Biological Resources Assessment, Jurisdictional Delineation Report & MSHCP Consistency Analysis

Jacobs

Cottonwood Village Development 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 9.39-acre parcel located in the City of Moreno Valley, Riverside County, California. The proposed development project would consist of a multi-family town home complex. The Subject Parcel falls entirely within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area and the City of Moreno Valley is a signatory to the MSHCP.

In June 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. Due to the environmental conditions on site and the adjacent disturbances, the Subject Parcel is likely not suitable to support any of the listed species that have been documented in the Project vicinity. Furthermore, the Subject Parcel 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.

The Subject Parcel is mapped within a MSHCP Burrowing Owl Survey Area. Therefore, a burrowing owl habitat suitability assessment was conducted by Jacobs in June 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 BUOW was found in the survey area and the Project Area is not suitable to support this species at the time of survey.

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. Additionally, the Subject Parcel does not support any MSHCP riparian/riverine areas or vernal pools.

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 June 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

Citivest Commercial Investments (Project Proponent) is planning a multi-family residential development project (Project) on an approximately 9.39-acre property (Subject Parcel) located in the City of Moreno Valley, Riverside County, California. The Subject Parcel (Assessor's Parcel Number [APN]: 479-140-022) is zoned for residential development and currently consists of vacant land surrounded by existing development. On behalf of Tom Dodson and Associates (TDA), Jacobs Engineering Group, Inc. (Jacobs) has prepared this Biological Resources Assessment (BRA) report for the proposed Project. The BRA fieldwork was conducted by Jacobs biologist Daniel Smith in June of 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 (Citivest Commercial Investments) 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.

Jacobs also 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 Moreno Valley'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 Moreno Valley 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 Moreno Valley 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.

According to the MSHCP, the Subject Parcel is mapped within a burrowing owl (*Athene cunicularia* [BUOW]) Survey Area. Therefore, in addition to the BRA survey and jurisdictional waters assessment, a BUOW habitat suitability assessment was 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 92-unit multi-family town home complex. The Project would include a total residential area of 406,329.34 square feet on a single parcel and would be comprised of 23, 4-plex structures, with 3 bed/2.5 bath townhome units, 289 parking stalls, and associated facilities (Figure 1).

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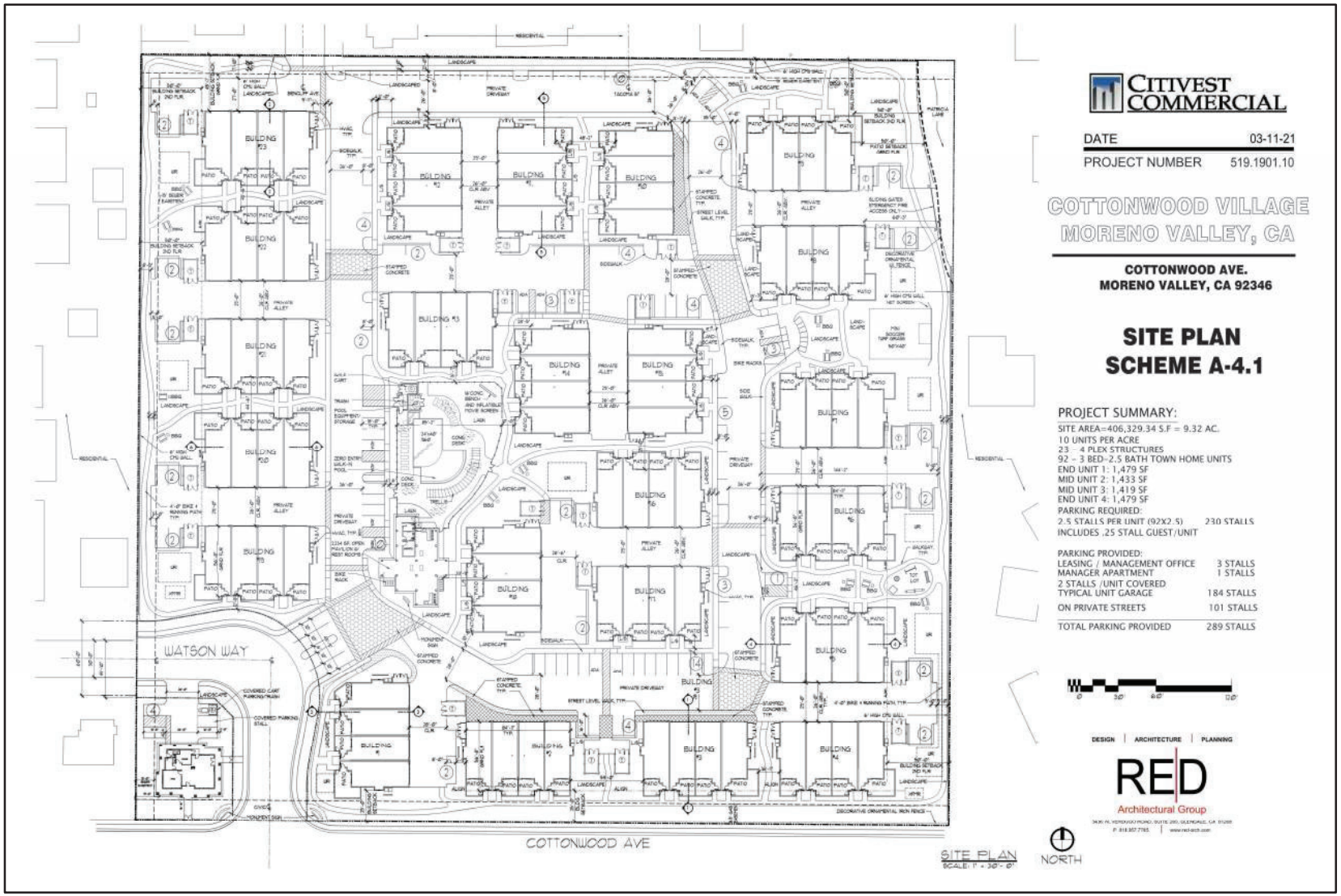


