

## Memorandum

To City of Rancho Cucamonga

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CC CRP/WP Alta Cuvee LLC

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Subject Rancho Cuvee Mixed-Use Project Biological Resource Assessment

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Date November 3, 2021

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AECOM conducted a biological resource assessment for the proposed Rancho Cuvee Mixed-Use Project (Project) that involves the development of a mixed-use apartment community located in the City of Rancho Cucamonga, California (see Figure in Appendix A). The purpose of this assessment was to inventory and evaluate biological resources in the vicinity of the Project. This memorandum summarizes the Project; provides the regulatory framework applicable to the resources that occur within or adjacent to the Project area; describes existing biological resources located within the vicinity of the Project; assesses potential impacts to sensitive habitats and species; and presents recommendations to avoid and minimize potential impacts.

### 1.0 Project Description

The proposed Project would develop a four-story, 260-unit apartment community in the City of Rancho Cucamonga, California. The proposed Project would include the construction of two four-story buildings composed of 255 apartment units and five live-work units, a below-grade parking garage, and a surface parking lot on the southern and eastern portions of the proposed Project site, approximately 5,500 square feet of indoor amenity space, approximately 16,860 square feet of outdoor amenity space including a pool and spa, and landscaping surrounding both buildings. Additionally, the proposed Project would include the construction of sidewalks and the undergrounding of power lines along Etiwanda Avenue.

### 2.0 Project Location

The proposed Project would be located at 12901-12939 Foothill Boulevard, at the southeastern corner of the intersection of Foothill Boulevard and Etiwanda Avenue in the City of Rancho Cucamonga, California (see Figure in Appendix A). The proposed Project site is bound by Foothill Boulevard, a vacant lot, and condominiums to the north; Etiwanda Avenue and a shopping center to the west; and residential single-family homes to the south and east. The 5.2-acre proposed Project site is composed of two parcels (Assessor's Parcel Numbers (APNs) 0229-311-14 and 0229-311-15) which are currently vacant and undeveloped.

### 3.0 Regulatory Requirements

This section provides a brief overview of federal, state, and local regulations that may be applicable to biological resources that occur within the proposed Project, and their respective requirements. The final determination of whether permits are required is made by the regulating agencies.

### **3.1 Federal Regulations and Standards**

#### Federal Endangered Species Act

Enacted in 1973, the ESA provides for the conservation of threatened and endangered species and their ecosystems (U.S. Code [U.S.C.] Title 16, Chapter 35, Sections 1531–1544). The ESA prohibits the “take” of threatened and endangered species except under certain circumstances and only with authorization from USFWS through a permit under Section 4(d), 7 or 10(a) of the ESA. “Take” under the ESA is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Formal consultation under the ESA would be required if the Project had the potential to affect a federally listed species that has been detected within or adjacent to the BSA. No federally listed species were detected during the field survey, and suitable habitats for such species do not occur in the BSA, or the species’ known distribution does not coincide with the BSA. Therefore, formal consultation is not anticipated.

#### Migratory Bird Treaty Act (MBTA)

Congress passed the MBTA in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA (U.S.C. Title 16, Chapter 7, Subchapter II, Sections 703–712). The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

No permit is issued under the MBTA; however, the Project would remain in compliance with the MBTA by conducting pre-construction nesting bird surveys, and, if needed, providing a qualified biologist to monitor active nests occurring in the BSA to ensure construction does not affect species protected under the MBTA.

#### Bald and Golden Eagle Protection Act (the Eagle Act)

The Eagle Act, amended in 1962, was originally implemented for the protection of bald eagles. In 1962, Congress amended the Eagle Act to also cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, because the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (which includes molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof.

Bald and golden eagles are not known from the Project area, and habitat in the BSA is not suitable for these species. As a result, the Project would not be expected to take bald or golden eagle.

#### Clean Water Act (CWA)

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into jurisdictional waters of the U.S., which include those waters listed in 33 CFR 328.3 (Definitions) (U.S.C. Title 33, Chapter 26, Sections 101–607). Section 401 of the CWA requires a water quality certification from the state for all permits issued by the USACE under Section 404 of the CWA. RWQCB is the state agency in charge of issuing a CWA Section 401 water quality certification or waiver.

No aquatic features under regulatory jurisdiction of the USACE or RWQCB occur within the BSA. As a result, permits from these agencies are not anticipated.

### 3.2 State Regulations and Standards

#### California Fish and Game Code

The CFGC regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as impacts to natural resources such as wetlands and waters of the state. It includes the CESA (Sections 2050–2115) and Lake and Streambed Alteration Agreement (LSAA) regulations (Section 1600 et seq.).

Wildlife “take” is defined by the CDFW as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Protection extends to the animals, dead or alive, and all their body parts. Section 2081 of the CESA allows the CDFW to issue an incidental take permit for state-listed threatened or endangered species, should the proposed Project have the potential to “take” a state-listed species that has been detected within or adjacent to the Project. Certain criteria are required under the CESA prior to the issuance of such a permit, including the requirement that impacts of the take are minimized and fully mitigated.

The Native Plant Protection Act (NPPA) was adopted in 1977 (CFGC §§ 1900–1913) to preserve, protect, and enhance rare and endangered plants. CDFW is responsible for administering the NPPA, while the Fish and Wildlife Commission has the authority to designate native plants as “endangered” or “rare” and provide measures to avoid take.

The CFGC includes protections against take, possession, or needlessly destroying the nest or eggs of any bird (CFGC §§ 3503), including those birds in the orders Falconiformes or Strigiformes (birds-of-prey) (CFGC §§ 3503.5).

No state-listed species are expected to occur in the BSA, and suitable habitats for such species do not occur in the BSA. As a result, a permit under Section 2081 is not anticipated for the Project.

No aquatic features under the CDFW jurisdiction occur within the BSA. As a result, coordination with the CDFW and the issuance of an LSAA is not anticipated for this Project.

#### Porter-Cologne Water Quality Control Act

Under Section 13000 et seq., of the Porter-Cologne Quality Control Act, RWQCB is the agency that regulates discharges of waste and fill material within any region that could affect a water of the state (California Water Code [CWC] 13260[a]), (including wetlands and isolated waters) as defined by CWC Section 13050(e).

No aquatic features under RWQCB jurisdiction occur within the BSA. As a result, coordination with RWQCB and the issuance of a permit under the Porter-Cologne Quality Control Act is not anticipated for the Project.

#### California Environmental Quality Act (CEQA)<sup>1</sup>

The California Environmental Quality Act (CEQA) requires that significant environmental impacts of Proposed Projects be reduced to a less-than-significant level through adoption of feasible avoidance, minimization, or mitigation measures unless overriding considerations are identified and documented. CEQA applies to certain activities in California undertaken by either a public agency or a private entity that must receive some discretionary approval from a California

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<sup>1</sup> PRC Section 21000 et seq. and the State CEQA Guidelines, California Code of Regulations, Section 15000 et seq.

government agency. CEQA does not specifically define what constitutes an “adverse effect” on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

### **3.3 Local Regulations and Standards**

#### Significant Ecological Areas Program

Los Angeles County first began to inventory biotic resources and identify important areas of biological diversity in the 1970s. Today, the primary mechanism used by the County to conserve biological diversity is a planning overlay called Significant Ecological Areas (SEAs)<sup>2</sup> designated in the County’s General Plan Conservation/Open Space Element. SEAs are ecologically important land and water systems that support valuable habitat for plants and animals, often integral to the preservation of rare, threatened, or endangered species and the conservation of biological diversity in Los Angeles County. While SEAs are not preserves, they are areas where Los Angeles County deems it important to facilitate a balance between development and resource conservation.

Together, the General Plan overlays and a SEA conditional-use permit process are referred to as the SEA Program. The SEA Program, through goals and policies of the General Plan and the SEA ordinance (Title 22 Zoning Regulations, Section 22.56.215), help guide development within the SEAs. The SEA ordinance establishes the permitting, design standards, and review process for development within the SEAs, and permits are reviewed by the SEA Technical Advisory Committee. Development activities in the SEAs are reviewed closely in order to conserve water and biological resources such as streams, oak woodlands, and threatened or endangered species and their habitat.

The BSA does not coincide with a SEA. The nearest SEA is San Dimas Canyon/San Antonio Wash, which is approximately 10 miles northwest of the BSA. The Project is not anticipated to affect resources within any SEA, and as a result the SEA program would not be applicable to the proposed Project.

#### City of Rancho Cucamonga Tree Protection Ordinances

City of Rancho Cucamonga Municipal Code (17.06.08)<sup>3</sup>, contains the City’s Tree Removal Permit Ordinance. The purpose of this ordinance is to provide a review process for the removal of heritage trees that are considered to be a community resource. This ordinance pertains to Eucalyptus windrows, extremely large trees (greater than 30 inches in diameter at breast height), and trees considered culturally significant. Based on the results of the reconnaissance field survey, this ordinance would not apply to the Project because no trees included in this ordinance were observed during the field reconnaissance survey.

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<sup>2</sup> Significant Ecological Areas Program. Los Angeles County. 2020. Accessed online at: <http://planning.lacounty.gov/site/sea/>. Accessed on October 1, 2020.

<sup>3</sup> City of Carson Municipal Code. 2020. Available at : <http://qcode.us/codes/ranchocucamonga/>. Accessed on October 9, 2020.

Removal of street trees or any tree on City-owned property also require a permit<sup>4</sup>. No street trees or City-owned trees were observed during the field reconnaissance survey, so this ordinance does not apply to the Project.

#### 4.0 Methodology

An assessment was conducted to determine the potential for sensitive biological resources to occur within the biological survey area (BSA), which included a desktop review and reconnaissance field survey. The BSA included the entire Project parcels (APNs 0229-311-14 and 0229-311-15) plus a surrounding 500-foot buffer. For the purposes of this memorandum, special-status species are defined as species that are included on one or more of the following lists:

- Plant and wildlife species that are listed as threatened or endangered, or are candidates for listing as threatened or endangered, under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA)<sup>5</sup>;
- California Department of Fish and Wildlife (CDFW)-designated Species of Special Concern (SSC), or designated Fully Protected Species<sup>6</sup>; and
- Plants designated by the California Native Plant Society (CNPS) and CDFW with a California Rare Plant Rank (CRPR)<sup>7</sup>

Prior to conducted the reconnaissance field survey, AECOM reviewed existing databases and identified biological resources that may occur in the BSA, including special-status plants and wildlife, United States (U.S.) Fish and Wildlife Service's (USFWS's) Critical Habitat, and previously delineated waters of the U.S. and state of California. The database searches were conducted of the Guasti 7.5-minute United States Geological Survey (USGS) topographic quadrangle, along with the eight surrounding quadrangles which included: Mt. Baldy, Cucamonga Peak, Devore, Ontario, Fontana, Prado Dam, Corona North, and Riverside West. Aerial imagery of the BSA was reviewed to help characterize site conditions. This information was evaluated by consulting the following available databases:

- CDFW CNDDDB<sup>8</sup>;
- USFWS online Information for Planning and Consultation (IPaC)<sup>9</sup>;
- CNPS Inventory of Rare and Endangered Plants<sup>10</sup>;

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<sup>4</sup> Rancho Cucamonga City Website. Available at: <https://www.cityofrc.us/your-government/trees>. Accessed on October 9, 2020.

<sup>5</sup> Species listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species). Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Title 14 California Code of Regulations 670.5).

<sup>6</sup> California Natural Diversity Database (CNDDDB). October 2020. Special Animals List. California Department of Fish and Wildlife. Sacramento, CA.

<sup>7</sup> Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 *et seq.*).

<sup>8</sup> CDFW CNDDDB RareFind 5.0. Available at <https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018407-rarefind-5>. Accessed on September 11, 2020.

<sup>9</sup> IPaC. 2020. USFWS. Available at: <https://ecos.fws.gov/ipac/>. Accessed September 2020.

<sup>10</sup> CNPS, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.45). Available at: <http://www.rareplants.cnps.org>. Accessed on September 11, 2020.

- USFWS Critical Habitat Mapper<sup>11</sup>;
- USFWS National Wetlands Inventory (NWI)<sup>12</sup>, and
- USGS National Hydrography Dataset (NHD)<sup>13</sup>.

Additional sources of information on special-status species in California were reviewed, given that CNDDDB is not inclusive of all current known occurrence information. The probability of occurrence evaluation provided in this memorandum for special-status species identified during the database reviews was supplemented by AECOM's professional knowledge of the area and included reviews of other published sources of information regarding special-status species in California. These latter sources include the following:

- eBird website<sup>14</sup>;
- Inaturalist website<sup>15</sup>;
- Calflora website<sup>16</sup>; and
- Western Bat Working Group (WBWG) website<sup>17</sup>.

