



Biological Resources Report for the
Quail Valley Subarea 4 Project
Menifee, California

Prepared for
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Acronyms and Abbreviations

Cal-IPC	California Invasive Plant Council
CBI	Conservation Biology Institute
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CP	connector pipe
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB(A)	A-weighted decibels
District	Eastern Municipal Water District
FC	Federally-listed candidate
FE	Federally-listed endangered
FESA	Federal Endangered Species Act
FT	Federally-listed threatened
GIS	geographic information system
HCP	Habitat Conservation Plan
IPaC	Information for Planning and Consultation Database
ITP	Incidental Take Permit
LS	lift station
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Program
NEPA	National Environmental Policy Act
proposed Project	Quail Valley Subarea 4 Project
PSE	Participating Special Entity
RCHCA	Riverside County Habitat Conservation Agency
RECON	RECON Environmental, Inc.
RWQCB	Regional Water Quality Control Board
U.S. EPA	U.S. Environmental Protection Agency
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCRCA	Western Riverside County Regional Conservation Authority

1.0 Introduction

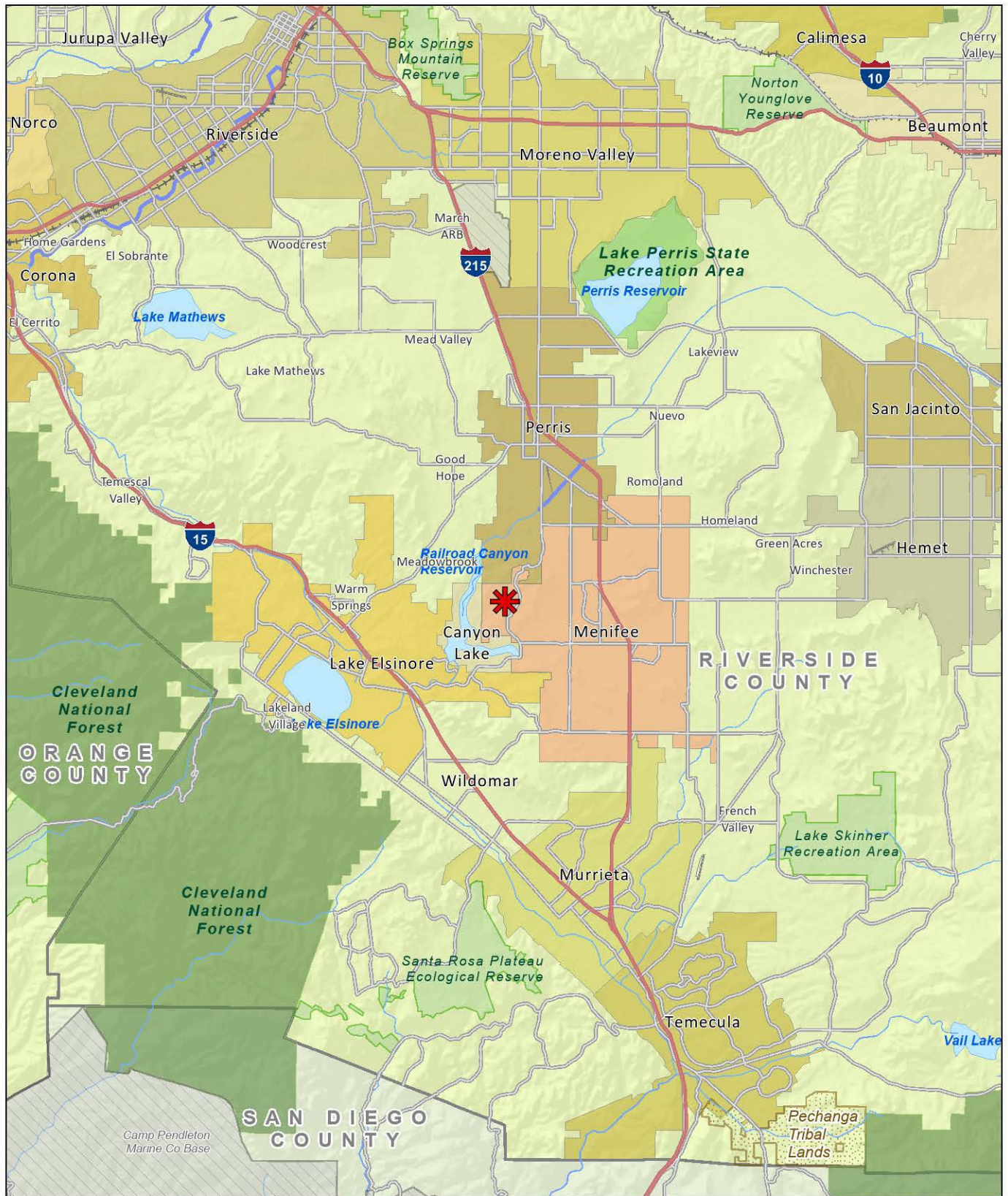
This report summarizes the biological resources survey methods and results, assessment of potential impacts to biological resources, and recommended avoidance, minimization, and mitigation measures for the Quail Valley Subarea 4 Project (proposed Project), which would replace existing private septic systems with a gravity sewer system. The Quail Valley community is situated within the service area of the Eastern Municipal Water District (District). Quail Valley has experienced ongoing failures of private septic system that pose a threat to public health and water quality, both within the community and downstream in Canyon Lake. The goal of the proposed Project is to implement a comprehensive, community-wide sewer collection system that would protect water resources, improve public health, and enhance the overall quality of life for Quail Valley residents. This consists of a long-term plan to enhance the community's wastewater infrastructure and will guide future development activities.