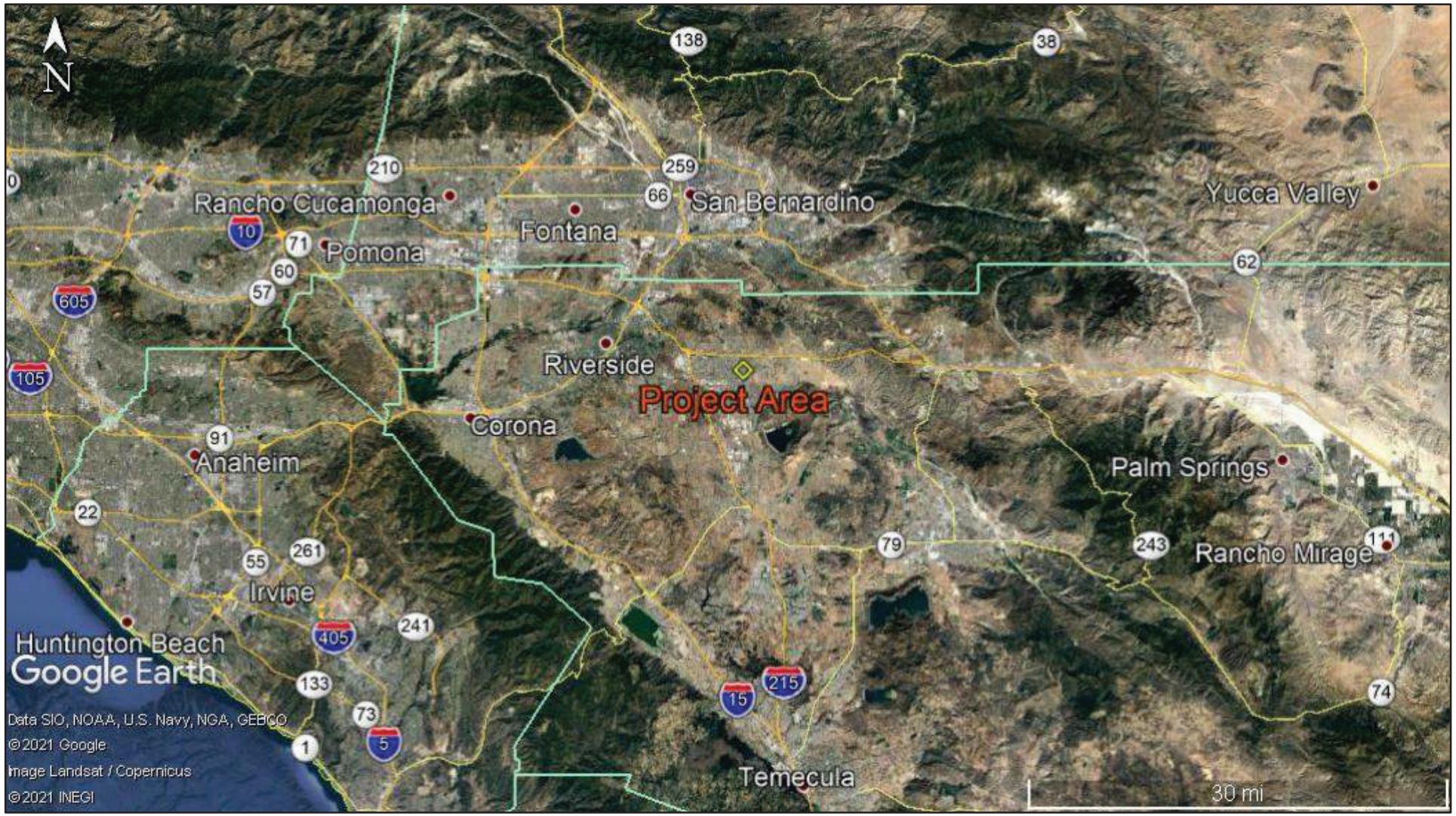
SOURCE: RED Architectural Group & Citivest Commercial Investments