Methodology for the reconnaissance field survey included AECOM Senior Biologist Angelique Herman conducting a pedestrian survey of the Project parcels on September 24, 2020, between the hours of 2:00 pm and 3:30 pm. The temperature ranged from 96 degrees Fahrenheit (°F) to 99°F. Skies were clear, and wind speeds were recorded between 0 and 3 miles per hour. The Project parcels were carefully surveyed on foot, and all wildlife and plants observed were recorded (Appendix B). Photographs were collected of the Project parcel (Appendix C). The adjacent properties located within the 500-foot buffer of the BSA were surveyed with binoculars from public sidewalks, to the extent feasible, to determine the potential for biological resources. Survey conditions were suitable for determining the potential for biological resources, and no survey constraints impeded the ability of the biologist to perform the survey successfully.

## 5.0 Findings

### 5.1 General Site Conditions

The BSA is located within a vacant lot in a residential area within City of Rancho Cucamonga. The Project parcels are surrounded by single-family residences, a commercial center, and a vacant lot. The dominant vegetation community within the Project parcels was non-native grassland

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<sup>11</sup> USFWS Critical Habitat Mapper. 2020. Available at: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>. Accessed on September 28, 2020.

<sup>12</sup> USFWS National Wetlands Inventory. 2020. Available at: <https://www.fws.gov/wetlands/data/mapper.html>. Accessed on October 14, 2020.

<sup>13</sup> USGS National Hydrography Products. 2020. Available at: <https://www.usgs.gov/core-science-systems/ngp/national-hydrography/access-national-hydrography-products>. Accessed on September 11, 2020.

<sup>14</sup> The Cornell Lab of Ornithology: eBird Website. 2020. Available at <http://www.ebird.org>. Accessed on September 11, 2020.

<sup>15</sup> Inaturalist Open Source Software. iNaturalist website. 2020. Available at <http://inaturalist.org>. Accessed on September 11, 2020.

<sup>16</sup> Calflora website. 2020. Available at <http://calflora.org>. Accessed on September 11, 2020.

<sup>17</sup> Western Bat Working Group website. 2020. Available at <http://wbwg.org/western-bat-species/>. Accessed on September 28, 2020.

composed largely of red brome (*Bromus madritensis* ssp. *rubens*) and wild oat (*Avena fatua*). Ornamental woody vegetation, including English ivy (*Hedera helix*), Nepalese firethorn (*Pyracantha crenulate*), and Peruvian pepper tree (*Schinus molle*), line the southern and eastern border of the parcels. Native plant species were scarce, and the area was dominated by non-native invasive plant species. A list of plants observed is in Appendix B. The Project parcels are mostly flat with a gentle swale occurring toward the center of the area. Photographs of the Project parcels are located in Appendix C.

## 5.2 Special-status Species

The desktop review yielded records for 49 special-status plant species and 52 special-status wildlife species that have been documented within the Guasti and surrounding eight quadrangles (Appendix D). No special-status plant or wildlife species were observed within BSA during the reconnaissance field survey. Common plant and wildlife species observed during the reconnaissance field survey are included in Appendix B.

The CNDDDB search yielded four special-status species with occurrences that overlap the BSA, including coast horned lizard (*Phrynosoma blainvillii*), Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), and Parry's spineflower (*Chorizanthe parryi* var. *parryi*).

Although the CNDDDB occurrences overlap with the BSA, none were considered to have potential to occur in the BSA given present day site conditions. In general, the CNDDDB records of these four species had non-specific locations which were not mapped precisely to the locations where the species were observed and each individual observation is a square mile or greater in size; so it is not known whether the observation was actually made precisely within the BSA. The CNDDDB records that overlap with the BSA are also 19 or more years old and there has been significant development in the area since that time and it is possible many locations have been extirpated. These four species were assessed for potential to occur within the BSA; however, the CNDDDB occurrence information is not sufficient by itself to conclude that the species is present or has potential to occur in the present day.

Los Angeles pocket mouse is a CDFW SSC which is associated with alluvial fan sage scrub with loose sandy soils, and a high percentage of bare ground compared to plant or thatch cover. Ground cover within the BSA consists largely of non-native annual grasses with a high thatch cover and little bare ground. The CNDDDB record from 1999 that overlaps the BSA described the area as degraded alluvial sage scrub. The NWI database showed a broad riparian drainage, likely connected to Etiwanda Creek, which could have been the historical source of the alluvial material and alluvial fan sage scrub; however no alluvial fan sage scrub was detected in the BSA at the time of the reconnaissance field survey, and the drainage has since been developed and is no longer a natural feature. The Los Angeles pocket mouse CNDDDB record covers a large area overlapping with the historical riparian area so, it is more likely that the Los Angeles pocket mice were concentrated in the historical riparian area and not necessarily in the BSA. Current site conditions do not provide suitable habitat for Los Angeles pocket mouse.

A complete list of special-status species known to occur in the vicinity of the BSA, their sensitivity status, general habitat descriptions, and potential or detection within the BSA is summarized in Appendix D. Due to the high levels of historic disturbance and absence of native habitats, the BSA does not provide suitable habitat for any special-status plant species; therefore, none are expected to occur within the BSA.

Similarly, the BSA does not provide high-quality habitat for special-status wildlife species; however, marginal habitat for three special-status wildlife species identified during the review of potential species (Table 1) is present in the BSA. These special-status species have a low potential to occur.

**Table 1. Special-status Wildlife Species with Potential to Occur in the BSA**

<b>Wildlife</b>		
<b>Common Name (Scientific Name)</b>	<b>Status Federal/State/Other</b>	<b>Potential to Occur</b>
<b>Invertebrates</b>		
Crotch bumble bee ( <i>Bombus crotchii</i> )	- / CE <sup>18</sup> / -	Low
<b>Mammals</b>		
western yellow bat ( <i>Lasiurus xanthinus</i> )	- / - / SSC, WBWG-H	Low
<b>Birds</b>		
burrowing owl ( <i>Athene cunicularia</i> )	- / - / SSC	Low

Crotch bumble bee is a state candidate for listing as endangered. Although the potential is low due to the high-level of disturbance within the BSA, there is potential for this species to occur due to its tolerance of hot and dry habitats with low vegetation cover. This species nests in holes or burrows in friable soil, so an area with herbaceous vegetation cover and some exposed soil, such as that within the BSA, could provide habitat for Crotch bumble bee. The probability of Crotch bumble bee occurring is low due to low habitat quality for this species within the BSA. The Project parcels are a relatively small (5.2 acres) undeveloped area surrounded by residential and commercial development. Anthropogenic disturbances such as routine mowing of the site, and low density of host plants contribute to the low habitat quality. No bumble bee species were observed during the field survey.

Western yellow bat is a CDFW SSC and is ranked as High Priority by the WBWG. Western yellow bats prefer roosting in trees and palms in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats; however, they have been captured in agricultural areas and residential areas<sup>19</sup>, especially those with swimming pools or near other water bodies. Although the potential is low, trees within the BSA, could provide roosting habitat for the western yellow bat. The probability of Western yellow bat occurring is low due to low habitat quality for this species within the BSA. The Project parcels are a relatively small (5.2 acres) undeveloped area surrounded by residential and commercial development. Anthropogenic disturbances such as traffic noise, routine mowing of the site, predation by domestic cats, and low density of insect food sources

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<sup>18</sup> During a November 19, 2020 court ruling, the California Superior Court in Sacramento ruled that the fish and game commission cannot list insects under the California Endangered Species Act (CESA). This decision by the Court is currently being appealed by the Xerces Society and CDFW. Regardless of the outcome, Crotch bumble bee meets the requirements for protection under CEQA. As of June 2, 2021, the most recent CDFW listing of state species is dated April 2021, and Crotch bumble bee remains CE. Candidate species have the same protections as listed species, so the Crotch bumble bee should be considered unless its status is officially changed.

<sup>19</sup> Los Angeles Natural History Museum. 2020. Backyard Bats webpage. Available at: <https://nhm.org/community-science-nhm/backyard-bats>. Accessed October 22, 2020.

contribute to the low habitat quality. No sign of bat roosting (guano, urea staining, or collections of insect carcasses) were observed during the field survey.

Burrowing owl is a CDFW SSC species that is associated with large expanses of (usually flat) grasslands and resides in small mammal burrows year around. The vegetation within the BSA is comprised of grassland and small mammal burrows (California ground squirrel) are present, therefore; western burrowing owl has some potential to occur within the BSA for breeding or overwintering. The project parcels are comprised of a relatively small (5.2 acres) undeveloped area surrounded by residential and commercial development, so the BSA does not support high quality burrowing owl habitat. Furthermore, anthropogenic disturbances (traffic, noise, mowing, and threats by domestic dogs) result in a low potential for burrowing owl to occur within the BSA. No burrowing owl sign (whitewash, owl pellets, or feathers) was observed during the field survey; however, a protocol-level survey was not conducted therefore the possibility cannot be entirely ruled out.

Many birds protected under the Migratory Bird Treaty Act (MBTA) and CFGC §§ 3503–3503.5 are likely to use the BSA for breeding, migratory stopovers, and local dispersal. Mourning dove (*Zenaida macroura*) is a species likely to nest within the BSA on or near to the ground. House finch (*Haemorhous mexicanus*), Northern mockingbird (*Mimus polyglottos*), and California scrub-jays (*Aphelocoma californica*) are most likely to nest in trees within the BSA.

### 5.3 Sensitive Natural Communities

Sensitive natural communities are those designated as rare in the region by the CNDDDB, support special-status plant or wildlife species, or receive regulatory protection (i.e., Section 404 of the Clean Water Act and/or Sections 1600 et seq. of the California Fish and Game Code [CFGC]). Rare communities are given the highest inventory priority. Ten regional habitats of concern including California Walnut Woodland, Canyon Live Oak Ravine Forest, Coastal and Valley Freshwater Marsh, Riversidian Alluvial Fan Sage Scrub, Southern California Arroyo Chub/Santa Ana Sucker Stream, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Forest, Southern Sycamore Alder Riparian Woodland, and Southern Willow Scrub were recorded in the CNDDDB from the USGS Guasti and surrounding eight quadrangles; however, no sensitive vegetation communities identified in the CNDDDB coincide with the BSA. Additionally, CDFW maintains and periodically updates a list of Sensitive Natural Communities<sup>20</sup>. Based on the results of the reconnaissance field survey, the BSA is composed of non-native annual grassland and bare ground and bordered with ornamental trees and shrubs (Appendices A, B, and C). Sensitive natural vegetation communities listed by CDFW are not present in the BSA.

### 5.4 Critical Habitat

Critical habitat is specific geographic areas designated by USFWS that contain features essential to the conservation of a federally endangered or threatened species and that may require special management and protection. The BSA does not coincide with lands designated by USFWS as critical habitat for a listed species.

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<sup>20</sup> CDFW, VegCamp, Natural Communities List. 2020. Available at: <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>. Accessed on October 5, 2020.

## 5.5 Jurisdictional Waters

Jurisdictional waters include waters of the state and of the U.S that fall under federal regulatory jurisdiction of the U.S. Army Corp of Engineers and/or under state jurisdiction of CDFW and Regional Water Quality Control Board (RWQCB). An online database search of the USGS NHD indicates no previously mapped jurisdictional waters occur within the BSA. No features potentially under the state or federal jurisdiction were detected during the reconnaissance field survey.

## 5.6 Wildlife Corridors

In an urban context, a wildlife corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resource that encourages population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban tracts or highways.

The BSA occurs within an industrial center of the Los Angeles Basin and does not occur within or intersect a recognized/established regional wildlife corridor or wildlife nursery site. Ornamental trees and shrubs along the border of the Project parcels provide some opportunities for cover, foraging, and nesting to localized bird populations. The BSA is located within the Pacific Flyway one of four major North American migration routes for birds, especially waterfowl, that extends from Alaska and Canada through California to Mexico. As these birds travel the flyway on their annual north-south migration, they stopover at wetlands with suitable habitat and food supplies. The Project site is composed of non-native annual grassland and bare ground and bordered with ornamental trees and shrubs. As such, the Project site does not contain suitable habitat or food supplies for birds migrating and therefore, is not used as part of this corridor.

## 6.0 Impacts on Biological Resources

Biological resources may be either directly or indirectly impacted by a project. Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

- **Direct:** Any alteration, physical disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include clearing vegetation, encroaching into wetlands or a stream, and the loss of individual species and/or their habitats.
- **Indirect:** As a result of project-related activities, biological resources may also be affected in a manner that is ancillary to physical impacts. Examples include elevated noise and dust levels, soil compaction, increased human activity, decreased water quality, and the introduction of invasive wildlife (domestic cats and dogs) and plants.
- **Permanent:** All impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary:** Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction; or removing vegetation for the preparation of stream bank stabilization activities, and either allowing the natural vegetation to recolonize or actively revegetating the impact area. Surface disturbance that removes vegetation and disturbs the soil is considered a long-term temporary impact because of slow natural recovery in arid ecosystems.

## 6.1. Vegetation

Implementation of the proposed Project would result in direct, permanent removal of approximately 6.3 acres of non-native annual grassland vegetation. Mixed-use buildings and ornamental landscaping would replace the non-native grassland.