This report is being prepared to support the California Environmental Quality Act (CEQA) document for this proposed Project, which is expected to be a program-level environmental impact report. The impact analysis provided in this report is a program-level analysis, consistent with Section 15168 of the CEQA Guidelines. In addition, the proposed Project is seeking state and federal funding sources, including grants from U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Department of Housing and Urban Development. As such, this biological resources report evaluates whether the proposed Project would comply with federal regulations, including the federal Endangered Species Act, Migratory Bird Treaty Act (MBTA), and the Clean Water Act (CWA; see Section 7).

1.1 Project Location

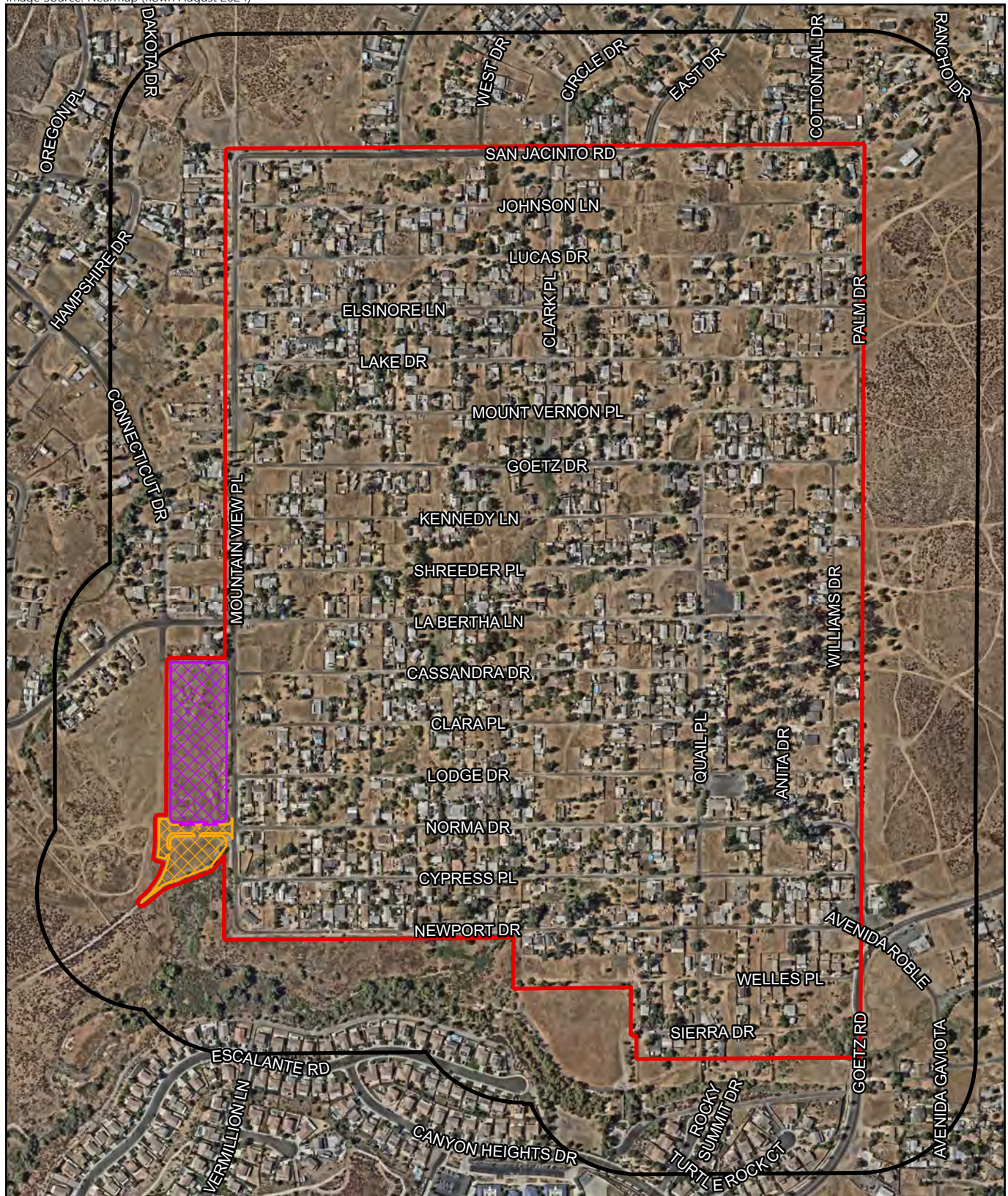
The proposed Project is located within the Quail Valley community of Menifee, California. It encompasses Subarea 4, which is one of nine subareas within the Quail Valley community. The proposed Project lies approximately 1.5 miles north of Newport Road and 2.8 miles west of Interstate 215 in southwestern Riverside County, California (Figure 1). The proposed Project is bounded to the east by Goetz Road, to the south by Newport Drive and Sierra Drive, to the west by Mountain View Place, and to the north by San Jacinto Road (Figure 2). The proposed regional lift station (LS-1) would be located on either assessor parcel number 350-020-025 or 351-200-006.

The proposed Project is located within Sections 25 and 36, Township 05 South, Range 04 West, as depicted on the U.S. Geological Survey 7.5-minute topographic map, Romoland quadrangle (Figure 3; U.S. Geological Survey 1979). The proposed Project consists of a mix of undeveloped and developed land with single-family residences found on a grid of small neighborhood roads. In total, Subarea 4 contains 1,368 lots, approximately 525 of which currently utilize septic systems.