FIGURE 1

Proposed Site Plan
Cottonwood Village Development Project

1.2 Location

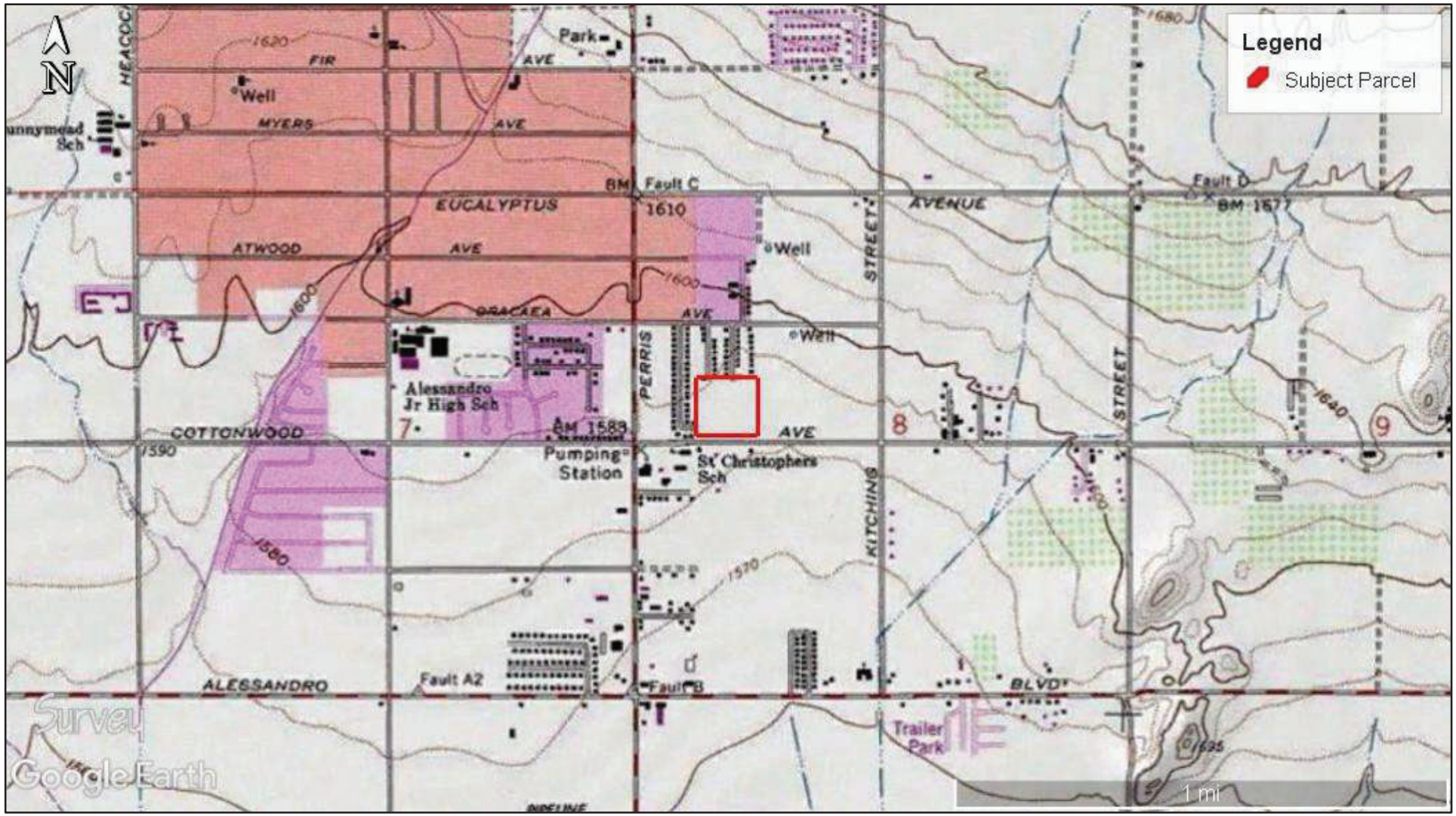
The Subject Parcel is generally located in the City of Moreno Valley, Riverside County, California, in Section 8 of Township 3 South, Range 3 West, San Bernardino Base Meridian (Figures 2 & 3). The Project Area is depicted on the *Sunnymead* U. S. Geological Survey's (USGS) 7.5-Minute Series Quadrangle map. Specifically, the Project site is located on APN: 479-140-022, on the north side of Cottonwood Avenue, approximately 0.13 miles east of the Perris Boulevard/Cottonwood Avenue intersection, and 1 mile south of the California State Route 60 (SR 60) freeway (Figures 3 & 4).



SOURCE: Google Earth

FIGURE 2

Regional Location
Cottonwood Village Development Project



SOURCE: Google Earth

FIGURE 3

Jacobs

Topographic Map of Project Location
Cottonwood Village Development Project

SOURCE: Google Earth

FIGURE 4

Aerial Photograph of Project Area
Cottonwood Village Development Project

1.3 Environmental Setting

The Project Area lies in the geographically based ecological classification known as the Inland Valleys – Level IV ecoregion, of the Southern California/Northern Baja Coast – Level III 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 Valleys ecoregion is a heavily urbanized ecoregion that historically consisted of the alluvial fans and basin floors immediately south of the San Gabriel and San Bernardino Mountains (Griffith et al. 2016).

The Project Area is situated in Moreno Valley, just west/southwest of The Badlands. The topography of the Project Area consists of flat urban landscape, comprised of vacant land and surrounding residential and commercial development. The elevation of the Subject Parcel is approximately 1,590 feet above mean sea level (amsl).

The Project Area is within a hot-summer Mediterranean climate (Csa), subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures within the Project Area peak at 94.4 degrees Fahrenheit (° F) in August and fall to an average annual minimum temperature of 39.1° F in January. Average annual precipitation is greatest from December through March and reaches a peak in February (2.20 inches). Precipitation is lowest in the month of July (0.04 inches). Annual total precipitation averages 10.21 inches.

Hydrologically, the Project Area is situated within the Perris Valley Hydrologic Sub-Area (HSA 802.11). The Perris Valley HSA comprises a 106,456-acre drainage area, within the larger San Jacinto Watershed (HUC 18070202). The San Jacinto River is the major hydrogeomorphic feature within the San Jacinto Watershed. The nearest tributary to the San Jacinto River is an unnamed, man-made flood control channel, which flows southward through the City of Moreno Valley, approximately 0.5 miles east of the Subject Parcel at its closest point.

Soils within the Subject Parcel are comprised of Ramona sandy loam, 2 to 5 percent slopes (eroded) and Pachappa fine sandy loam, 2 to 8 percent slopes (eroded) soils. Ramona sandy loam soils consist of sandy loam, fine sandy loam, sandy clay loam, to gravelly sandy loam comprised of alluvium derived from granite. This soil is well-drained, with a low runoff class and does not have a hydric soil rating. Pachappa fine sandy loam soils consist of fine sandy loam and loam comprised of alluvium derived from granite. This soil is well-drained, with a medium runoff class and does not have a hydric soil rating.