Implementation of the proposed Project would not result in indirect impacts to native vegetation communities since none occur adjacent to the BSA.

## 6.2 Special-Status Species

### Special-Status Plants

Based on the results of the biological resource assessment, no special-status plant species are expected to occur within the BSA due to high levels of historic disturbance and absence of native habitats; therefore, no direct impacts to special status plants are expected.

Indirect impacts to special-status plant species occurring outside of the Project site are not expected since special-status plants are unlikely to occur immediately adjacent to the BSA.

### Special-status Wildlife

There are no special-status wildlife species with high potential to occur within the Project site nor does the vegetation in the BSA provide potentially suitable nesting habitat for urban bird species protected by the MBTA and the CFGC that could nest in the BSA. Should construction activities occur when birds are nesting within the BSA, disturbances to nests could occur including trampled or crushed nests, eggs, or nestlings, a significant direct impact to birds protected by the MBTA and CFGC. By adhering to avoidance and minimization measures provided in **Mitigation Measure BIO-3** related to pre-construction surveys and nest avoidance buffers, the direct impacts of construction on nesting birds and their associated habitat would be reduced to less than significant.

Indirect impacts to nesting birds within the BSA could occur during construction as a result of noise, dust, increased human presence, and vibrations. Such disturbances could result in increased nestling mortality due to nest abandonment or decreased feeding frequency by adults and would be considered significant. By adhering to avoidance and minimization measures provided in **Mitigation Measure BIO-3** related to pre-construction surveys and nest avoidance buffers, indirect impacts to nesting birds would be reduced to less than significant.

There are no special-status wildlife species with high potential to occur within the project site or vicinity. However, there is low potential for special-status bat species, such as western yellow bat to occur in the BSA. Direct impacts to bats could occur if daytime or maternal roosts are present in trees, other vegetation, or structures that would be altered or removed by Project activities. By adhering to avoidance and minimization measures provided in **Mitigation Measure BIO-1** related to bat habitat avoidance, the direct impacts of construction on special-status bats and their associated habitat would be reduced to less than significant.

Indirect impacts to special-status bats within the BSA could occur during construction as a result of noise, dust, increased human presence, increased predators (i.e., domestic cats) and vibrations. Such disturbances could result in lower reproductive success due to roost abandonment or decreased feeding frequency by adults and would be considered significant. By adhering to avoidance and minimization measures provided in **Mitigation Measure BIO-1** related to bat habitat avoidance, indirect impacts to special-status bats and their associated habitat would be reduced to less than significant.

There is low potential for one CDFW SSC species, burrowing owl occur in the BSA. Direct impacts such as mortality or nest abandonment could occur if burrowing owls are occupying burrows within the BSA during Project activities. Even though the potential for the occurrence of burrowing owl is low, a mitigation measure has been incorporated to address burrowing owls at the request of CDFW as a precautionary measure. By adhering to avoidance and minimization measures provided in **Mitigation Measure BIO-2** related to burrowing owl avoidance, the direct impacts of construction on burrowing owl and their associated habitat would ensure impacts are less than significant.

Indirect impacts to burrowing owl within the BSA could occur during construction as a result of noise, dust, increased human presence, and vibrations. Such disturbances could result in lower reproductive success due to burrow abandonment or decreased feeding frequency by adults. However, the potential for the occurrence of burrowing owl is low. At the request of CDFW, **Mitigation Measure BIO-2** would be implemented as a precautionary measure related to burrowing owl avoidance, to ensure indirect impacts to burrowing owls and their associated habitat would be less than significant.

Implementation and adherence to the avoidance and minimization and avoidance measures described in Section 7.0 of this memorandum would reduce the potential for direct impacts to less than significant.

### **6.3 Sensitive Natural Communities**

Implementation of the proposed Project would not result in direct or indirect impacts to any sensitive natural communities, as none occur within the BSA or surrounding area.

### **6.4 Critical Habitat**

Implementation of the proposed Project would not result in direct or indirect impacts to USFWS-designated critical habitat, as none occur within the BSA or surrounding area.

### **6.5 Jurisdictional Waters**

Implementation of the proposed Project would not result in direct or indirect impacts to jurisdictional waters, as none occur within the BSA.

### **6.6 Wildlife Corridor**

The BSA does not serve as a regional wildlife corridor; as a result, direct impacts to a regional wildlife movement corridor would not occur. Project construction activities (i.e., increased noise, human presence, vibration) would likely result in wildlife avoidance of the area during the construction time frame. Such indirect impacts would be temporary in nature, restricted to the Project construction time period.

## **7.0 Avoidance and Minimization Measures**

The following avoidance and minimization measures and field surveys, are recommended in order to avoid impacts to natural resources:

### **BIO-1: Bat Habitat Avoidance.**

No less than 60 days prior to initiating project activities, a CDFW-approved bat biologist shall conduct a bat roosting habitat suitability assessment of any vegetation that may be removed, altered, or indirectly impacted by the project activities. Any locations identified as having potentially suitable bat roosting habitat by the CDFW- approved bat biologist shall be subject to additional nighttime surveys (bat surveys) during the summer months (i.e., June- August) to determine the numbers and bat species using the roost(s). The

information collected during these additional bat surveys shall be used by the CDFW-approved bat biologist to develop species-specific measures to minimize impacts to roosting bats should bats be detected using the site. The bat surveys shall be conducted by the CDFW-approved bat biologist using an appropriate combination of visual inspection, sampling, exit counts, and acoustic surveys. The results of the pre-construction bat surveys shall be submitted to CDFW for review no less than 30 days prior to the initiation of project activities.

If the presence of bats within the project is confirmed, avoidance and minimization measures, including the designation of buffers based upon what bat species are found, and phased removal of trees, shall be developed and submitted to CDFW for review and approval. If the site supports maternity roosts, Applicant shall avoid disturbing those areas during the breeding season.

If the site supports a maternity roost(s) or special-status species, Applicant shall contact CDFW and conduct an impact assessment prior to commencing project activities to assist in the development of minimization and mitigation measures. Applicant shall compensate for impacts and losses to maternity roosts and/or special-status bat habitat through a mitigation strategy approved by CDFW.

#### **BIO-2: Burrowing Owl Avoidance.**

Applicant shall designate a burrowing owl biologist (Designated Biologist that is knowledgeable about the burrowing owl, including its natural history, habitat requirements, seasonal movements, and range, to survey and monitor for burrowing owls prior to project activities. The Designated Biologist shall complete necessary surveys, impact assessments, and associated reports following the recommendations and guidelines provided within the Staff Report on Burrowing Owl Mitigation (Department of Fish and Game, March 2012) or similar approach. The survey(s) shall encompass the entire project site and a 150-meter buffer surrounding it, and it shall occur at a time of the day when most burrowing owls are active. Pre-construction burrowing owl surveys shall also be conducted by the Designated Biologist 3 days prior to the start of project activities. If breeding season or pre-construction surveys confirm occupied burrowing owl habitat in or adjoining areas subject to project activities, the Applicant shall contact CDFW and conduct an impact assessment, in accordance with Staff Report on Burrowing Owl Mitigation prior to commencing project activities, to assist in the development of avoidance, minimization, and mitigation measures. Mitigation may include acquisition and in-perpetuity conservation of occupied burrowing owl habitat. To avoid direct take of owls, the Designated Biologist shall establish a conservative avoidance buffer and monitoring shall occur, if deemed necessary, based on identified activities. If relocation/passive exclusion is deemed necessary Applicant shall prepare a Burrowing Owl Exclusion Plan for CDFW review and approval, in accordance with Staff Report on Burrowing Owl Mitigation (Department of Fish and Game, March 2012).

#### **BIO-3: Bird Nest Avoidance.**

Applicant shall ensure that impacts to nesting birds are avoided through the implementation of preconstruction surveys, ongoing monitoring, and if necessary, establishment of minimization measures. The Applicant shall designate a Designated Biologist experienced in: identifying local and migratory bird species; conducting bird

surveys using appropriate survey methodology (e.g., Ralph et al. 1993<sup>21</sup> and United States Fish and Wildlife Service and/or CDFW-accepted species-specific survey protocols, available here: <https://www.wildlife.ca.gov/conservation/survey-protocols>); nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success (e.g., Martin and Geupel 1993<sup>22</sup>); determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

The Designated Biologist shall conduct a pre-construction nesting bird survey to identify nesting birds within three days prior to the start of project activities including vegetation clearing and ground-disturbance. The survey shall be conducted between dawn and noon, in order to capture both nocturnal and diurnal nesting bird species and shall be conducted regardless of the time of year the construction is to begin. The pre-construction survey shall be a pedestrian-based, visual encounter survey, providing full coverage of the Project parcels. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the property; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior (e.g., copulation, carrying of food or nest materials, nest building, removal of fecal sacks, flushing suddenly from atypically close range, agitation, aggressive interactions, feigning injury or distraction displays, or other behaviors).

If nesting birds are detected during pre-construction surveys, avoidance buffers shall be established, and biological monitoring shall be conducted during construction activities to avoid impacts to nesting birds (250-ft for raptors or special-status birds species and 50-ft for common bird species). If excluding work activities from any established buffers is not feasible, the Designated Biologist may establish a modified buffer exclusion utilizing specific biological and/or ecological attributes of the project location and avian species. Reduced nest buffer modifications would be allowed at the discretion of the Designated Biologists and their professional opinion determines that the buffer reduction would not result in nest failure. If the Designated Biologist determines nesting activities could fail as a result of work activities, all work shall cease within the buffer exclusion, and no entry into the buffer will occur. The active nest shall be monitored by the biologist for the duration of the construction until the young have fledged, or nest is no longer active.

## 8.0 Conclusion

Based on the analysis presented above regarding anticipated impacts of the proposed Project, significant impacts to special-status species are not expected. Impacts to nesting birds protected under the MBTA could occur. However, by conducting pre-construction surveys and subsequent biological monitoring efforts as described above in Section 7.0, impacts to biological resources would be further reduced to a level below significant.

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<sup>21</sup> Ralph, C. John, et al. 1993. Handbook of Field Methods for Monitoring Landbirds. United States Department of Agriculture Forest Service Pacific Southwest Research Station. General Technical Report PSW-GTR-144. May.

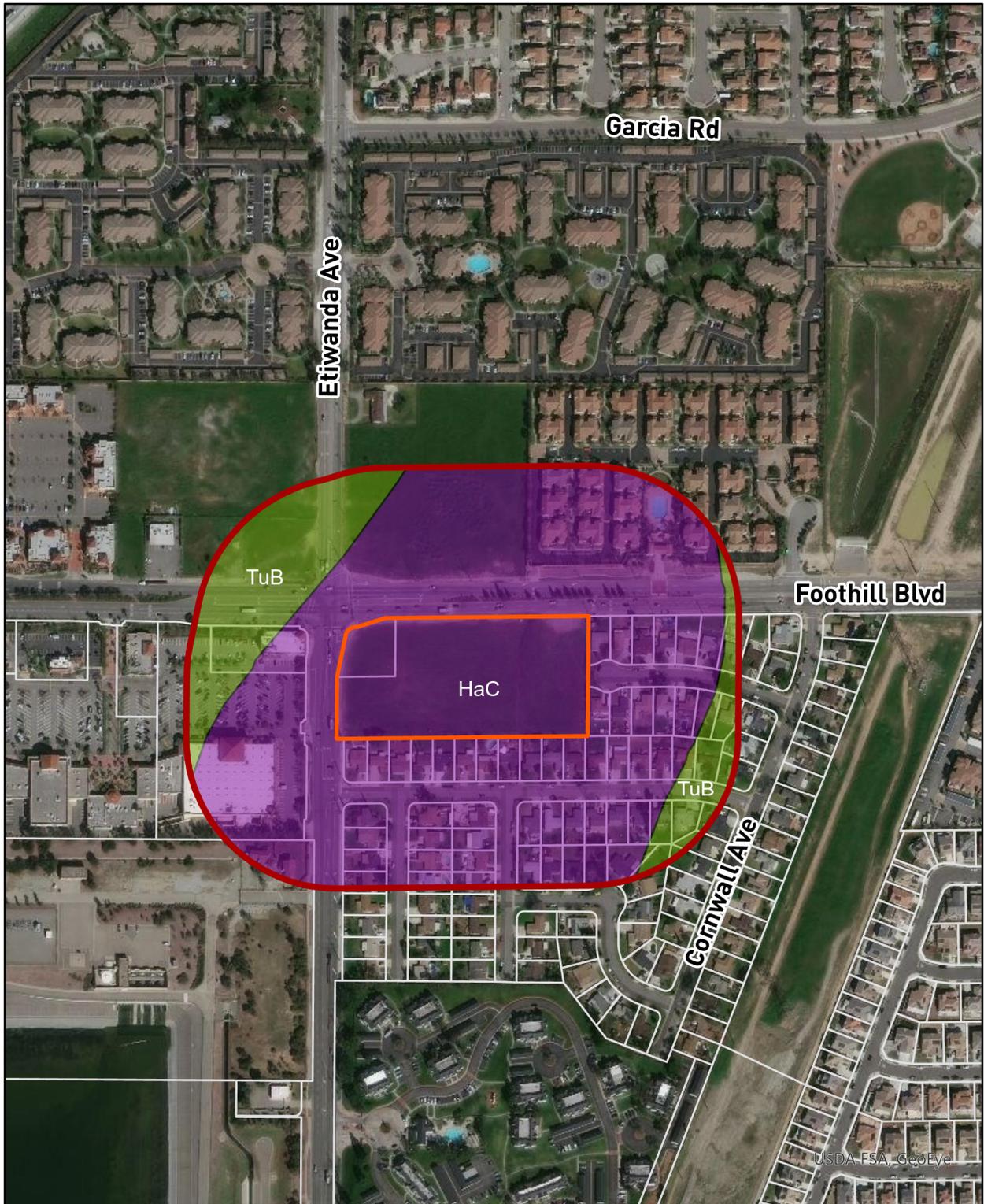
<sup>22</sup> Martin, Thomas E. and Geogfrey R. Geupel. 1993. Nest-Monitoring Plots: Methods for Locating Nests and Monitoring Success. Journal of Field Ornithology: Vol 64: 4, pps: 507-519.

