallow (5 to 15 percent slopes, eroded). These four soil types comprise approximately 97 percent of the soils within the Project site.

- Hanford coarse sandy loam (2 to 8 percent slopes) consists of a coarse sandy loam, fine sandy loam and stratified loamy sand to sandy loam profile comprised of alluvium derived from granite. This soil type is well-drained with a low runoff class and does not have a hydric soil rating.
- Greenfield sandy loam (0 to 2 percent slopes) consists of a sandy loam, fine sandy loam, loam and stratified loamy sand to coarse sandy loam profile comprised of alluvium derived from granite. This soil type is well-drained with a very low runoff class and does not have a hydric soil rating.
- Placentia fine sandy loam (5 to 15 percent slopes) consists of a fine sandy loam, clay, clay loam and gravelly sandy loam profile comprised of alluvium derived from granite. This soil type is moderately well-drained with a very high runoff class and does not have a hydric soil rating.
- Monserate sandy loam, shallow (5 to 15 percent slopes, eroded) consists of a sandy loam, sandy clay loam, indurated, cemented and loamy coarse sand profile comprised of alluvium derived from granite. This soil type is well-drained with a high runoff class and does not have a hydric soil rating.

Existing land use within the general Project vicinity consists mostly of residential development, with some commercial development. The Project site consists of a previously graded 14.4-acre vacant lot that is surrounded by existing development. Due to previous grading and periodic weed abatement activities (i.e. mowing), the site is completely disturbed and no longer supports any native habitat.

2 Assessment Methodology

Data regarding biological resources in the Project Area were obtained through literature review and field investigation. Prior to performing the survey, available databases and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species in the Project vicinity (approximately 1 mile). The 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* USGS 7.5-Minute Series Quadrangle. 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 1 mile). Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

2.1 Biological Resources Assessment

Jacobs biologist Lisa Patterson conducted a biological resources assessment survey of the Project Area on July 17, 2019. The survey area encompassed the entire 14.4-acre Project site and included 100 percent coverage of the site, which is completely disturbed and surrounded by existing development consisting of single-family residences and paved roads. Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined per 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 within the Project Area. Disturbance characteristics and all animal sign encountered on the site are recorded in the results section.

During the July 17, 2019 site visit, Ms. Patterson also evaluated the Project site for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. Waters of the U.S. (WoUS), 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 and Environmental Protection Agency (EPA) Water Program “My Waters” Google Earth Pro data layer 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.

2.2 Burrowing Owl Habitat Suitability Assessment

The BUOW habitat assessment was conducted in accordance with the “Burrowing Owl Survey Protocol and Mitigation Guidelines” prepared by the California Burrowing Owl Consortium (1993) and the March 7, 2012 “California Department of Fish and Game Staff Report on Burrowing Owl Mitigation.” The assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced approximately 30 feet apart to provide 100 visual coverage of the Project site. Adjacent areas that were not accessible on foot were surveyed with binoculars. During the site walk over, Ms. Patterson looked for sign including, burrows, molted feathers, cast pellets, prey remains, owl white wash, and suitable surrogate burrows. The area was also assessed for soil type and level of friability as well as habitat type and habitat structure. The habitat assessment survey was conducted during a time of year when BUOW are

both evident and identifiable. The survey was conducted during calm weather, during peak BUOW activity between the morning hours of 6:00 a.m. and 10:00 a.m., in accordance with the MSHCP Burrowing Owl Survey Guidelines.

3 Biological Resources Assessment Results

3.1 Existing Biological and Physical Conditions

The proposed Project consists of an approximately 14.4-acre parcel consisting entirely of previously graded and mowed vacant land surrounded by existing development. Disturbances within and adjacent the Project area, include previous grading and periodic weed abatement activities (i.e. mowing), existing residential and commercial development, paved roads and utilities.

Due to previous grading and periodic weed abatement activities, the site is completely disturbed and no longer supports any native habitat. The Project site is dominated by invasive, non-native and ruderal native plant species including brome grasses (*Bromus* spp.), yellow star thistle (*Centaurea solstitialis*), turkey-mullein (*Croton setiger*), jimsonweed (*Datura wrightii*), coastal heron's bill (*Erodium cicutarium*), common sunflower (*Helianthus annuus*), Mediterranean hoary mustard (*Hirschfeldia incana*), prickly lettuce (*Lactuca serriola*) and Russian thistle (*Salsola tragus*). Additionally, there is a graded swale where onsite runoff likely collects within the northwest portion of the Project site that supports a small cluster of tree saplings including several willows (*Salix* sp.) and one cottonwood (*Populus fremontii*).

No wildlife species were observed within the Project Area during survey. Due to the level of disturbance within the Project Area and the site's proximity to surrounding existing development, only domesticated animals (i.e. domestic dogs and cats) and those wildlife species that are adapted to urban environments are expected to occur within the Project area.