The City of Moreno Valley consists primarily of urban landscapes. The Subject Parcel is entirely within an urban landscape that no longer supports any native habitat and consists of a cleared/graded vacant lot surrounded by urban landscape consisting of residential development to the north, west, and east; and commercial development to the south (Figure 4).

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 (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data in the *Sunnymead* and *Riverside East* USGS 7.5-Minute Series Quadrangles. The Subject Parcel is situated within the *Sunnymead* quad and the sites' proximity to the *Riverside East* quad led to its 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 June 10, 2021. The reconnaissance-level field survey and BUOW habitat suitability assessment 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 June 10, 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 9.39-acre Subject Parcel and encompasses the entire extent of the proposed development plan (Figure 1). The Subject Parcel consists of cleared/graded vacant lot surrounded by urban landscape consisting of residential development to the north, west, and east; and commercial development to the south (Figure 4). Existing disturbances within the Subject Parcel include periodic disking, dumping, and litter.

3.1.1 Habitat

The Subject Parcel is completely disturbed, consisting mostly of disked bare ground, and no longer supports any native habitat. Sparse vegetation cover within the Subject Parcel is dominated by non-native, invasive species, consisting primarily of field bindweed (*Convolvulus arvensis*) and non-native grasses including slim oat (*Avena barbata*), brome grasses (*Bromus* spp.), Bermuda grass (*Cynodon dactylon*), Italian rye grass (*Festuca perennis*), and foxtail barley (*Hordeum murinum*). 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

The only wildlife species observed or otherwise detected during the reconnaissance-level survey were birds, including American kestrel (*Falco sparverius*), house sparrow (*Passer domesticus*), Cassin's kingbird (*Tyrannus vociferans*), and mourning dove (*Zenaida macroura*).

3.2 Special Status Species and Habitats

According to the CNDDB, 46 sensitive species (10 plant species, 36 animal species) and one sensitive habitat have been documented in the *Sunnymead* and *Riverside East* 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 CNDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special status species.” The CDFW considers the taxa on this list to be those of greatest conservation need.

3.2.1 Special Status Species

Of the 46 sensitive species documented within the within the *Sunnymead* and *Riverside East* quads, 11 are state and/or federally listed as threatened or endangered species. However, the Subject Parcel consists entirely of cleared/graded vacant lot surrounded by urban landscape, and the habitat requirements for these listed species are absent from the Project Area. 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 and due to the environmental conditions on site, none are expected to occur. A complete list of all sensitive species identified by the CNDDB as potentially occurring in the Project vicinity is provided in Appendix A.

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 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 (approximately 3 miles). Therefore, BUOW will be included in the discussion below.

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. 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 (2007) is approximately 1.9 miles southwest of the Subject Parcel (CNDDB 2021). The BUOW habitat assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced approximately 10 meters (30 feet) apart to provide 100 percent visual coverage of the Subject Parcel. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including castings, feathers or whitewash were observed. Furthermore, although the Subject Parcel consists of sparse, low-growing vegetation and bare ground, no burrows, burrow surrogates, or appropriately sized fossorial mammal dens were observed within the Subject Parcel. 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 2.5 miles north of the Subject Parcel. This Critical Habitat unit is part of the San Timoteo Creek Unit of USFWS designated Critical Habitat for the federally listed as endangered southwestern willow flycatcher (*Empidonax traillii extimus*). However, no portion of the Subject Parcel is within or adjacent this Critical Habitat unit, or any other Critical Habitat. According to the CNDDB, the nearest sensitive habitat is Southern Sycamore Alder Riparian Woodland located within Reche Canyon, approximately 3.8 miles north of the Subject Parcel. 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 Perris Valley Hydrologic Sub-Area (HSA 802.11). The Perris Valley HSA comprises a 106,456-acre drainage area, within the larger San Jacinto Watershed (HUC 18070202). The San Jacinto Watershed is bound on the west/northwest by the Santa Ana Watershed, on the east/northeast by the Whitewater River Watershed, and on the south by the Santa Margarita and Aliso-San Onofre Watersheds. The

San Jacinto Watershed encompasses the San Jacinto, Moreno, Perris, and Menifee Valleys, as well a portion of the Santa Jacinto Mountains to the east, The Badlands to the north, and the Elsinore Mountains to the southwest. The San Jacinto Watershed is approximately 765.26 square miles in area. The San Jacinto River is the major hydrogeomorphic feature within the San Jacinto Watershed and the nearest tributary to the San Jacinto River is an unnamed, man-made flood control channel, which flows southward through the City of Moreno Valley, approximately 0.5 miles east 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. 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 (NWPR) 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).

There are two ephemeral swales along the northern boundary of the Subject Parcel that receive stormwater runoff from Bencliff Avenue and Tacoma Drive, respectively (Appendix B). These ephemeral swales terminate on site in directional sheet flow over upland. Additionally, there is an ephemeral swale near the southwestern corner of the Subject Parcel that receives stormwater runoff from Watson Way (Appendix B). This ephemeral swale drains into the roadside swale that parallels the north side of Cottonwood Avenue (between Cottonwood Avenue and the southern boundary of the Subject Parcel), which is part of the City's storm drain system (Appendix B). Given that these man-made features consist of ephemeral swales that flow only in direct response to precipitation, all four man-made ephemeral swales are excluded from the definition of WOTUS under the 2020 NWPR. Furthermore, none of these four man-made ephemeral swales are relocated tributaries to WOTUS or excavated in any tributaries, and none of them drain any wetlands. Thus, these features would also be excluded from the definition of WOTUS under the EPA and the Department of the Army's June 29, 2015 (effective August 28, 2015) "Clean Water Rule: Definition of 'Waters of the United States'" (80 FR 37053).