**Appendices**

- Appendix A – Figure
- Appendix B – Plants and Wildlife Observed
- Appendix C – Photographic Log
- Appendix D – Special-Status Species Known to Occur in Vicinity of the BSA
- Appendix E – Resumes

Memorandum

## **Appendix A – Figure**



Source: ESRI 2018, USDA NRCS 2003



- Project Boundary
- Biological Study Area
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- TuB - Tujunga loamy sand, 0 to 5 percent slopes

## Biological Survey Area (BSA)

Memorandum

## **Appendix B – Plants and Wildlife Observed**

Appendix B: Plants and Wildlife Observed

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
<b>Plants</b>		
American bird's foot trefoil	<i>Acmispon americanus</i>	Native
Annual burweed	<i>Ambrosia acanthicarpa</i>	Native
Ragweed	<i>Ambrosia psilostachya</i>	Native
Wildoats	<i>Avena fatua</i>	Invasive non-native
Ripgut brome	<i>Bromus diandrus</i>	Invasive non-native
Red brome	<i>Bromus madritensis ssp. rubens</i>	Invasive non-native
Crimson bottlebrush	<i>Callistemon citrinus</i>	Non-native
Yellow starthistle	<i>Centaurea solstitialis</i>	Invasive non-native
Bermuda grass	<i>Cynodon dactylon</i>	Invasive non-native
Jimsonweed	<i>Datura wrightii</i>	Native
Ice plant	<i>Drosanthemum floribundum</i>	Non-native
Canada horseweed	<i>Erigeron canadensis</i>	Native
Coastal heron's bill	<i>Erodium cicutarium</i>	Invasive non-native
English ivy	<i>Hedera helix</i>	Invasive non-native
Telegraph weed	<i>Heterotheca grandiflora</i>	Native
Mustard	<i>Hirschfeldia incana</i>	Invasive non-native
Foxtail barley	<i>Hordeum murinum</i>	Invasive non-native
Prickly lettuce	<i>Lactuca serriola</i>	Invasive non-native
Kikuyu grass	<i>Pennisetum clandestinum</i>	Invasive non-native
Prostrate knotweed	<i>Polygonum aviculare</i>	Non-native
Nepalese firethorn	<i>Pyracantha crenulate</i>	Invasive non-native
Russian thistle	<i>Salsola tragus</i>	Invasive non-native
Peruvian pepper tree	<i>Schinus molle</i>	Invasive non-native
Siberian elm	<i>Ulmus pumila</i>	Invasive non-native
<b>Reptiles</b>		
Western fence lizard	<i>Sceloporus occidentalis</i>	Native
<b>Birds</b>		
Rock dove	<i>Columba livia</i>	Non-native

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status</b>
House finch	<i>Haemorhous mexicanus</i>	Native
Northern mockingbird	<i>Mimus polyglottos</i>	Native
Black phoebe	<i>Sayornis nigricans</i>	Native
Lesser goldfinch	<i>Spinus psaltria</i>	Native
<b>Mammals</b>		
California ground squirrel	<i>Otospermophilus beecheyi</i>	Native
Botta's pocket gopher	<i>Thomomys bottae</i>	Native

Memorandum

## **Appendix C – Photographic Log**

Appendix C: Photographic Log

<b>PHOTOGRAPHIC LOG</b>			
<b>Project Name:</b> Rancho Cuvee Mixed Use Project		<b>Site Location:</b> City of Rancho Cucamonga, California	<b>Project No.:</b> 60641605
<b>Photo No.</b> <b>1</b>	<b>Date:</b> 9/24/2020	 <p>SE 120 150 180 210 240 270 W</p> <p>☀ 201°S (T) 📍 34.106151°N, 117.521886°W ±26ft ▲ 1201ft</p>	
<b>Direction Photo Taken:</b> south		 <p style="text-align: right;">Ditch 24 Sep 2020, 14:35:35</p>	
<b>Description:</b> Photo showing the non-jurisdictional swale occurring near the center of the parcel.			
<b>Photo No.</b> <b>2</b>	<b>Date:</b> 9/24/2020	 <p>N 0 30 60 90 120 150 180 S</p> <p>☀ 93°E (T) 📍 34.105775°N, 117.523560°W ±19ft ▲ 1200ft</p>	
<b>Direction Photo Taken:</b> east		 <p style="text-align: right;">Facing E 24 Sep 2020, 14:48:00</p>	
<b>Description:</b> Photo showing a general view of the parcel facing east.			

# PHOTOGRAPHIC LOG

<b>Project Name:</b> Rancho Cuvee Mixed Use Project		<b>Site Location:</b> City of Rancho Cucamonga, California		<b>Project No.</b> 60641605	
<b>Photo No.</b> <b>3</b>	<b>Date:</b> 9/24/2020	<div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center;"> <span style="font-size: 1.2em;">NE</span>      <span style="font-size: 1.2em;">E</span>      <span style="font-size: 1.2em;">SE</span>      <span style="font-size: 1.2em;">S</span> </div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; font-size: 0.8em;"> <span style="margin: 0 10px;">30</span> <span style="margin: 0 10px;">60</span> <span style="margin: 0 10px;">90</span> <span style="margin: 0 10px;">120</span> <span style="margin: 0 10px;">150</span> <span style="margin: 0 10px;">180</span> </div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; font-size: 0.9em;"> <span>📍 108°E (T)    📍 34.105280°N, 117.522647°W ±19ft    ▲ 1200ft</span> </div>  <div style="text-align: right; padding-right: 10px; font-size: 0.8em;">             Shrubs 24 Sep 2020, 14:57:55         </div>			
<b>Direction Photo Taken:</b> east					
<b>Description:</b> Photo showing the ornamental trees and shrubs lining the southern boundary of the parcel which could provide habitat for nesting birds.					
<b>Photo No.</b> <b>4</b>	<b>Date:</b> 9/24/2020	<div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center;"> <span style="font-size: 1.2em;">S</span>      <span style="font-size: 1.2em;">SW</span>      <span style="font-size: 1.2em;">W</span>      <span style="font-size: 1.2em;">NW</span> </div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; font-size: 0.8em;"> <span style="margin: 0 10px;">50</span> <span style="margin: 0 10px;">180</span> <span style="margin: 0 10px;">210</span> <span style="margin: 0 10px;">240</span> <span style="margin: 0 10px;">270</span> <span style="margin: 0 10px;">300</span> <span style="margin: 0 10px;">330</span> </div> <div style="background-color: #2c3e50; color: white; padding: 5px; text-align: center; font-size: 0.9em;"> <span>📍 244°SW (T)    📍 34.105319°N, 117.522633°W ±39ft    ▲ 1182ft</span> </div>  <div style="text-align: right; padding-right: 10px; font-size: 0.8em;">             Elm 24 Sep 2020, 14:58:15         </div>			
<b>Direction Photo Taken:</b> southwest					
<b>Description:</b> Photo showing the large Siberian elm ( <i>Ulmus pumila</i> ) along the southern parcel boundary which could provide habitat for nesting birds.					

# PHOTOGRAPHIC LOG

**Project Name:**  
Rancho Cuvee Mixed Use Project

**Site Location:**  
City of Rancho Cucamonga, California

**Project No.**  
60641605

**Photo No.**  
**5**

**Date:**  
9/24/2020

**Direction Photo Taken:**  
southeast

**Description:**  
Photo of water district infrastructure.



**Photo No.**  
**6**

**Date:**  
9/24/2020

**Direction Photo Taken:**  
northeast

**Description:**  
Photo of utility infrastructure present on the northeastern boundary.



**Appendix D – Special-Status Species Known to Occur in  
Vicinity of the BSA**

Appendix D - Special-Status Species Known to Occur in Vicinity of the BSA<sup>1</sup>

Common Name Scientific Name	Status <sup>2</sup>	General Habitat Description	Habitat Present/ Absent in BSA	Potential for Occurrence Rationale <sup>3,4</sup>
<b>Plants</b>				
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None CRPR: 1B.1	Found in sandy habitats, including chaparral, coastal scrub, and desert dunes. Occurs between 250 and 5,250 feet above mean sea level (amsl). Blooms (January) during March to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
singlewhorl burrobrush <i>Ambrosia monogyra</i>	Federal: None State: None CRPR: 2B.2	Found in sandy soils in chaparral and Sonoran Desert scrub habitats. Occurs between 30 and 1,640 feet amsl. Blooms during August to November.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Diego ambrosia <i>Ambrosia pumila</i>	Federal: FE State: None CRPR: 1B.1	Inhabits chaparral, coastal scrub, valley and foothill grassland, and vernal pool habitats. Often occurs in sandy loam or clay, in disturbed areas, or in alkaline soils. Occurs between 65 and 1,360 feet amsl. Blooms during April to October.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Gabriel manzanita <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	Federal: None State: None CRPR: 1B.2	Found in rocky chaparral habitat. Occurs between 1,955 and 4,925 feet amsl. Blooms during March.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
marsh sandwort <i>Arenaria paludicola</i>	Federal: FE State: SE CRPR: 1B.1	Found in sandy openings in freshwater or brackish marsh and swamp habitats. Occurs between 10 and 560 feet amsl. Blooms during May to August.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

<b>Common Name Scientific Name</b>	<b>Status<sup>2</sup></b>	<b>General Habitat Description</b>	<b>Habitat Present/ Absent in BSA</b>	<b>Potential for Occurrence Rationale<sup>3,4</sup></b>
Braunton's milk-vetch  <i>Astragalus brauntonii</i>	Federal: FE State: None CRPR: 1B.1	Found in recently burned or disturbed areas in chaparral, coastal scrub, and valley and foothill grassland habitats. Occurs between 10 and 2,100 feet amsl. Blooms during January to August.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Coulter's saltbush  <i>Atriplex coulteri</i>	Federal: None State: None CRPR: 1B.2	Found in alkaline or clay soils in coastal bluff scrub, coastal dune, coastal scrub, and valley and foothill grassland habitats. Occurs between 5 and 1,510 feet amsl. Blooms during March to May.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Nevin's barberry  <i>Berberis nevinii</i>	Federal: FE State: SE CRPR: 1B.1	Found in sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian scrub habitats. Occurs between 230 and 2,710 feet amsl. Blooms during (February) March to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
slender mariposa-lily  <i>Calochortus clavatus</i> var. <i>gracilis</i>	Federal: None State: None CRPR: 1B.2	Found in chaparral, coastal scrub, and valley and foothill grassland habitats. Occurs between 1,045 and 3,285 feet amsl. Blooms during March to June (November).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Plummer's mariposa-lily  <i>Calochortus plummerae</i>	Federal: None State: None CRPR: 4.2	Found in granitic or rocky chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland habitats. Occurs between 330 and 5,580 feet amsl. Blooms during May to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
intermediate mariposa-lily  <i>Calochortus weedii</i> var. <i>intermedius</i>	Federal: None State: None CRPR: 1B.2	Found in chaparral, chenopod scrub, cismontane woodland, coastal scrub, lower montane coniferous forest and valley and foothill grassland. Occurs between 100 and 4,920 feet amsl. Blooms during April to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

Common Name Scientific Name	Status <sup>2</sup>	General Habitat Description	Habitat Present/ Absent in BSA	Potential for Occurrence Rationale <sup>3,4</sup>
lucky morning-glory <i>Calystegia felix</i>	Federal: None State: None CRPR: 1B.1	Usually found in wetland and marsh habitats, occasionally in drier habitats, including meadows and seeps and riparian scrub. May inhabit areas with silty loam and alkaline soils. Occurs between 98 and 700 feet amsl. Blooms during March to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	Federal: None State: None CRPR: 1B.1	Found in alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland habitats. Occurs between 0 and 2,100 feet amsl. Blooms during April to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Federal: FE State: SE CRPR: 1B.2	Found in coastal dunes and coastal salt marshes and swamps. Occurs between 0 and 100 feet amsl. Blooms during May to October (November).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None CRPR: 1B.1	Found in sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Occurs between 900 and 4,005 feet amsl. Blooms during April to June.	Absent	<b>Not Expected.</b> A CNDDDB record from 1998 overlaps the BSA, however; suitable habitat for this species is now absent from the BSA.
white-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Federal: None State: None CRPR: 1B.2	Inhabits sandy or gravelly soils in coastal scrub, Mojavean desert scrub, and pinyon and juniper woodland habitats. Occurs between 985 and 3,940 feet amsl. Blooms during April to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