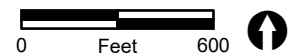


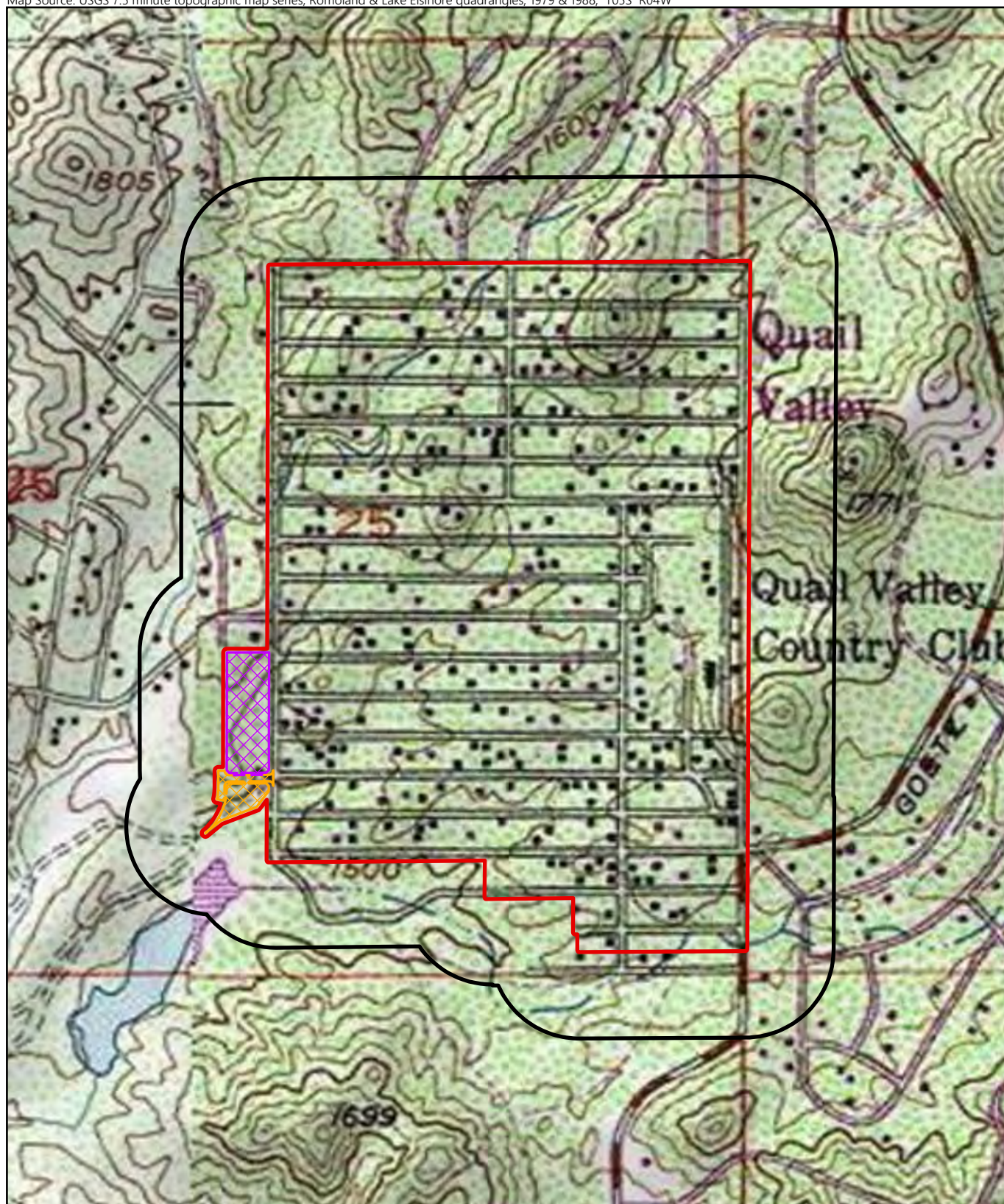
 Project Location

FIGURE 1
Regional Location



- Project Boundary
- Survey Area
- LS-1 Option 1
- LS-1 Option 2





-  Project Boundary
-  Survey Area
-  LS-1 Option 1
-  LS-1 Option 2

0 Feet 800



1.2 Project Description

The proposed Project would construct approximately 10 miles of 8-inch and 12-inch polyvinyl chloride gravity main pipe, approximately 1.1 miles of force mains, 247 manholes, 24 connector pipes (CP), LS-1, and 4 smaller lift stations (LS-2, LS-3, LS-4, and LS-5). LS-1 would convey the majority of wastewater flows originating from Subarea 4. To connect Subarea 4 to LS-1, 24 CPs would be installed to link streets, thereby facilitating gravity flows. To accomplish this, CPs would be required to traverse private properties. Three CP options are under consideration, CP 1, CP 2, and CP 3.