Areas meeting all three wetland parameters (i.e. hydrophitic vegetation, hydric soils, and wetland hydrology) and are adjacent to other jurisdictional waters would be designated as USACE wetlands. The Subject Parcel does not support any hydrophitic vegetation, including within any of the ephemeral swales on site. Thus, there are no wetland or non-wetland WOTUS within the Subject Parcel and the Project will not result in any permanent or temporary impacts to WOTUS. Therefore, the Project would be exempt from CWA Section 404/401 permitting.

State Lake/Streambed

The man-made ephemeral swales that are present within the Subject Parcel do not meet the CDFW definition of a lake, river or stream and do not support any aquatic resources, stream-dependent wildlife resources or riparian habitats. Additionally, none of these features has a definable bed and bank. Therefore, the Project will not result in any permanent or temporary impacts to jurisdictional waters of the State and the Project would be exempt from FGC Section 1602 permitting as well.

3.4 MSHCP Consistency Analysis

Western Riverside County MSHCP

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 four birds, three mammals, three amphibians, three 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 three riparian obligate bird species and three vernal pool associated fairy shrimp species.

The Subject Parcel is located within the MSHCP's Reche Canyon/Badlands Area Plan. According to the Western Riverside County Regional Conservation Authority's online MSHCP Information Tool query, the Subject Parcel is within the San Timoteo Habitat Management Unit (HMU) but is not mapped within or adjacent a Criteria Cell or Cell Group, and therefore not targeted for conservation. Furthermore, the Subject Parcel is not mapped within any required survey areas for amphibians, mammals, invertebrates, Narrow Endemic Plants Species, or other Criteria Area Species. However, Burrowing Owl Surveys, are required within the Subject Parcel. 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.

> *Findings*: According to the Western Riverside County MSHCP GIS overlay, the Subject Parcel is not located within a Subunit Area or Criteria Cell. No further discussion on this subject is required in this analysis.

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 additional surveys are required for any amphibians, mammals, invertebrates, 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.

> *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 the Subject Parcel. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including castings, feathers or whitewash were observed. Furthermore, although the Subject Parcel consists of sparse, low-growing vegetation and bare ground, no burrows, burrow surrogates, or appropriately sized fossorial mammal dens were observed within the Subject Parcel. 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 not located in an area where additional 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.

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 and the man-made ephemeral swales present within and adjacent the Subject Parcel do not support any aquatic resources, stream-dependent wildlife resources, or riparian habitats. 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 MSCHP 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*: There are no MSCHP Conservation Areas within or adjacent to the Subject Parcel. No further discussion on this subject is required in this analysis.

4. Conclusions and Recommendations

4.1 Sensitive Biological Resources

A reconnaissance level BRA survey of the Subject Parcel was conducted by Jacobs in June of 2021 to identify potential habitat for special status wildlife within the Project Area. No sensitive species were observed within the Project Area during the reconnaissance-level field survey and due to the environmental conditions on site, none are expected to occur. The Subject Parcel is completely disturbed and no longer supports any native habitats (see attached Site Photos). The Subject Parcel consists of cleared/graded vacant lot surrounded by urban landscape consisting of residential development to the north, west, and east; and commercial development to the south (Figure 4). Existing disturbances within the Subject Parcel include periodic disking, dumping, and litter. Due to the environmental conditions on site and the adjacent disturbances, the Subject Parcel is likely not suitable to support any of the listed species that have been documented in the Project vicinity (within approximately 3 miles). Furthermore, the Subject Parcel 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.

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 Subject Parcel is not within or adjacent any MSHCP Criteria Cells or Cell Groups and the Project will not impact any MSHCP Conservation Areas. Furthermore, the Subject Parcel is not mapped within any required survey areas for amphibians, mammals, invertebrates, Narrow Endemic Plants Species, or other Criteria Area Species.

Burrowing Owl

The Subject Parcel is within a MSHCP Burrowing Owl Survey Area. Therefore, a BUOW habitat suitability assessment was conducted by Jacobs in June of 2021 that included 100 percent visual coverage of any potentially suitable BUOW habitat within the Project Area. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including castings, feathers, whitewash, burrows, burrow surrogates, or appropriately sized fossorial mammal dens were observed within the survey area 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 construction activities. Therefore, the following precautionary avoidance measures are recommended to ensure the Project does not result in any impacts to BUOW:

- 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 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, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations. 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 Project Area is suitable to support nesting birds, particularly open ground nesting species. 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:

- 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 BUOW habitat suitability assessment 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 but is not within or adjacent any MSHCP Criteria Cells or Cell Groups. Therefore, implementation of the MSHCP Section 6.1.4 Guidelines Pertaining to the Urban/Wildlands Interface is not required. The Project Proponent should be prepared to pay the MSHCP fees and restrict all Project related impacts to existing right-of-way and/or other areas outside of Conserved Lands. No conservation or avoidance measures are expected, and the Project as described, is consistent with the Reche Canyon/Badlands Area Plan conservation criteria and overall conservation goals and objectives set forth in the MSHCP.