<b>Common Name Scientific Name</b>	<b>Status<sup>2</sup></b>	<b>General Habitat Description</b>	<b>Habitat Present/ Absent in BSA</b>	<b>Potential for Occurrence Rationale<sup>3,4</sup></b>
California saw-grass <i>Cladium californicum</i>	Federal: None State: None CRPR: 2B.2	Found in alkaline or freshwater marshes and swamps, meadows, and seeps. Occurs between 195 and 5,250 feet amsl. Blooms during June to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Peirson's spring beauty <i>Claytonia peirsonii</i> ssp. <i>peirsonii</i>	Federal: None State: None CRPR: 1B.2	Found in subalpine coniferous forest and upper montane coniferous forest habitats, often in scree. Occurs between 4,950 and 9,005 feet amsl. Blooms during (March) May to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE Other: 1B.1	Inhabits sandy soils in chaparral, cismontane woodland, and coastal scrub habitats. Occurs between 655 and 2,495 feet amsl. Blooms during April to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
many-stemmed dudleya <i>Dudleya multicaulis</i>	Federal: None State: None CRPR: 1B.2	Found in chaparral, coastal scrub, and valley and foothill grassland habitats. Often in clay soils. Occurs between 50 and 2,520 feet amsl. Blooms during April to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE CRPR: 1B.1	Found in sandy or gravelly sites in chaparral and coastal scrub habitats. Occurs between 298 and 2,000 feet amsl. Blooms during April to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Johnston's buckwheat <i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Federal: None State: None CRPR: 1B.3	Inhabits rocky subalpine coniferous forest and upper montane coniferous forest habitats. Occurs between 6,000 and 9,600 feet amsl. Blooms during July to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

<b>Common Name Scientific Name</b>	<b>Status<sup>2</sup></b>	<b>General Habitat Description</b>	<b>Habitat Present/ Absent in BSA</b>	<b>Potential for Occurrence Rationale<sup>3,4</sup></b>
mesa horkelia <i>Horkelia cuneata</i> <i>var. puberula</i>	Federal: None State: None CRPR: 1B.1	Prefers sandy or gravelly sites in chaparral, cismontane woodland, and coastal scrub habitats. Occurs between 230 to 2,660 feet amsl. Blooms during February to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Coulter's goldfields <i>Lasthenia glabrata</i> <i>ssp. coulteri</i>	Federal: None State: None CRPR: 1B.1	Found in coastal salt marshes and swamps, playas, and vernal pools. Occurs between 0 and 4,000 feet amsl. Blooms during February to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None CRPR: 4.3	Chaparral or coastal scrub habitats. Occurs between 5 to 2,905 feet amsl. Blooms during January to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
lemon lily <i>Lilium parryi</i>	Federal: None State: None CRPR: 1B.2	Found in lower montane coniferous forest, meadows and seeps, riparian forest, and upper montane coniferous forest habitats. Prefers mesic areas. Occurs between 4,000 and 9,005 feet amsl. Blooms during July to August.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Gabriel linanthus <i>Linanthus concinnus</i>	Federal: None State: None CRPR: 1B.2	Prefers rocky areas and openings in chaparral, lower montane coniferous forest, and upper montane coniferous forest habitats. Occurs between 4,985 and 9,190 feet amsl. Blooms during April to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Parish's desert-thorn <i>Lycium parishii</i>	Federal: None State: None CRPR: 2B.3	Found in coastal scrub and Sonoran Desert scrub habitats. Occurs between 115 and 3,280 feet amsl. Blooms during March to April.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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Parish's bush-mallow  <i>Malacothamnus parishii</i>	Federal: None State: None CRPR: 1A	Found in chaparral and coastal scrub habitats. Occurs between 1,000 and 1,495 feet amsl. Blooms during June to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Jokerst's monardella  <i>Monardella australis</i> ssp. <i>jokerstii</i>	Federal: None State: None CRPR: 1B.1	Inhabits chaparral and lower montane coniferous forest habitats. Often found in steep scree or talus slopes between breccia, or in secondary alluvial benches along drainages and washes. Occurs between 4,425 and 5,745 feet amsl. Blooms during July to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Hall's monardella  <i>Monardella macrantha</i> ssp. <i>hallii</i>	Federal: None State: None CRPR: 1B.3	Found in broad-leaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland habitats. Occurs between 2,395 and 7,205 feet amsl. Blooms during June to October.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Pringle's monardella  <i>Monardella pringlei</i>	Federal: None State: None CRPR: 1A	Inhabits sandy coastal scrub habitats. Occurs between 980 and 1,315 feet amsl. Blooms during May to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
California muhly  <i>Muhlenbergia californica</i>	Federal: None State: None CRPR: 4.3	Prefers mesic areas, seeps, and streambanks in chaparral, coastal scrub, lower montane coniferous forest, and meadows and seeps. Occurs between 325 and 6,565 feet amsl. Blooms during June to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
aparejo grass  <i>Muhlenbergia utilis</i>	Federal: None State: None CRPR: 2B.2	Found in chaparral, cismontane woodland, coastal scrub, marshes and swamps, and meadows and seeps. Occurs between 80 and 7,630 feet amsl. Blooms during March to October.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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prostrate vernal pool navarretia  <i>Navarretia prostrata</i>	Federal: None State: None CRPR: 1B.2	Found in mesic habitats, including coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools. Occurs between 5 and 3,970 feet amsl. Blooms during April to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
short-joint beavertail  <i>Opuntia basilaris</i> var. <i>brachyclada</i>	Federal: None State: None CRPR: 1B.2	Found in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland habitats. Occurs between 1,394 and 5,905 feet amsl. Blooms during April to June (August).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
woolly mountain-parsley  <i>Oreonana vestita</i>	Federal: None State: None CRPR: 1B.3	Inhabits lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest habitats. Prefers gravel or talus soils. Occurs between 5,295 and 11,485 feet amsl. Blooms during March to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Rock Creek broomrape  <i>Orobanche valida</i> ssp. <i>valida</i>	Federal: None State: None CRPR: 1B.2	Found in chaparral and pinyon and juniper woodland habitats. Prefers granitic soils. Occurs between 4,100 and 6,560 feet amsl. Blooms during May to September.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Brand's star phacelia  <i>Phacelia stellaris</i>	Federal: None State: None CRPR: 1B.1	Inhabits coastal dune and coastal scrub habitats. Occurs between 3 and 1,315 feet amsl. Blooms during March to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
white rabbit-tobacco  <i>Pseudognaphalium leucocephalum</i>	Federal: None State: None CRPR: 2B.2	Prefers sandy, gravelly areas in chaparral, cismontane woodland, coastal scrub, or riparian woodland habitats. Occurs between 0 to 6,890 feet amsl. Blooms during (July) August to November (December).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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Sanford's arrowhead <i>Sagittaria sanfordii</i>	Federal: None State: None CRPR: 1B.2	Found in assorted shallow freshwater marshes and swamps. Occurs between 0 and 2,135 feet amsl. Blooms during May to October (November).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
chaparral ragwort <i>Senecio aphanactis</i>	Federal: None State: None CRPR: 2B.2	Sometimes alkaline. Prefers areas of chaparral, cismontane woodland, or coastal scrub habitats. Occurs between 50 to 2,625 feet amsl. Blooms during January to April (May).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
salt spring checkerbloom <i>Sidalcea neomexicana</i>	Federal: None State: None CRPR: 2B.2	Prefers alkaline or mesic areas in chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playa habitats. Occurs between 45 and 5,020 feet amsl. Blooms during March to June.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
prairie wedge grass <i>Sphenopholis obtusata</i>	Federal: None State: None CRPR: 2B.2	Found in cismontane woodlands, and meadows and seeps. Prefers mesic areas. Occurs between 980 and 6,565 feet amsl. Blooms during April to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Laguna Mountains jewelflower <i>Streptanthus bernardinus</i>	Federal: None State: None CRPR: 4.3	Found in chaparral and lower montane coniferous forest habitats. Occurs between 2,195 and 8,205 feet amsl. Blooms during May to August.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

Common Name Scientific Name	Status <sup>2</sup>	General Habitat Description	Habitat Present/ Absent in BSA	Potential for Occurrence Rationale <sup>3,4</sup>
San Bernadino aster <i>Symphotrichum defoliatum</i>	Federal: None State: None CRPR: 1B.2	Found near ditches, streams, and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernal mesic valley and foothill grassland habitats. Occurs between 5 and 6,700 feet amsl. Blooms during July to November (December).	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Greata's aster <i>Symphotrichum greatae</i>	Federal: None State: None CRPR: 1B.3	Prefers mesic areas in broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and riparian woodland habitats. Occurs between 980 and 6,595 feet amsl. Blooms during June to October.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
rigid fringe-pod <i>Thysanocarpus rigidus</i>	Federal: None State: None CRPR: 1B.2	Found on dry rocky slopes in pinyon and juniper woodland habitats. Occurs between 1,965 and 7,220 feet amsl. Blooms during February to May.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
grey-leaved violet <i>Viola pinetorum</i> ssp. <i>grisea</i>	Federal: None State: None CRPR: 1B.2	Found in meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest habitats. Occurs between 4,920 and 11,155 feet amsl. Blooms during April to July.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

Common Name Scientific Name	Status <sup>2</sup>	General Habitat Description	Habitat Present/ Absent	Potential for Occurrence Rationale <sup>3,4</sup>
<b>Invertebrates</b>				
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: CE Other: None	Inhabit open grassland and scrub habitats with hot, dry, friable soils in which to burrow. Are thought to forage on a variety of flowering plants including those in: Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae plant families.	Present	<b>Low.</b> Marginal habitat for this species is present in the BSA.
quino checkerspot butterfly <i>Euphydryas editha quino</i>	Federal: FE State: None Other: None	Lives in grasslands, coastal sage scrub, chamise chaparral, red shank chaparral, juniper woodland, and semi-desert scrub where native plantain species ( <i>Plantago ovata</i> and <i>P. erecta</i> ) are found.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA. No host plants for this species were observed.
Delhi Sands flower-loving fly <i>Rhaphiomidas terminates abdominalis</i>	Federal: FE State: None Other: None	Requires fine, sandy soils specifically the Delhi sands formation. Occurs in San Bernardino and Riverside counties.	Absent	<b>Not Expected.</b> Several CNDDB occurrences overlap the BSA, however; soils derived from the Delhi sands formation are not mapped within the BSA (Appendix A).