Gravity flows cannot be fully achieved in the northwest portion of Subarea 4 due to varied topography. To adjust to this, lift stations LS-2 through LS-5 would pump wastewater via a shared force main to Collection Manhole 2, located at the intersection of La Bertha Lane and Mountain View Place, before ultimately discharging to LS-1. From LS-1, flows would be pumped to Collection Manhole 1 located at the intersection of Wells Place and Goetz Road. Collection Manhole 1 would connect to sewer infrastructure in Goetz Road ("Goetz Road Sewer Backbone"). The Goetz Road Sewer Backbone Project underwent its own environmental review in 2024. Should the Goetz Road Sewer Backbone Project not be approved by the District, sewer flows would connect to existing infrastructure within Goetz Road.

Construction is planned to be carried out in eight phases, implemented over an approximately 20-year period. Temporary staging and stockpiling of materials during construction is expected to occur within the street right-of-way, and as such impacts from staging areas are assumed to not impact biological resources. When construction is inactive, excavation equipment and pipe materials would be relocated to a designated staging and spoils area. Private properties could also serve as staging and spoils locations. It is possible that some or all these staging properties could be graded. Grading and erosion control plans would be required for these stockpile areas.

2.0 Regulatory Context

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The FESA, as amended, provides for the listing of endangered and threatened species of plants and animals and the designation of critical habitat for listed animal species. The FESA also prohibits all persons subject to U.S. jurisdiction from "taking" endangered species, which includes any harm or harassment.

An authorization or permit to incidentally take listed species can be obtained either through the Section 7 consultation process or through the Section 10 incidental take permit process, as described in the sections below. In the context of Section 7, incidental take is authorized through an Incidental Take Statement that is issued consistent with a Biological Opinion. In the context of Section 10, incidental take is authorized through an incidental take permit issued pursuant to Section 10(a)(1)(B). Measures contained in the incidental take permit reflect the measures set out in a Habitat

Conservation Plan (HCP) developed by the applicant in conjunction with the U.S. Fish and Wildlife Service (USFWS).

Section 7 of the Federal Endangered Species Act

Section 7 of the FESA requires that federal agencies, prior to project approval, consult the USFWS and/or the National Marine Fisheries Service to ensure adequate protection of listed species that may be affected by the project. Specifically, Section 7 of the FESA provides that each federal agency undertaking a federal action that could significantly affect FESA species shall consult with the Secretary of Interior or Commerce, and that any actions authorized, funded, or carried out by the agency are “not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of lands determined to be critical habitat” (16 U.S.C. Section 1536[a][2]). The term “agency action” is broadly defined in a manner that includes nearly all actions taken by federal agencies, such as permitting or carrying out a project, as well as actions by private parties that require federal agency permits or approval (50 Code of Federal Regulations [CFR] Section 402.02). The consultation requirement of Section 7 is triggered upon a determination that a proposed action “may affect” a listed species or designated Critical Habitat (50 CFR Section 402.14[a]). If the proposed action is a “major construction” activity, the federal agency proposing the action must prepare a biological assessment to include with its request for the initiation of Section 7 consultation.

Included in the USFWS Biological Opinion is an Incidental Take Statement that authorizes a specified level of take anticipated to result from the proposed action. The Incidental Take Statement contains “reasonable and prudent measures” that are designed to minimize the level of incidental take, adverse modification, or destruction to critical habitat, and that must be implemented as a condition of the take authorization (50 CFR Section 402.14[i][5]).