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Appendix A. CNDDB Species and Habitats Documented Within the *Sunnymead* and *Riverside East* USGS 7.5-Minute Quadrangles

Special Status Species Occurrence Potential Analysis

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Accipiter cooperii	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.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Agelaius tricolor	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.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Aimophila ruficeps canescens	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.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Anniella stebbinsi	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Arenaria paludicola	marsh sandwort	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Marshes and swamps. Growing up through dense mats of *Typha, Juncus, Scirpus*, etc. in freshwater marsh. Sandy soil. 3-170 m.	The Subject Parcel is outside the known elevation range for this species and the conditions and habitats 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
Arizona elegans occidentalis	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Artemisiospiza belli belli	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.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Aspidoscelis hyperythra	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Aspidoscelis tigris stejnegeri	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Athene cunicularia	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.	Although the Subject Parcel consists of sparse, low-growing vegetation and bare ground, no evidence of BUOW was found in the survey area during the Habitat Suitability Assessment Survey and no appropriately sized mammal burrows or burrow surrogates were observed within the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Berberis nevinii	Nevin's barberry	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m.	The conditions and habitats this species is associated with are absent from the Subject Parcel and the only documented occurrence for this species (1999) in the 2-quad CNDDB query is approx. 8.8 miles NW of the Subject Parcel. Occurrence potential is low.
Bombus crotchii	Crotch bumble bee	None/ Candidate Endangered	G3G4; S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia,* and *Eriogonum*.	The food plant genera required by this species are absent from the Subject Parcel. Occurrence potential is low.
Buteo regalis	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.	No suitable nesting habitat for this species exists in the Project Area. Furthermore, although the Subject Parcel may provide suitable foraging habitat, the Subject Parcel is surrounded by urban environment. Occurrence potential is low.
Calochortus plummerae	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 conditions and habitats this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
Centromadia pungens ssp. *laevis*	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 conditions and habitats 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
Ceratochrysis longimala	Desert cuckoo wasp	None/ None	G1; S1	No information.	The only documented occurrence for this species in the 2-quad CNDDB query is a historical occurrence (1892) from approx. 9.2 miles NW of the Subject Parcel. Occurrence potential is low.
Chaetodipus fallax fallax	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	Endangered/ Endangered	G4?T1; S1; CNPS: 1B.2	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	The Subject Parcel is outside the known elevation range for this species and the conditions and habitats this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
Chorizanthe parryi var. *parryi*	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 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	The conditions and habitats this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened/ Endangered	G5T2T3; S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	No suitable nesting or foraging habitat for this species exists in the Project Area and the nearest documented occurrence for this species (2001) is approx. 2.7 miles NW of the Subject Parcel. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Crotalus ruber	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Dipodomys merriami parvus	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.	No suitable habitat for this species exists in the Project Area and the nearest documented occurrence for this species is a historical occurrence (1913) from approx. 3.9 miles E/SE of the Subject Parcel. Occurrence potential is low.
Dipodomys stephensi	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.	No suitable nesting or foraging habitat for this species exists in the Project Area and the nearest documented occurrence for this species (1989) is approx. 2.6 miles E of the Subject Parcel. Occurrence potential is low.
Emys marmorata	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 presumed absent from the Project Area.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Eremophila alpestris actia	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.	Some suitable habitat for this species is present within the Subject Parcel but the only documented occurrence for this species (1992) in the 2-quad CNDDB query is approx. 4.5 miles SW of the Subject Parcel. Furthermore, the Subject Parcel is surrounded by urban environment. Occurrence potential is low.
Eumops perotis californicus	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Icteria virens	yellow-breasted chat	None/ None	G5; S3; CDFW: SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Lanius ludovicianus	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.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.
Lasiurus xanthinus	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Lasthenia glabrata ssp. *coulteri*	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 conditions and habitats 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
Laterallus jamaicensis coturniculus	California black rail	None/ Threatened	G3G4T1; S1; CDFW: FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	No suitable nesting or foraging habitat for this species exists in the Project Area and the only documented occurrence for this species in the 2-quad CNDDB query is a historical occurrence (1892) from approx. 9.2 miles NW of the Subject Parcel. Occurrence potential is low.
Lepidium virginicum var. *robinsonii*	Robinson's peppergrass	None/ None	G5T3; S3; CNPS: 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	The conditions and habitats this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
Lepus californicus bennettii	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/ None	G5; S3; CDFW: SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Onychomys torridus ramona	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Perognathus longimembris brevinasus	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Phrynosoma blainvillii	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Polioptila californica californica	coastal California gnatcatcher	Threatened/ None	G4G5T3Q; S2; CDFW: SSC	Obligate, permanent resident of coastal sage scrub below 2500 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.	No suitable nesting or foraging habitat for this species exists in the Project Area and the nearest documented occurrence for this species (2002) is approx. 2.5 miles N of the Subject Parcel. Occurrence potential is low.
Salvadora hexalepis virgultea	coast patch-nosed snake	None/ None	G5T4; S2S3; CDFW: SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Senecio aphanactis	chaparral ragwort	None/ None	G3; S2; CNPS: 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	The conditions and habitats this species is associated with are absent from the Subject Parcel. Occurrence potential is low.
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None/ None	G4; S4;		This habitat type is absent from the Subject Parcel.
Spea hammondii	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 presumed absent from the Project Area.
Spinus lawrencei	Lawrence's goldfinch	None/ None	G3G4; S4	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	No suitable nesting or foraging habitat for this species exists in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status Federal/ State	Other Status	Habitat	Occurrence Potential
Streptocephalus woottoni	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 Project Area and the nearest documented occurrence for this species (2009) is approx. 2.6 miles SW of the Subject Parcel. Therefore, this species is presumed absent from the Project Area.
Symphyotrichum defoliatum	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. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Although some of the conditions within the Subject Parcel may be suitable for this species (i.e. vernally mesic ditches; disturbed areas), the only documented occurrence for this species in the 2-quad CNDDB query is a historical occurrence (1951) from approx. 6.8 miles NE of the Subject Parcel. Occurrence potential is low.
Taxidea taxus	American badger	None/ None	G5; S3; CDFW: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
Vireo bellii pusillus	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, Baccharis, mesquite.	No suitable nesting or foraging habitat for this species exists in the Project Area and the nearest documented occurrence for this species (2011) is approx. 2.4 miles NW of the Subject Parcel. 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.