3.2 Special Status Species and Habitats

Per the CNDDDB, CNPSEI, and other relevant literature and databases, 52 sensitive species (21 plant species, 31 animal species) and four sensitive habitats have been documented in the *Murrieta* USGS 7.5-Minute Series Quadrangle. 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 12 State- and/or federally-listed or Candidate species documented within the *Murrieta* quad, only the federally-listed as threatened coastal California gnatcatcher (*Polioptila californica californica* [CAGN]) has been documented in the Project vicinity (within approximately 1 mile). No other State- and/or federally-listed species have been documented in the Project vicinity and due to the absence of suitable habitat on site, none are expected to occur.

Although not a State- or federally-listed as threatened or endangered species, 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 (MBTA) and by State law under the California FGC (FGC #3513 & #3503.5). Furthermore, the Project site is within a MSHCP required survey area for this species. Therefore, BUOW will be included in the discussion below.

An analysis of the likelihood for occurrence of all CNDDDB sensitive species documented in the *Murrieta* quad is provided in Table 1 (attached). This analysis considers species' range as well as documentation within the vicinity of the Project Area 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.

The Project site is not within any sensitive habitats, including any USFWS designated Critical Habitat for any federally-listed species.

3.2.1 Special Status Species

Coastal California Gnatcatcher – Threatened (Federal)

The federally-listed as threatened 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. The 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 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: CAGN have not been documented in the Project Area. Per the literature review, the nearest documented CAGN occurrence (2001) is approximately 0.4 miles east of the Project site (CNDDDB 2019). However, this occurrence is likely extirpated as the site has since been developed. The nearest documented extant CAGN occurrence (2016) is approximately 2.1 miles north of the Project site, within suitable sage scrub habitat (CNDDDB 2019). None of the PCEs for CAGN are present within the Project Area, which is completely disturbed and no longer supports any native habitat. Furthermore, the Project site is surrounded by existing development. Therefore, the Project Area does not contain any habitat suitable to support CAGN and the Project will not affect this species.

Burrowing owl – SSC

The 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. 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 ESA, but is considered both a State and federal SSC. 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 Project Area. Per the literature review, the nearest documented BUOW occurrence (2008) is approximately 2.8 miles southeast of the Project site (CNDDDB 2019).

The habitat assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced approximately 30 feet apart to provide 100 percent visual coverage of the Project site. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including feathers, whitewash, castings or prey remains were observed. Per 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.” Although the Project site does contain short vegetation and well-drained soils, no burrows or burrow surrogates of appropriate size and aspect were found on site. Therefore, the Project site is likely not suitable to support BUOW and this species is considered absent from the Project Area at the time of survey.

4 MSHCP Consistency Analysis

The MSHCP is a criteria-based plan and identification of planning units on which to base the Criteria 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. 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 Project site is located within the Southwest Area Plan. Per the Western Riverside County Regional Conservation Authority’s online MSHCP Information Tool query, the Project site is within the Santa Ana Mountains Habitat Management Unit (HMU), but the Project site is not mapped within a Criteria Cell or Cell Group, and therefore not targeted for conservation. Furthermore, the Project site is not mapped within any required survey areas for amphibians, mammals, Narrow Endemic Plants or other Criteria Area Species. However, the Project site is within a BUOW survey requirement area. Therefore, in addition to the BRA survey, a BUOW habitat suitability assessment survey was 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.

- Ø *Per the Western Riverside County MSHCP GIS overlay, the Project site is not located within a Subunit Area or Criteria Cell. No further discussion on this subject is required in this analysis.*

Amphibian, Mammal 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.

- Ø *Per the Western Riverside County MSHCP GIS overlay, the Project site is not located in an area where additional surveys are required for any amphibian, mammal or other Criteria Area species. No further discussion on this subject is required in this analysis.*

Burrowing Owl

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

- Ø *Per the Western Riverside County MSHCP GIS overlay, the Project site is located in an area where surveys are required for BUOW. The Project site did not contain suitable BUOW habitat at the time of survey (July 17th, 2019) and therefore, focused protocol-level BUOW surveys were not conducted. Furthermore, no BUOW individuals or sign including feathers, whitewash, castings or prey remains were observed on site during the habitat assessment survey. Thus, the Project site is likely not suitable to support BUOW and this species is considered absent from the Project Area at the time of survey (see Section 3.2.1 above).*

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.

- Ø *Per the Western Riverside County MSHCP GIS overlay, the Project site is not located in an area where surveys are required for narrow endemic plant species. No further discussion on this subject is required in this analysis.*

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.