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<b>Fish</b>				
Santa Ana sucker <i>Catostomus santaanae</i>	Federal: FT State: None Other: None	Inhabits permanent streams and rivers, with depths from a few centimeters to over a meter. Water must be cool with variable flows. Substrates of gravel, rubble and boulders are preferred for foraging and required for breeding.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
arroyo chub <i>Gila orcuttii</i>	Federal: None State: None Other: SSC	Habitat includes headwaters, creeks, and small to medium rivers, often intermittent streams; permanent, small- to moderate-sized, moderate- to high-gradient streams with more than 50 percent of the habitat as runs and pools less than 4 inches deep and reaches of permanent water more than 6,560 feet long; requires some flow.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
steelhead – southern California DPS <i>Oncorhynchus mykiss irideus</i> pop. 10	Federal: FE State: None Other: None	Found in Pacific Ocean tributaries from Aleutian Islands in Alaska south to Southern California. Anadromous forms are known as steelhead, freshwater forms as rainbow trout.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Santa Ana speckled dace <i>Rhinichthys osculus</i> ssp. 3	Federal: None State: None Other: SSC	Inhabit a variety of habitats, including perennial streams, riffles dominated by gravel and cobble, and pools in low-gradient streams. Mainly found in areas that maintain summer water temperatures below 68 °F.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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<b>Amphibians</b>				
arroyo toad <i>Anaxyrus californicus</i>	Federal: FE State: None Other: SSC	Inhabits valley-foothill, desert riparian, desert wash, palm oasis, Joshua tree, mixed chaparral, and sagebrush habitats. Often found near washes or intermittent streams.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
western spadefoot <i>Spea hammondi</i>	Federal: None State: None Other: SSC	Inhabits grassland, oak woodland, coastal sage scrub, and chaparral vegetation in washes, floodplains, alluvial fans, playas, and alkali flats.	Breeding habitat is Absent	<b>Not Expected.</b> Suitable breeding habitat for this species is absent from the BSA.
foothill yellow-legged frog <i>Rana boylei</i>	Federal: None State: SE Other: SSC	Inhabits streams, seeps, pools, and other moist habitats between 0 and 5,800 feet amsl.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
southern mountain yellow-legged frog <i>Rana mucosa</i>	Federal: FE State: SE Other: WL	Inhabits ponds, lakes, and streams at moderate to high elevations.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Coast Range newt <i>Taricha torosa</i>	Federal: None State: None Other: SSC	Inhabits valley-foothill hardwood, valley-foothill hardwood-conifer, coastal scrub, mixed chaparral, annual grassland, and mixed conifer habitats. Occurs between 0 and 6,000 feet amsl.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
<b>Reptiles</b>				
southern California legless lizard <i>Anniella stebbinsi</i>	Federal: None State: None Other: SSC	Occurs in moist warm loose soils in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Often under leaf litter or other surface objects.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: None Other: SSC	Most common in desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grassland.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
orange-throated whiptail <i>Aspidoscelis hyperythra</i>	Federal: None State: None Other: WL,	Inhabits washes, streams, terraces, and other sandy areas often where there are rocks and patches of brush and rocky hillsides. Frequent coastal chaparral, thornscrub and streamside growth.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	Federal: None State: None Other: SSC	Occurs in coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	Federal: None State: None Other: SSC	Occurs in coastal and cismontane areas in southern California. Prefers granite and rocky outcrops.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: None Other: SSC	Occurs in coastal sage scrub, chamise chaparral, redshank, desert slope scrub, desert washes, grassy fields, orchards, cactus patches, and rocky areas.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
western pond turtle <i>Emys marmorata</i>	Federal: None State: None Other: SSC	Occurs in aquatic water bodies including flowing rivers and streams, permanent lakes, ponds, reservoirs, settling ponds, marshes and other wetlands. Semi-permanent water bodies such as stock ponds, vernal pools and seasonal wetlands can also be utilized on a temporary basis.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: None Other: SSC	Inhabits coastal sage scrub and chaparral in arid and semiarid climates. Prefers friable, rocky, or shallow sandy soils.	Absent	<b>Not Expected.</b> A CNDDDB record dated 1991 overlaps with the BSA, however suitable habitat for this species is now absent from the BSA.
Two-striped gartersnake <i>Thamnophis hammondi</i>	Federal: None State: None Other: SSC	Inhabits perennial and intermittent streams, often with rocky streambeds bordered by willow thickets or dense vegetation. Occurs in a variety of habitats between 0 and 8,000 feet amsl.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
<b>Birds</b>				
tricolored blackbird <i>Agelaius tricolor</i>	Federal: None State: FT Other: SSC, BCC	Inhabits annual grasslands, wet and dry vernal pools, seasonal wetlands. Frequently found in and around agricultural areas.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	Federal: None State: None Other: WL	Considered a habitat specialist inhabiting dry, rocky hillsides with sparse shrub cover.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
grasshopper sparrow <i>Ammodramus savannarum</i>	Federal: None State: None Other: SSC	Prefers moderately open grasslands with scattered shrubs.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
golden eagle <i>Aquila chrysaetos</i>	Federal: None State: None Other: FP, WL, BCC	In southern California, occupies grasslands, brushlands, deserts, oak savannas, open coniferous forests, and montane valleys. Nests on rock outcrops and ledges.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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Bell's sage sparrow <i>Artemisiospiza belli belli</i>	Federal: None State: None Other: WL, BCC	Found in a variety of chaparral and scrub habitats. In the winter, prefers more arid, open shrub habitats.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
long-eared owl <i>Asio otus</i>	Federal: None State: None Other: SSC	Prefers riparian habitats. Sometimes found in live oak thickets and other dense stands of trees.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
burrowing owl <i>Athene cunicularia</i>	Federal: None State: None Other: SSC	Occurs in expansive, nearly flat open areas, such as prairies, grasslands, agricultural fields, vacant lots. Small mammal burrows are required for roosting/nesting.	Present	<b>Low.</b> Marginal habitat for this species is present in the BSA.
Swainson's hawk <i>Buteo swainsoni</i>	Federal: None State: ST Other: BCC	Nests in stands with few trees in juniper-sage flats and riparian areas. Utilizes adjacent grasslands, grain or alfalfa fields, or livestock pastures for foraging.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
coastal cactus wren <i>Campylorhynchus brunneicapillus sandiegensis</i>	Federal: None State: None Other: SSC	Inhabits cactus scrub complexes that can include <i>Rhus</i> sp. Presence of cholla cactus is preferred, as well as large dense stands of cactus.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	Federal: FT State: SE Other: BCC	Occurs in valley foothill and desert riparian habitats.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
yellow rail <i>Coturnicops noveboracensis</i>	Federal: None State: None Other: SSC, BCC	Inhabits sedge marshes and meadows with moist soil or shallow standing water.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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black swift <i>Cypseloides niger</i>	Federal: None State: None Other: SSC, BCC	Nests in forested areas near rivers in dark, damp areas. Forages in skies over mountainous areas and on coastal cliffs.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
white-tailed kite <i>Elanus leucurus</i>	Federal: None State: None Other: FP	Inhabits open grassy areas with scattered shrubs. Roosts in tall trees adjacent to open areas.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Federal: FE State: SE Other: None	Nests in extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters, between 2,000 and 8,000 feet amsl. Dense willow thickets are required for nesting and roosting. Low, exposed branches are used for singing posts/hunting perches.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
yellow-breasted chat <i>Icteria virens</i>	Federal: None State: None Other: SSC	Occurs in dense tangled brushy patches, hedgerows and wood edges, in open sunny areas and along riparian woodland ecotones.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
California black rail <i>Laterallus jamaicensis coturniculus</i>	Federal: None State: ST Other: FP, BCC	Inhabits saline, brackish, and fresh emergent wetlands.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
coastal California gnatcatcher <i>Polioptila californica californica</i>	Federal: FT State: None Other: SSC	Inhabits coastal sage scrub below 2,500 feet amsl in southern California. Inhabits low, coastal sage scrub in arid washes, on mesas and slopes.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
yellow warbler <i>Setophaga petechia</i>	Federal: None State: None Other: SSC, BCC	Occupies riparian vegetation in close proximity to water along streams and in wet meadows. Associated with willow and cottonwoods.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

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Lawrence's goldfinch <i>Spinus lawrencei</i>	Federal: None State: None Other: BCC	Occurs in valley foothill hardwood, valley foothill hardwood-conifer, desert riparian, palm oasis, pinyon-juniper, and lower montane habitats. Breeds in arid woodland and chaparral habitats near a water source.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
least Bell's vireo <i>Vireo bellii pusillus</i>	Federal: FE State: SE Other: None	Occupies willow and cottonwood riparian woodland, usually associated with water or adjacent to a water source.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
<b>Mammals</b>				
pallid bat <i>Antrozous pallidus</i>	Federal: None State: None Other: SSC, WBWG-H	Roosts by day in rock crevices, buildings, mines, and hollow trees. At night, may roost under bridges and/or porches.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: None Other: SSC	Found in coastal sage scrub, sage scrub/grassland ecotones, and chaparral habitats. Typically inhabits areas with rocky outcroppings and sandy soils.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
pallid San Diego pocket mouse <i>Chaetodipus fallax pallidus</i>	Federal: None State: None Other: SSC	Found in desert shrublands, slopes, and rocky areas along southern margins of Mojave Desert and along northern slopes of San Bernardino Mountains.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Bernadino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: CE Other: SSC	Found in alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA. No burrows characteristic of kangaroo rats were observed during field survey.

<b>Common Name Scientific Name</b>	<b>Status<sup>2</sup></b>	<b>General Habitat Description</b>	<b>Habitat Present/ Absent</b>	<b>Potential for Occurrence Rationale<sup>3,4</sup></b>
Stephens' kangaroo rat <i>Dipodomys stephensi</i>	Federal: FE State: ST Other:	Prefers annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA. No burrows characteristic of kangaroo rats were observed during field survey.
western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: None Other: SSC, WBWG-H	Roosts in rock crevices on cliff faces and also uses crevices in buildings and structures. Limited to roosts that allow at least 10 feet of free fall.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
hoary bat <i>Lasiurus cinereus</i>	Federal: None State: None Other: WBWG-M	Occurs from sea level to 13,200 feet amsl. Males generally inhabit foothills, deserts, and mountains, while females inhabit lowlands and coastal valleys. Roosts in dense foliage of medium to large trees, preferring sites hidden from above with few branches below.	Present	<b>Low.</b> Marginal habitat for this species is present in the BSA.
western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: None Other: SSC, WBWG-H	Occurs below 2,000 feet amsl in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees and palms.	Present	<b>Low.</b> Marginal habitat for this species is present in the BSA.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: None Other: SSC	Occurs in lower elevation herbaceous and desert-shrub areas and open, early-successional stages of forest and chaparral habitats.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: None Other: SSC	Inhabits Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, sagebrush, and most desert habitats. Prefers rocky areas with Joshua trees. Occurs between 0 and 8,500 feet amsl.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA. No woodrat middens were detected during the field survey.

<b>Common Name Scientific Name</b>	<b>Status<sup>2</sup></b>	<b>General Habitat Description</b>	<b>Habitat Present/ Absent</b>	<b>Potential for Occurrence Rationale<sup>3,4</sup></b>
pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: None Other: SSC, WBWG-M	Occurs in pinyon-juniper woodlands, desert scrub, desert succulent scrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis habitats. Roost in rock crevices, caverns, or buildings.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
big free-tailed bat <i>Nyctinomops macrotis</i>	Federal: None State: None Other: SSC, WBWG-M	Often found in urban areas. Roost in buildings, caves, hollow trees, high cliffs, and rocky outcrops.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
desert bighorn sheep <i>Ovis canadensis nelsoni</i>	Federal: None State: None Other: FP	Requires semi-open areas with rocky slopes, ridges, cliffs, or rugged canyons.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: None Other: SSC	Occurs in open landscapes associated with alluvial, aeolian, or well-drained upland deposits of sandy soil with a dominance of bare ground.	Absent	<b>Not Expected.</b> Suitable habitat for this species is absent from the BSA.

Common Name <i>Scientific Name</i>	Status <sup>2</sup>	General Habitat Description	Habitat Present/ Absent	Potential for Occurrence Rationale <sup>3,4</sup>
<sup>1</sup> Special-Status species known from the CNDDDB and CNPS databases to occur on the Mt. Baldy, Cucamonga Peak, Devore, Ontario, Guasti, Fontana, Prado Dam, Corona North, and Riverside West quadrangles, and identified in the USFWS species list.				
<sup>2</sup> Sensitivity Status Codes <u>Federal</u> <b>FT</b> – Federally Threatened under the Federal Endangered Species Act <b>FE</b> – Federally Endangered under the Federal Endangered Species Act <u>State</u> <b>ST</b> – State Threatened under the California Endangered Species Act <b>SE</b> – State Endangered under the California Endangered Species Act <u>Other</u> <b>BEGE</b> – Federal Bald Eagle and Golden Eagle Protection Act <b>BCC</b> – Designated by USFWS as a Bird of Conservation Concern <b>FP</b> – Designated Fully Protected by CDFW <b>SSC</b> – Designated Species of Special Concern by CDFW <b>WL</b> – Designated as a Watch List species by CDFW <b>WBWG-H</b> – Designated by the Western Bat Working Group (WBWG) as High Priority <b>WBWG-M</b> – Designated by the WBWG as Medium Priority <u>CRPR</u> California Native Plant Society’s California Rare Plant Rank (CRPR) <b>1A:</b> Plants presumed extinct in California <b>1B:</b> Plants rare, threatened, or endangered in California and elsewhere <b>2:</b> Plants rare, threatened, or endangered in California, but more common elsewhere <b>3:</b> Plants more information is needed for <b>4:</b> Plants of limited distribution – a watch list <b>0.1:</b> Seriously threatened in California <b>0.2:</b> Fairly endangered in California <b>0.3:</b> Not very endangered in California				
<sup>3</sup> Historical records from CNDDDB. CDFW CNDDDB RareFind 5.0. Available at <a href="https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018407-rarefind-5">https://wildlife.ca.gov/Data/CNDDDB/Maps-and-Data#43018407-rarefind-5</a> . Accessed on September 11, 2020.				
<sup>4</sup> Potential for each species to occur within the BSA is based on the following guidelines: <ul style="list-style-type: none"> <li>• Present: Species was observed in or immediately adjacent to the BSA during the field survey, or survey conducted within the past 5 years.</li> <li>• High: Habitat (including soils and elevation factors) and known historical range for the species occurs in the BSA and a known occurrence has been recorded from within 5 miles within the past 30 years.</li> <li>• Moderate: Habitat for the species occurs in the BSA and a known occurrence exists from between 5 and 10 miles of the BSA, within the past 30 years.</li> <li>• Low: Limited habitat for the species occurs in the BSA and a known occurrence is from greater than 10 miles from the BSA or over 30 years old, or habitat to support the species is of marginal quantity or quality. A low potential to occur is also assigned when focused surveys for a species have been conducted numerous times within the past 10 years without positive results.</li> <li>• Not Expect: Beyond those factors listed for Low Potential, the species is easily identifiable throughout the year and was not observed, or specific habitat requirements are not found within or adjacent to the BSA.</li> </ul>				

Memorandum

## **Appendix E – Resumes**

# Angelique Herman, Senior Biologist

## Professional History

AECOM, Santa Maria, CA, 2018-  
Present

Encelia Biological Consulting, LLC,  
San Diego, CA, 2015-2018

San Elijo Lagoon Conservancy,  
Solana Beach, CA 2014-2015

Garcia and Associates (GANDA),  
Oceanside, CA, 2011-2014

San Diego Zoo Global, San Diego,  
CA, 2010-2011

Indiana Dunes National Lakeshore,  
Porter, IN, 2009

Virginia Polytechnic Institute and  
State University, Blacksburg, VA,  
2007-2009

## Education

B.S. Environmental Science,  
Emphasis on Plant Resources,  
Virginia Polytechnic Institute and  
State University, 2009

## Technical Specialties

Monitoring sensitive, threatened and  
endangered reptiles, amphibians,  
birds, mammals and plants of  
California

Wildlife surveys

Nesting bird surveys

Botanical surveys

## Affiliations

The Wildlife Society – California  
Central Coast Chapter

San Diego Audubon Society

California Native Plant Society  
(CNPS)

International Society of Arboriculture  
(ISA)

Southern California Botanists

Ms. Herman is a field biologist and ISA-certified arborist with 11 years of experience performing habitat restoration, wildlife and vascular plant surveys, and natural lands management. Ms. Herman has extensive field experience in California and is familiar with the flora and vegetative communities of southern and central California. She has provided biological services to support large-scale transportation and energy projects for clients such as: High Speed Rail Authority, Southern California Gas Company, Southern California Edison, and Con Edison.