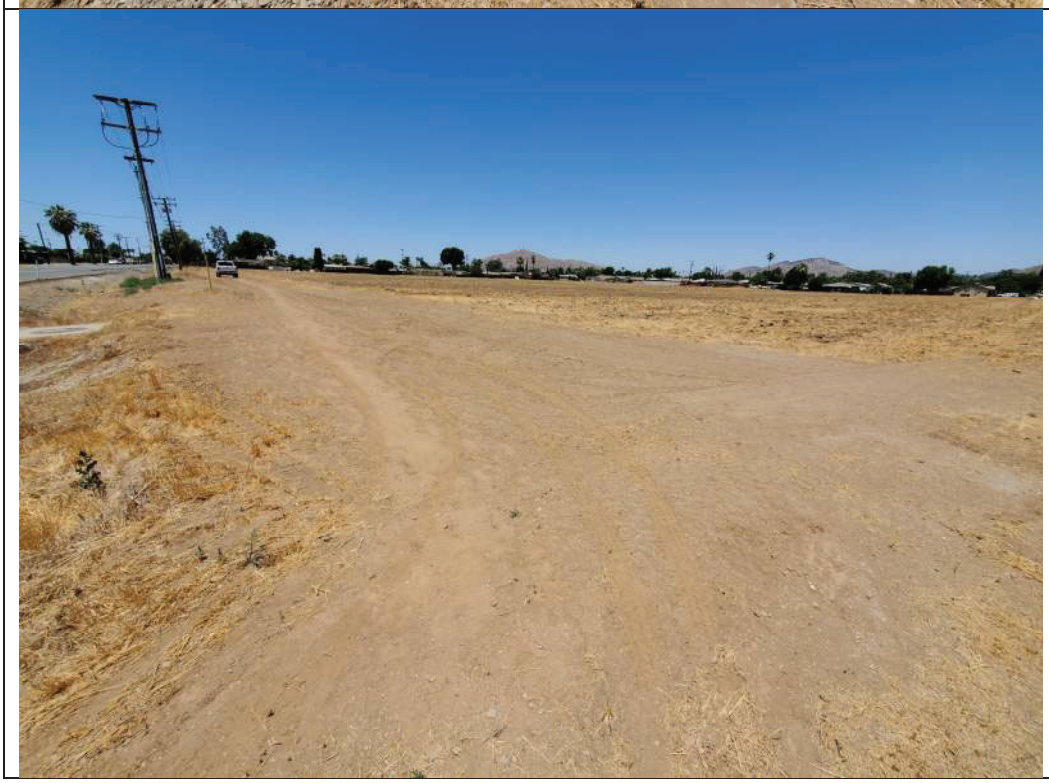
Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* 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. Southeast corner of Subject Parcel, looking north along eastern boundary of site.
	Photo 2. Southeast corner of Subject Parcel, looking west along southern boundary of site. Cottonwood Ave. on the far left.

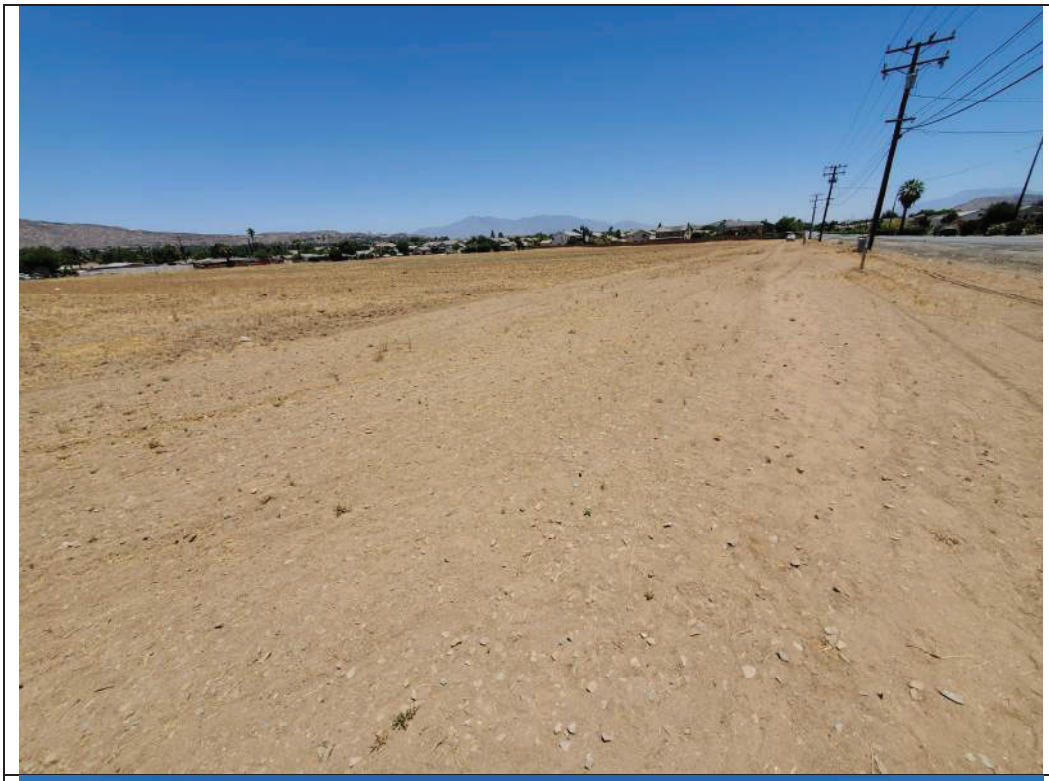
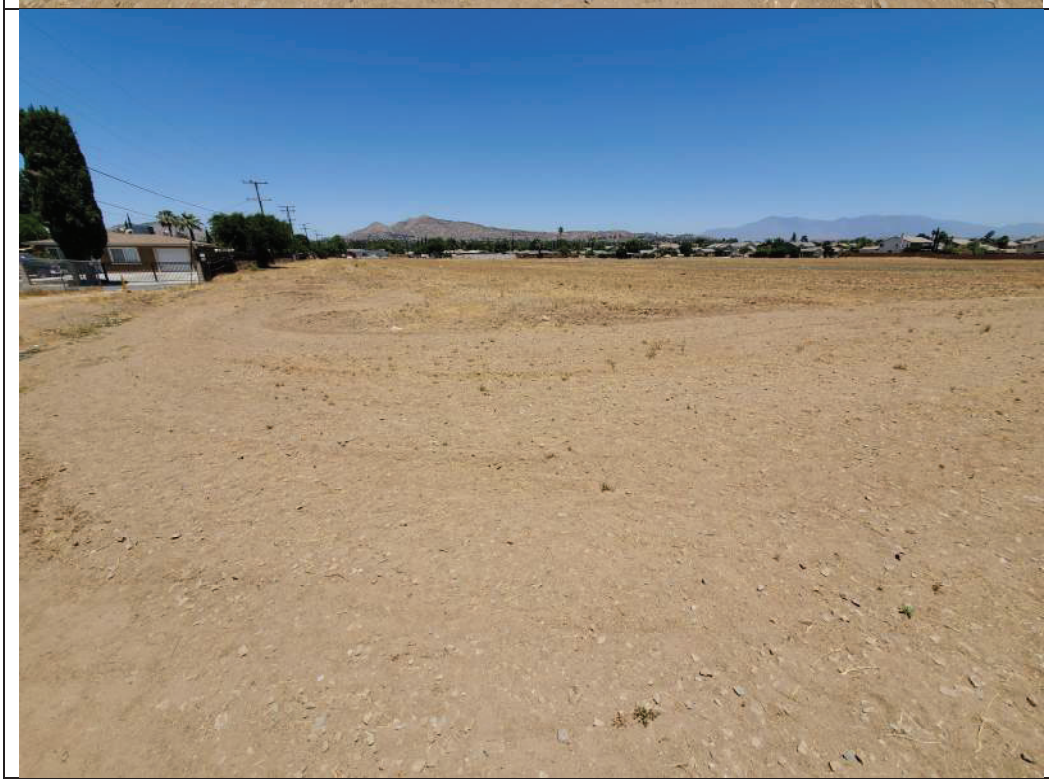
	Photo 3. Southwest corner of Subject Parcel, looking east along southern boundary of site. Cottonwood Ave. on the far right.
	Photo 4. Southwest corner of Subject Parcel, looking north along western boundary of site.