The issuance of a Biological Opinion concludes formal consultation, but consultation can be reinstituted if the amount or extent of incidental take authorized is exceeded, the action changes, new information reveals effects of the action not previously considered, a new species is listed, or Critical Habitat is designated (50 CFR Section 402.16). Once the Biological Opinion is issued, the project applicant must implement the terms, conditions, and conservation measures mandated by the USFWS. Monitoring and reporting are required to be coordinated with the USFWS during the implementation of conservation measures.

Section 9 of the Federal Endangered Species Act

Section 9 of the FESA prohibits any person from “taking” an endangered animal species. Regulations promulgated by USFWS and the National Oceanic and Atmospheric Administration make the “take” prohibition generally applicable to threatened animal species as well (50 CFR 17.71). Section 9 thus prohibits the clearing of habitat that results in death or injury to members of a protected (e.g., threatened or endangered) species.

Section 10 of the Federal Endangered Species Act

Under Section 10(a)(1)(B) of the FESA, the USFWS may permit the incidental take of listed species that may occur because of a lawful activity, such as construction of a sewer system. To obtain a Section 10(a)(1)(B) permit, an applicant must prepare an HCP that meets the following five criteria: (1) the taking will be incidental to an otherwise lawful activity; (2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (3) the applicant will ensure that adequate funding for the plan will be provided; (4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (5) other measures, if any, that the USFWS requires as being necessary or appropriate for purposes of the plan will be met (16 U.S.C. Section 1539[a][2][A]).

2.2.2 Clean Water Act of 1972 (33 U.S.C. 1251 et seq.) and the Rivers and Harbors Act

The Rivers and Harbors Act of 1899 and the CWA regulate project activities within non-marine navigable waters and/or waters of the U.S. The discharge of any pollutant from a point source into navigable waters is illegal unless a permit under the CWA's provisions is acquired.

Sections 404 and 401 of the CWA apply to potential impacts to wetlands, waters of the U.S., and waters of the State, respectively. The U.S. EPA administers the CWA; however, some sections of the CWA are administered by other agencies. Section 404 of the CWA regulates the discharge of dredged or fill material into navigable waters, including both wetlands and other waters of the U.S. The discharge of dredged or fill material is typically associated with a variety of development projects, agricultural activities, and water resource projects. The USACE administers Section 404 of the CWA and is responsible for issuing general and individual permits and for making jurisdictional determinations. Projects can be permitted on an individual basis or be covered by one of several approved nationwide or regional general permits.

Section 401 of the CWA requires a State Water Quality Certification or waiver for any activity requiring a Section 404 permit. The State Water Quality Certification ensures the activity will not violate any established state water quality standards. The State Water Resources Control Board, in conjunction with the nine California Regional Water Quality Control Boards (RWQCB), administers Section 401 of the CWA and is responsible for issuing permits pursuant to the Section 401 Water Quality Certification Program. The proposed Project is within the jurisdiction of the Santa Ana RWQCB (Region 8).

Prior to installation of any new storm drain connections to and/or discharges into the Santa Ana River watershed, the District or other project applicants shall (1) obtain a permit or other authorization from the USACE pursuant to Section 404 of the federal CWA; (2) obtain a Section 401 Water Quality Certification from the California RWQCB, Santa Ana region, pursuant to Section 401 of the CWA, which requires any applicant for a federal permit, such as a CWA Section 404 permit, to provide the licensing agency a certification from RWQCB that the project will comply with adopted water quality standards; and (3) provide notification to the California Department of Fish and Wildlife (CDFW) of

the project pursuant to Section 16-2 of the California Fish and Game Code (CFGF) and comply with any further actions required by the CDFW.

2.2.3 Migratory Bird Treaty Act (16 U.S.C. 703 through 711)

The MBTA is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and is listed at 50 CFR 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species and any part, egg, or nest of such birds. The MBTA, which is enforced by USFWS, makes it unlawful "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation. The take, possession, import, export, transport, sale, purchase, barter, or offering of these activities is prohibited, except under a valid permit or as permitted in the implementing regulations.