In addition to her botanical background, Ms. Herman has a wide breadth of experience in wildlife science. She has small mammal trapping experience currently holds state and federal permits to handle several species, including **giant kangaroo rat**. She has experience surveying for desert and San Joaquin kit fox and monitoring potential dens using wildlife cameras and tracking medium. She assisted with monitoring the biodiversity of herpetofauna using a variety of techniques including: pit-fall traps, coverboards, surveys, and noosing. She has performed protocol surveys **blunt-nosed leopard lizard**. She has assisted permitted biologists with translocating adult **California tiger salamander** and sampling larvae, and she field experience working under permitted researchers performing aquatic sampling techniques and handling different life stages of **California red-legged frog**. She can distinguish amphibian egg masts from several sympatric amphibians. She has experience surveying for **southwestern pond turtle**. Her avian experience includes: nest monitoring for Ridgeway's rail, collecting avian point count data for coastal cactus wren and California gnatcatcher, performing burrowing owl presence/absence surveys, MBTA-protected nesting bird surveys, Swainson's Hawk surveys/nest monitoring, and banding passerine birds.

## Permits/Certifications

USFWS Endangered Species Act 10(a)1(A) Recovery Permit TE 37620D-0

- Giant Kangaroo Rat (*Dipodomys ingens*)
- Tipton Kangaroo Rat (*Dipodomys nitratooides nitratooides*)

California Department of Fish and Wildlife (CDFW) Scientific Collecting Permit SC-190530014/ Memorandum of Understanding

- Giant Kangaroo Rat (*Dipodomys ingens*)
- Tipton Kangaroo Rat (*Dipodomys nitratooides nitratooides*)
- Mohave Ground Squirrel (*Xerospermophilus mohavensis*)

CDFW Endangered Species Act Plant Voucher Collecting Permit (No.2081(a)-19-069-V)

Basic Wetland Delineation Training (No.7092), United States Army Corps of Engineers

International Society of Arboriculture-Certified Arborist (WE-10295A)

Qualified to Perform California Rapid Assessment Method (CRAM) assessments

California Society for Ecological  
Restoration (SERCAL)

## Select Project Experience

### BOTANICAL SURVEYS

**Mojave Public Utility District Cache Creek Water Line Replacement Project, Tehachapi, CA.** *Surveyor:* As a supplement to the habitat assessment survey, Ms. Herman conducted a rare plant survey of the proposed project area including BLM-sensitive species. Though no rare species were documented during the survey, several challenging genera were observed during the survey including: *Eriastrum* and *Cryptantha* with which, several local dichotomous keys and the use of a dissecting microscope were used to make plant determinations. A total of 142 plant taxa were documented including two potentially significant non-native plant taxa tuberclad crowfoot (*Ranunculus testiculatus*) and crossflower (*Chorispora tenella*).

**Aliso Canyon Turbine Replacement Project Invasive Plant Surveys, Porter Ranch, CA.** *Surveyor:* Ms. Herman performed quarterly invasive plant surveys to satisfy the Project's post-construction mitigation requirements and added several previously undocumented invasive grass species to the Project list.

**Dense Urban Terrain (DUT) Rare Plant Survey, Fort Irwin, CA.** *Surveyor:* With a team of EREMICO botanists, Ms. Herman participated in a protocol-level full coverage rare plant survey focusing on federally endangered Lane Mountain Milkvetch and California Desert Native Plant Act (CNDPA)-protected species. The 4,014-acre survey was floristic in nature and results included an inventory of 153 taxa.

**San Elijo Lagoon Ecological Reserve Botanical Inventory, Solana Beach, CA.** *Botanist:* Ms. Herman maintained the botanical inventory for the 900-acre coastal wetland reserve. Over the course of one year, she added 25 taxa to the list and updated the taxonomy consistent with The Jepson Manual II.

**San Diego Management and Monitoring Program (SDMMP) Rare Plant Population Monitoring, San Diego County, CA.** *Botanist:* Ms. Herman performed a comprehensive rare plant monitoring protocol on several occurrences of rare plant species. Plant occurrence data included: population size, health, phenology, associated species and percent cover information, vegetation alliances, and potential threats.

### ISA-CERTIFIED ARBORIST

**Oak Mitigation, Point Pedernales Pipelines 2012 Dig Site 15 Anomaly Inspection and Repair Project, Santa Barbara County, CA.** *Technical Lead:* Ms. Herman designed and oversaw installation of exclusionary caging to protect 86 coast live oak (*Quercus agrifolia*) saplings from herbivores such as: deer and pocket gophers. Site specific recommendations were also provided to help improve sapling vigor and survivorship including: adding oak leaf litter as mulch, initiating pathogen abatement procedures for sudden oak death, recommending maintenance of water retention basins, and adjusting the irrigation regime.

**Saint Albans Drive Addition, Encinitas, CA.** *Certified Arborist:* Ms. Herman authored a Tree Protection and Preservation Plan pursuant to City of Encinitas Tree Protection Ordinance for city street trees. The plan included minimization measures to limit zoot-zone disturbance during the construction of a new driveway which encroached onto the city right-of-way.

**Southern California Gas Company Ventura and Montgomery Street Pipeline Replacement Project, Ojai, CA.** *Certified Arborist:* Ms. Herman performed an arborist survey and monitored construction pursuant of City of Ojai Tree Protection Ordinance.

**Southern California Gas Company North Signal Street Pipeline Replacement Project Arborist Survey and Tree Protection Plan, Ojai, CA.** *Certified Arborist:* Ms. Herman performed a comprehensive arborist survey, prepared a Tree Protection Plan, and monitored construction pursuant of City of Ojai Tree Protection Ordinance. The arborist inventory included diameter-at-breast-height (DBH), canopy cover, height, and health of 30 protected trees. The Tree Protection Plan included mitigation measures to minimize root-zone disturbance caused by trenching activities. Western Oak Bark Beetle (*Pseudopityophorus pubipennis*) was observed and documented in several trees.

**Southern California Gas Company Del Norte Road Pipeline Replacement Project Arborist Survey and Tree Protection Plan, Ojai, CA.** *Certified Arborist:* Ms. Herman performed a comprehensive arborist survey and prepared a Tree Protection Plan pursuant of City of Ojai Tree Protection Ordinance. The 2-acre arborist inventory included 150+ protected trees and included diameter-at-breast-height (DBH), canopy cover and health of each tree. The Tree Protection Plan included mitigation measures to minimize root-zone disturbance caused by trenching activities.

#### SMALL MAMMAL

**Construction Package 4, California High Speed Rail Project, Wasco, CA.**

*Biologist:* Ms. Herman performed protocol trapping for Tipton kangaroo rat (*Dipodomys nitratooides nitratooides*). Traps were checked every three hours from sunset to sunrise due to cold weather conditions. Individuals personally handled included: deer mouse (28).

**Semitropic Ridge Reserve Small Mammal Trapping, San Joaquin Valley, CA.**

*Volunteer:* Ms. Herman assisted in nocturnal trapping for an on-going mark/recapture study. Several species were personally captured and handled including: Tipton kangaroo rat (49 individuals handled), San Joaquin pocket mouse (15), and Heermann's kangaroo rat (5).

**Lokern Reserve Small Mammal Trapping, San Joaquin Valley, CA.** *Volunteer:*

Ms. Herman assisted in nocturnal trapping for an on-going mark/ recapture study. Several species were personally captured and handled including: giant kangaroo rat (14), short-nosed kangaroo rat (24), and San Joaquin pocket mouse (7).

**Tipton Kangaroo Rat Population Monitoring, CSU Bakersfield, San Joaquin Valley, CA.** *Volunteer:*

Ms. Herman assisted in nocturnal trapping Tipton's kangaroo rats using Sherman traps for an on-going mark/recapture study including PIT tag scanning and marking for recapture. Small mammals observed included: Tipton kangaroo rat (10), San Joaquin pocket mouse (5), and Heermann's kangaroo rat (12).

**Mohave Ground Squirrel Population Study, California State University-Stanislaus, Naval Weapons Base China Lake, CA.** *Field Technician:*

For three field seasons, Ms. Herman has assisted permitted biologists with the trapping and processing of Mohave ground squirrels (10 individuals handled) for a

population monitoring study. She baited Pymatuning traps and extracted and processed the individuals, including scanning for PIT tags and marking for recapture. White-tailed antelope squirrel (10 individuals handled) were processed and released in addition. Ms. Herman took part in grid set-up, breakdown, and trap sterilization.

**Kern County National Wildlife Refuge Reconnaissance Small Mammal Trapping, San Joaquin Valley, CA.** *Volunteer:* Ms. Herman assisted in nocturnal trapping conducted to detect presence of Tipton kangaroo rat. Captures included: little pocket mouse (2) and Merriam's kangaroo rat (1).

**Mohave Ground Squirrel Little Dixie Wash Population Monitoring, Inyokern, CA.** *Volunteer:* Ms. Herman assisted permitted biologist with diurnal trapping, grid set-up, handling and processing of capture animals. Captures handled included: Mohave ground squirrel (1) Mojave rattlesnake (2).

**Stonebridge Mesa Small Mammal Trapping, San Elijo Lagoon Ecological Reserve, Encinitas, CA.** *Trapper:* Ms. Herman assisted with reconnaissance-level nocturnal trapping (3 nights) using Sherman live traps. Animals were captured, processed, and released. Processing included sex determination; marking; and measurements of body weight, ear, tail, and/or hind foot length. Captures handled included: Northwestern San Diego pocket mouse (1), western harvest mouse (6), big-eared woodrat (1).

**Burrowing Owl Recovery Project. San Diego Zoo Global, Institute for Conservation Research, San Diego County, CA.** *Field Assistant:* Ms. Herman assisted with trapping, processing, and releasing California ground squirrels. The study aims to re-introduce this key stone species to previously occupied habitat to increase the habitat value for western burrowing owl.

#### HABITAT ASSESSMENTS

**Phillips 66 Santa Margarita Remediation Project Biological Resources Report, Santa Margarita, CA.** *Lead Biologist:* Ms. Herman performed habitat assessment survey and reporting. Field work included detailed vegetation classification and mapping and habitat assessment for 100+ potential special-status wildlife and plants. Several special-status species were observed including: Bald Eagle, White-tailed Kite, Logger-head Shrike, Ferruginous Hawk, and American badger.

**FEMA Habitat Assessment, Central Coast, CA.** *Biologist:* On behalf of FEMA, Ms. Herman performed several habitat assessment surveys to identify compliance with federal regulations for FEMA-funded projects.

**Terra-Gen Windland Habitat Assessment, Tehachapi, CA.** *Deputy Project Manager:* Ms. Herman conducted a baseline habitat assessment survey including vegetation mapping. Special-status species observations included: coast horned lizard (1) and rare plant adobe yampah (*Perideridia pringlei*, CRPR 4.3) (26). Plant list observations included 93 taxa.

**Aera Energy Ventura River Well Abandonment Project, Ventura, CA.** *Surveyor:* Ms. Herman conducted a baseline habitat assessment survey including vegetation mapping. Special-status species observations included: southern California black walnut (*Juglans californica*, CRPR 4.2), Southwestern spiny rush (*Juncus acutus* ssp. *leopoldi*, CRPR 4.2), and Plummer's baccharis

(*Baccharis plummerae* ssp. *plummerae*, CRPR 4.3) and **Southwestern pond turtle** (*Actinemys marmorata pallida*, CDFW-SSC).