∅ *No Riparian/Riverine areas were found within the Project site. There are no natural or man-made streams or other aquatic or riparian habitats within the Project site. There is a graded swale where onsite runoff likely collects within the northwest portion of the Project site that supports a small cluster of tree saplings including several willows and one cottonwood (see attached Site Photos). However, this vegetation is sparse, immature and not developed sufficiently enough to provide the biological functions and values required to support any of the sensitive riparian associated species that occur within the Plan Area. No other potential Riparian/Riverine areas exist within the Project Area.*

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.

∅ *No Vernal Pools were identified within the Project site and no further discussion on this subject is required in this analysis.*

Urban/ Wildlands Interface

Section 6.1.4 of the MSHCP presents guidelines to minimize indirect effects of projects in proximity to the MSCHP Conservation Areas. This section provides mitigation measures for impacts associated with Drainage, Toxics, Lighting, Noise, Invasives, Barriers, and Grading/Land Development.

∅ *There are no MSCHP Conservation Areas within or adjacent to the Project site. No further discussion on this subject is required in this analysis.*

5 Conclusions and Recommendations

5.1 Sensitive Biological Resources

A biological resources assessment survey was conducted by Jacobs biologist Lisa Patterson on July 17th, 2019, to identify potential suitable habitat for special status species that have been documented within the Project vicinity including the State- and/or federally-listed species discussed in Section 3.2 (above), as well as BUOW. The result of the survey is that no listed plant or animal species were detected on site and none

are expected to occur. The Project site is within a completely disturbed area consisting of a previously graded and mowed 14.4-acre vacant parcel, surrounded by existing development. Due to the conditions on site and surrounding land uses, the site is not suitable to support any of the listed species that have been documented within the Project vicinity, including the federally-listed as threatened CAGN, and no protocol-level sensitive species surveys are warranted or recommended.

Burrowing Owl

The result of BUOW habitat suitability assessment survey conducted on July 17th, 2019, was that no BUOW individuals or sign were observed within the Project Area during the survey. Furthermore, no suitably-sized burrows or burrow surrogates were found on site. Therefore, BUOW are considered absent from the Project area at the time of survey and the Project is not likely to impact this species.

According to protocol and standard practices, the results of the habitat assessment survey will remain valid for the period of one year, or until July 2020, after which time, if the site has not been disturbed in the interim, another survey may be required to determine the persisting absence of BUOW on-site. Regardless of survey results and conclusions given herein, BUOW are protected by applicable State and/or federal laws, including but not exclusive to the FGC and MBTA. As such, if BUOW are found on-site during work activities, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions.

Nesting Birds

Although the project site is within an urban environment, it is still potentially suitable to support nesting birds, including open ground nesters such as killdeer (*Charadrius vociferus*). As discussed, most birds are protected by the MBTA. In general, impacts to all bird species (common and special status) can be avoided by conducting initial clearing/grubbing work outside of the nesting season, which is generally February to September. However, if all clearing/grubbing work cannot be conducted outside of nesting season, the following is recommended:

- Ø Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre-construction NBS prior to project-related disturbance 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 nests 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.

5.2 MSHCP Consistency Analysis

The Project is consistent with the MSHCP policies found Section 6 which include Riparian/Riverine Areas/Vernal Pools, Narrow Endemic Plant Species, Urban/Wildlands Interface, and Surveys for Special Status Species (BUOW):

- Ø The site is **not** mapped within any MSHCP Criteria Cell or Subunit.

- Ø The site is **not** located in an area where additional surveys are required for any Amphibian, Mammal or other Criteria Area Species.
- Ø The Project will **not** impact any Riparian/Riverine or Vernal Pool areas.
- Ø The site is **not** within or adjacent any MSHCP Conservation Areas and therefore does not require mitigation measures pursuant Section 6.1.4 (pertaining to Urban/Wildlands Interface) of the MSHCP, which presents guidelines to minimize indirect effects of projects in proximity to the MSHCP Conservation Areas.
- Ø The site is located within a BUOW survey area, as required by the MSHCP. However, a BUOW habitat suitability assessment was conducted and the result of survey was that no suitable BUOW habitat exists on site and this species is considered **absent** from the Project Area at the time of survey.
- Ø The site is **not** located within a Narrow Endemic Plant Species survey area.