	Photo 5. Northwest corner of Subject Parcel, looking south along western boundary of site.
	Photo 6. Northwest corner of Subject Parcel, looking east along northern boundary of site.

	Photo 7. Northeast corner of Subject Parcel, looking west along northern boundary of site.
	Photo 8. Northeast corner of Subject Parcel, looking south along eastern boundary of site.

	Photo 9. Northern boundary of Subject Parcel, looking north toward ephemeral swale that receives stormwater runoff from Bencliff Avenue.
	Photo 10. Northern portion of Subject Parcel, looking south from ephemeral swale that receives stormwater runoff from Bencliff Avenue.

	Photo 11. Northern boundary of Subject Parcel, looking north toward ephemeral swale that receives stormwater runoff from Tacoma Drive.
	Photo 12. Northern portion of Subject Parcel, looking south from ephemeral swale that receives stormwater runoff from Tacoma Drive.

	Photo 13. Ephemeral swale that receives stormwater runoff from Watson Way to the roadside swale that parallels the north side of Cottonwood Avenue; looking north from southwest corner of Subject Parcel.
	Photo 14. Ephemeral roadside swale that parallels the north side of Cottonwood Avenue; looking east from southwest corner of Subject Parcel. Cottonwood Avenue on the right; Subject Parcel on the left.

Appendix C. Plant List

List of Plant Species Observed within the Subject Parcel

Scientific Name	Common Name	Life Form	Wetland Indicator Status
Asteraceae	Aster Family		
*Lactuca serriola**	prickly lettuce*	annual herb	FACU
Brassicaceae	Mustard Family		
Hirschfeldia incana **	short podded mustard **	perennial herb	UPL
*Raphanus sativus***	jointed charlock**	annual or biennial herb	UPL
Boraginaceae	Borage family		
Amsinckia intermedia	common fiddleneck	annual herb	UPL
Chenopodiaceae	Goosefoot Family		
*Atriplex semibaccata***	Australian saltbush**	perennial herb	FAC
*Salsola tragus***	Russian thistle**	annual herb	FACU
Convolvulaceae	Morning Glory Family		
*Convolvulus arvensis***	field bindweed**	perennial herb or vine	UPL
Euphorbiaceae	Spurge Family		
Euphorbia polycarpa	smallseed sandmat	perennial herb	UPL
Geraniaceae	Walnut Family		
*Erodium cicutarium***	redstem fillaree**	annual herb	UPL
Malvaceae	Mallow Family		
*Malva parviflora**	cheeseweed*	annual herb	UPL
Poaceae	Grass Family		
*Avena barbata***	slim oat**	annual grass	UPL
Bromus spp.**	brome grasses**	annual grasses	UPL
*Cynodon dactylon***	Bermuda grass**	perennial grass	FACU
*Festuca perennis***	Italian rye grass**	annual or perennial grass	FAC
*Hordeum murinum***	foxtail barley**	annual grass	FACU
Polygonaceae	Buckwheat Family		
*Rumex crispus***	curly dock**	perennial herb	FAC
Solanaceae	Nightshade Family		
Datura wrightii	jimsonweed	perennial herb	UPL

*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 (CFGC) list 37 fully protected species (CFGC 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 CFGC 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) (CFGC 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 (CFGC 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.