#### GENERAL WILDLIFE SURVEYS/COMPLIANCE MONITORING

**California American Desalination Plant, Monterey CA.** *Technical Lead:* Ms. Herman performed the role of technical lead responsible for compliance with permit measures related to American badger and Salinas kangaroo rat and prepared relocation plan for Salinas kangaroo rat. She also assisted with protocol surveys for western burrowing owl.

**Phillips 66 Hopkins Phase II Pipeline Abandonment Project, Orcutt, CA.** *Biological Compliance Manager:* Ms. Herman oversaw Project compliance with USFWS ITP and HCP, performed pre-construction surveys and monitoring including mapping of potential CTS-burrows. She coordinated with USFWS, CDFW, and County of Santa Barbara for successful completion of the project. Observations included coast horned lizard scat and coastal tarweed (*Deinandra paniculata*, CRPR 4.3).

**California High-speed Rail, Construction Package 1, Fresno to Madera, CA.** *Biological Monitor and surveyor:* Ms. Herman performed construction monitoring and pre-construction surveys. Listed wildlife species included: Swainson's hawk, San Joaquin kit fox, western spadefoot toad, California tiger salamander (CTS), American badger, listed bat species, blunt-nosed leopard lizard, and burrowing owl. Ms. Herman monitored pools occupied with CTS larvae (50), performed CTS translocations (5), inspected CTS wildlife exclusionary fencing for compliance, checked coverboards and relocated non-listed amphibians including: western toad (26), California tree frog (38), western spadefoot toad (23).

**Sequoia River Lands Trust San Joaquin kit fox spotlighting, Carrizo Plain National Monument, CA.** *Biologist:* Ms. Herman conducted spotlighting for San Joaquin kit fox.

**Blunt-nosed Leopard Lizard Population Monitoring Study, Carrizo Plain National Monument: Elkhorn Plain, CA.** *Field Assistant:* Working with a team of University of California Santa Cruz researchers, Ms. Herman was an active participant in transect-based surveys, noosing, handling, and release of blunt-nosed leopard lizards (10 individuals handled). Ms. Herman observed both males and females (some gravid) in various life stages being collected and processed (27 individuals observed). Data collected included: snout to vent length, weight, reproductive status, and sex. Ms. Herman observed pit tag insertion and scanning.

**USGS Fort Irwin Desert Tortoise Translocation Health Assessment Monitoring Project.** *Volunteer:* Working under permitted individual Michael Tuma (TE32004C-2), Ms. Herman performed telemetry tracking and assisted with health assessments of 26 adult desert tortoises (*Gopherus agassizii*) located on BLM lands south of Fort Irwin in San Bernardino County, California. Duties included telemetry tracking, data recording, assistance with handling of tortoises during health assessments, and observed advanced sample collection procedures (nasal lavage, blood draws, and oral swab). Desert tortoises personally handled (9).

**Borrego Solar Project, Edwards Airforce Base, Kern County, CA.** *Biologist:* Ms. Herman conducted biological monitoring activities and Worker Environmental Awareness Training for desert tortoise.

#### AVIAN

**Carlsbad Hydrologic Unit (CHU) Invasive Vegetation Control Program, Migratory Bird Treaty Act Compliance, Solana Beach, CA.** *Surveyor/survey coordinator:* Ms. Herman was responsible for ensuring compliance with Migratory Bird Treaty Act by implementing nesting bird surveys for San Elijo Lagoon Conservancy's CHU Invasive Vegetation Control Program. Ms. Herman coordinated nesting bird surveys with up to three other biologists, other staff members, interns, and volunteers. In accordance with permit mitigation measures, nesting bird surveys were performed three times prior to treatment of an area and covered over 200 acres throughout the course of the season. Surveys were performed in close coordination with agency staff. In addition to coordinating the survey effort, Ms. Herman personally surveyed approximately 100 acres including Diegan coastal sage scrub, chamise chaparral, southern coastal salt marsh, and southern riparian scrub vegetation communities.

**San Elijo Lagoon Ecological Reserve Monthly Bird Count, Solana Beach, CA.** *Surveyor:* The transect-based bird count covers numerous habitats including southern coastal salt marsh, Diegan coastal sage scrub, southern riparian scrub, and southern maritime chaparral. Multiple threatened or endangered species have been personally observed through auditory and visual sensories including: coastal California gnatcatcher, Ridgway's rail, Belding's savannah sparrow, and white-faced ibis.

**Guejito Ranch Road Improvement Project, Escondido, CA.** *Surveyor:* Ms. Herman assisted permitted biologist with protocol-level California gnatcatcher presence/absence surveys.

**San Diego Audubon California Least Tern Recovery Project, San Diego, CA.** *Surveyor:* Ms. Herman assisted with southern foredune habitat restoration for California Least Tern nesting sites in San Diego Bay and Mission Bay. Predator control fences were erected, and nest sites were monitored to prevent predation.

**San Elijo Lagoon Restoration Project, Cardiff-by-the-Sea, CA.** *Biologist:* As a Ridgeway's Rail-approved biologist, Ms. Herman walked in front of mowing equipment to carefully flush Ridgeway's rails and other shorebirds out of harm's way. The task concluded without project-related take of Ridgeway's rail. Approximately 18 Ridgeway's rails were personally flushed.

**Cal-fire Eucalyptus Removal Project, Rancho Santa Fe, CA.** *Biologist:* Ms. Herman conducted a nesting bird survey focused on raptors for a riparian area within San Dieguito River Watershed. Twenty-two (22) avian species were identified during the survey.

**Otay Mesa Burrowing Owl and California Ground Squirrel Research Project, San Diego County, CA.** *Surveyor:* Ms. Herman conducted (non- protocol) burrowing owl behavioral observations on five breeding pairs and their chicks for an ongoing research project.

**Arthur Popp****Senior Biologist | Project Manager****Education**

M.S., Forestry, Fisheries and Wildlife, University of Nebraska, Lincoln, NE, 1993  
B.S., Biology, Nebraska Wesleyan University, Lincoln, NE 1991

**Additional Training/Accreditation**

California Rapid Assessment Methodology (CRAM) for Wetlands  
Range Safety Officer, U.S. Marine Corps Base Camp Pendleton

Arthur Popp's qualifications as a biologist and project manager include 26 plus years of experience as a botanist, aquatic ecologist, and wetland specialist. Mr. Popp has experience in conducting general vegetation surveys, focused surveys for sensitive plant species, aquatic bioassessments, and wetland determinations. He has assisted clients in understanding and complying with regulations that govern impacts to sensitive biological resources and provided options that may avoid or minimize such impacts, permitted the activities that propose impacts, and coordinate mitigation projects that satisfy both the client and regulatory agencies. Mr. Popp also has experience with pre- and post-project natural resource monitoring, including assessments of stream habitats and macroinvertebrate community composition, and natural vegetation communities.

Mr. Popp's experience in the consulting field involves designing, conducting, and managing projects for private landowners, utility companies, municipalities, regulatory agencies, and non-profit resource conservation groups. He has served as project manager and led efforts on utility, transportation, and renewable resource development projects, and habitat restoration projects. He has overseen projects from field surveys and technical reports through the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) processes.

**Project Experience**

**Beri Hill Estates, City of Fullerton, Fullerton, CA.** As senior biologist, conducted field surveys, prepared biological technical report, and prepared Biological Resources section of the Mitigated Negative Declaration prepared for the City of Fullerton for the project. Also participated in project meetings with the City and provided technical support during coordination with regulatory agencies.

**Brea Canyon Road Widening and Improvements Project, Orange County Public Works (OCPW), Brea, CA.** As senior biologist, led and conducted general biological surveys in support of the preparation of a Biological Resources Technical Report in support of an Environmental Impact Report being prepared for this project. Coordinated protocol surveys for various listed wildlife species and supported preparation of technical reports. Also participated in public

meetings and coordinated closely with Orange County Public Works during the project's environmental review process.

**OCPW and OC Parks - Upper Newport Bay-East Bluff Drainage Repair Project, Newport Beach, CA.** As compliance lead for biological resources, coordinate construction monitoring efforts in support of compliance with permits issued by regulatory agencies for the project. Also to support compliance, prepared a Nesting Bird Management Plan and provided other technical support to OC Parks during permit coordination and consultation with U.S. Fish and Wildlife Service, Army Corps of Engineers, and California Department of Fish and Wildlife, prior to and during construction. Subsequently served as Project Manager for implementation of 5-Year Maintenance and Monitoring Plan for restoration of the site. Coordinated subconsultant maintenance crews, site irrigation, and prepared quarterly and annual reports summarizing maintenance and monitoring efforts.

**Los Angeles Department of Water and Power (LADWP), Silver Lake Reservoir Complex Biological Surveys, Los Angeles, CA** Project Manager for nesting bird surveys and biological monitoring efforts since 2014 during construction and maintenance projects, including installation of new conveyance water lines at the Silver Lake Reservoir Complex. Survey and monitoring efforts are focused on a great blue heron rookery within the complex. Conduct surveys for great blue heron and other nesting birds, monitor great blue heron nests during construction, prepare monthly monitoring reports, and perform various project management functions. Also has lead team of biologists that have conducted bat surveys and turtle trapping in the complex, and prepared "white papers" for DWP Public Affairs staff regarding the use of the complex by herons after draining of the reservoir in 2017, use of the complex by coyotes, and use of the complex and surrounding neighborhood of water birds.

**LADWP, LA Groundwater Replenishment Project, Los Angeles, CA.** As biological resource lead, conducted field surveys, prepared biological technical report, and assist with preparation of the biological resource section of the Environmental Impact Report being prepared for this groundwater recharge project. Proposed project includes construction of a water treatment plant and recycled water conveyance pipelines.

**LADWP, City Trunk Line North Project, Los Angeles, CA.** As biological resource lead, conducted a field survey and prepared the biological resources section of an Initial Study prepared in compliance with CEQA. Also prepared a biological resources technical memorandum in support of LADWP efforts to obtain funding from the State Water Resources Control Board (SWRCB) Clean Water State Revolving Fund (SRF) for construction of the proposed water trunk line. Coordinated preparation of the report with LADWP and provided support during preparation of the SRF application package.

**City of Los Angeles, Bureau of Engineering (BOE), Terminal Island Water Reclamation Plant Wildlife Surveys, Long Beach, CA.** As biological lead, conducted wildlife surveys and prepared a

memo report to support environmental review in advance of facilitate upgrades at the Terminal Island Water Reclamation Plant.

**BOE, Asilomar Boulevard Landslide Mitigation Project, Los Angeles, CA**

As biological resource lead, conducted field surveys in support of the preparation of a biological technical report and the biological resources section of the proposed project's Environmental Impact Report (EIR). Proposed project includes stabilization of Asilomar Boulevard in the Pacific Palisades neighborhood of Los Angeles that has been damaged by past landslides.

**BOE, Bridge Housing Projects, Los Angeles, CA**

As biological resources lead, conducted field surveys and prepared technical memorandums in support of the City of Los Angeles' environmental review of temporary homeless shelters proposed in various Council Districts across the City.

**Los Angeles County Public Works (Public Works), Big Dalton Dam Sluiceway Rehabilitation and Access Road Improvements Project, Glendora, CA.** As Project Manager, directed subconsultant and AECOM biologists during various pre-construction surveys, conducted surveys, and coordinated preparation and submittal of survey reports to Public Works to support Project compliance with a Lake or Streambed Alteration Agreement (LSAA) issued by California Department of Fish and Wildlife. During construction, coordinated surveys and monitoring efforts in support of Project compliance with the LSAA. Provided email updates to Public Works during construction activities. Also prepared a Species Monitoring, Protection, and Relocation Plan and Restoration Plan in compliance with the LSAA.

**Public Works, The Old Road Over Santa Clara River and SPT Co. Bridge, Los Angeles County, CA**

As biological resource lead, conducted and coordinated field surveys, and prepared a Natural Environment Study (NES) and Biological Assessment (BA) to Caltrans specifications, and prepared and reviewed various other biological technical reports. Surveys and reports were completed in support of an Environmental Impact Report/Environmental Assessment prepared for the road widening and bridge replacement project.

**U.S. Army Corps of Engineers (ACOE), Los Angeles District, Supplemental Environmental Assessment (SEA)/Environmental Impact Report (EIR) Addendum for Reach 9, Phases 4, 5A, 5B, and BNSF Bridge, Orange and Riverside Counties, CA.**

Project manager for the preparation of a Draft SEA/EIR Addendums for four flood protection projects proposed for construction in Reach 9 of the Santa Ana River. Prepared sections of the SEA/EIR Addendums and integrated sections written by other team members into the draft document. Also oversaw reconnaissance-level biological surveys of the project sites. Also prepared a 401(b)(1) Evaluation to be appended to SEA/EIR Addendum.