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**Table 1 – CNDDDB
Results**

Table 1 – CNDDDB Results for the *Murrieta* USGS 7.5-Minute Quadrangle

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.	The habitats this species is associated with are absent from 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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<i>Almutaster pauciflorus</i>	alkali marsh aster	None/ None	G4; S1S2; CNPS: 2B.2	Meadow and seeps. Alkaline. 60-765 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<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 is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<i>Arctostaphylos</i> <i>rainbowensis</i>	Rainbow manzanita	None/ None	G2; S2; CNPS: 1B.1	Chaparral. Usually found in gabbro chaparral. 100-870 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Arizona elegans</i> <i>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 no suitable habitat for this species within the Project Area. Occurrence potential is low .
<i>Artemisospiza 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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<i>Athene cucularia</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.	A BUOW habitat suitability assessment was conducted for the Project Area on July 17 th , 2019. The result of the survey was that no BUOW individuals or sign including feathers, whitewash, castings or prey remains were observed on site and no suitably-sized burrows or burrow surrogates were found on site. Therefore, BUOW are considered absent from the site at the time of survey.
<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> .	The food plants this species requires are absent from the Project Area. 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/vernal pool habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	Endangered/ None	G2; S2	Endemic to San Diego and Orange County mesas. Vernal pools.	The aquatic/vernal pool habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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 Project Area is outside of the known elevation range for this species and the habitats this species is associated with are absent from the Project site. 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, and 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 is no suitable habitat for this species within the Project Area. 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 habitats this species is associated with are absent from the Project Area. 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 habitats this species is associated with are absent from the Project Area. 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 and grassland in San Diego County. Attracted to grass-chaparral edges.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Crotalus ruber</i>	red-diamond rattlesnake	None/ None	G4; S3; CDFW: SSC	Chaparral, woodland, grassland, and 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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<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 within the Project Area. Occurrence potential is low .
<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	Endangered/ Threatened	G2; S2	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	There is no suitable habitat for this species within the Project Area. 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 and 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 is no suitable habitat for this species within the Project Area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<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 feet 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 this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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 some marginally suitable habitat for this species within the Project Area. Occurrence potential is moderate .
<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 and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Eumops perotis californicus</i>	western mastiff bat	None/ None	G5T4; S3S4; CDFW: SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	Endangered/ None	G5T1T2; S1S2	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and 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 purpureus</i> .	The food plants this species requires are absent from the Project Area. Occurrence potential is low .
<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 and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	The aquatic habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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 habitats this species is associated with are absent from the Project Area. 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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Lasthenia glabrata</i> ssp. <i>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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/ None	G5T3; S3; CNPS: 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low .

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 and open shrub / herbaceous and tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	There is no suitable habitat for this species within the Project Area. 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 aquatic/vernal pool habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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 habitats this species is associated with are absent from the Project Area. 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 and vernal pools, often surrounded by other habitat types. 15-850 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/ None	G2; S2; CNPS: 1B.1	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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<i>Orcuttia californica</i>	California Orcutt grass	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Vernal pools. 10-660 m.	There are no vernal pools within the Project Area. Occurrence potential is low .
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/ None	G5T1T2; 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 no suitable habitat for this species within the Project Area. 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.	There is no suitable habitat for this species within the Project Area. Occurrence potential is low .
<i>Polioptila californica californica</i>	coastal California gnatcatcher	Threatened/ None	G4G5T2Q; S2; CDFW: SSC	Obligate, permanent resident of coastal sage scrub below 2,500 feet 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 no suitable habitat for this species within the Project Area. Occurrence potential is low .
<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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
<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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
Southern Coast Live Oak Riparian Forest		None/ None	G4; S4		This habitat is absent from the Project Area.
Southern Interior Basalt Flow Vernal Pool		None/ None	G1; S1.2		This habitat is absent from the Project Area.
Southern Sycamore Alder Riparian Woodland		None/ None	G4; S4		This habitat is absent from the Project Area.
<i>Spea hammondi</i>	western spadefoot	None/ None	G3; 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 this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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/vernal pool habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<i>Symphytotrichum 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 habitats this species is associated with are absent from the Project Area. Occurrence potential is low .
<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 and will migrate over 1 km to breed in ponds, reservoirs and slow-moving streams.	The aquatic habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
<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 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	The aquatic habitats this species requires do not exist within the Project Area. Therefore, this species is considered absent from the Project site.
Valley Needlegrass Grassland		None/ None	G3; S3.1		This habitat is absent from the Project Area.
<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 feet. 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 within 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)

Site Photos



Photo 1. Looking NW at the Project site from the SE corner of the Project site, near Nutmeg Street.



Photo 2. Looking SE at the southeastern corner of the Project site. Nutmeg Street in the far ground.



Photo 3. Looking N at the northern corner of the Project site.



Photo 4. Looking E at the eastern side of the Project site.



Photo 5. Looking SW along the western border of the Project site from the NW corner of the Project site. Washington Avenue on the right.



Photo 6. Graded swale near the NW corner of the Project site.



Photo 7. Cluster of sapling trees near the NW corner of the Project site.



Photo 8. Looking W at the Project site from Washington Avenue.

**Appendix A –
Regulatory Framework**

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” 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).

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).

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, and 3513) 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), or 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.

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.