2.2.4 Bald and Golden Eagle Protection Act (16 U.S.C. 668)

The Bald and Golden Eagle Protection Act provides protection for both the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting the "take" of either of these species, including their parts, nests, or eggs. The MBTA defines "take" as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" any bald or golden eagle. The Bald and Golden Eagle Protection Act is administered by the USFWS, and limited take authorizations are granted for qualifying activities. Persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof" without prior approval are subject to criminal penalties.

2.2 State Regulations

2.2.1 California Endangered Species Act (California Fish and Game Code 2050 et seq.)

The California Endangered Species Act (CESA) parallels FESA and protects and/or preserves native plant and wildlife species and their habitats, especially those that are threatened with extinction and those that are experiencing significant decline that may lead to a threatened or endangered designation, within the state of California. CESA designates special-status species that are protected from unauthorized "take," which is defined as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

The CESA is administered by the CDFW. A state-lead agency is required to consult with the CDFW to ensure that a project is not likely to jeopardize the continued existence of a special-status species or result in the destruction or adverse modification of essential habitat for a species. The CESA allows for the issuance of incidental take permits for lawful development projects and emphasizes the benefits of early consultation between the lead agency and the CDFW to avoid potential impacts to

special-status species and to develop appropriate mitigation measures to reduce impacts to and avoid loss of a special-status species.

2.2.2 California Environmental Quality Act

The CEQA requires that biological resources be considered when assessing the environmental impacts that are the result of proposed actions. The lead agencies determine the scope of what is considered an impact and what constitutes an “adverse effect” on a biological resource.

FESA and CESA protect only those species formally listed as threatened or endangered (or rare in the case of the state list). Section 15380 of the CEQA Guidelines independently defines “endangered” species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy, and “rare” species as those who are in such low numbers that they could become endangered if their environment worsens. Therefore, a project normally would have a significant effect on the environment if it would substantially affect a rare or endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

2.2.3 California Fish and Game Code

Section 3503 from the CFGC applies to projects in the state. This section states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto,” and Section 3503.5 prohibits take, possession, or destruction of any birds in the orders Falconiformes (raptors) or Strigiformes (owls), or of their nests and eggs. Compliance with Sections 3503 and 3503.5 of the CFGC and all applicable federal and state laws pertaining to migratory and nesting birds is anticipated. Compliance measures would be determined by the Project biologist prior to the start of construction and may include pre-activity surveys, nest avoidance, and construction monitoring.

The California Fish and Game Code (Sections 1600 through 1603) regulates project activities within wetlands and riparian habitats. The CDFW can issue a Streambed Alteration Agreement for projects affecting riparian and wetland habitats. Project activities that fill or dredge within wetland waters of the U.S. and waters of the U.S. as well as wetland waters of the state and waters of the state, including isolated waters such as vernal pools and other waters showing lack of connectivity to a Traditional Navigable Waters, require a Water Quality Certification by the California RWQCB under Section 401 of the CWA and Section 13000 et seq. of the California Water Code under the Porter-Cologne Water Quality Control Act.

2.2.4 State Fully Protected Species

The State of California designated species as fully protected prior to the creation of CESA and FESA. Lists of fully protected species were initially developed to provide protection to species that were rare or faced possible extinction/extirpation. Most fully protected species have since been state listed as threatened or endangered species. Under CFGC Section 4700, fully protected mammals may not be taken or possessed at any time.

In September 2011, the Natural Community Conservation Planning Act was amended to permit the incidental take of 36 fully protected species pursuant to a Natural Community Conservation Plan approved by CDFW (CFGF Section 2835). The amendment gives fully protected species the same level of protection as endangered and threatened species under the Natural Community Conservation Planning Act (CFGF Section 2835). The Natural Community Conservation Planning Act, enacted in the 1990s, authorizes the incidental take of species “whose conservation and management” is provided for in a conservation plan approved by CDFW.

2.2.5 California Species of Special Concern

In addition to formal listing under FESA and CESA, certain species receive additional consideration by CDFW and lead agencies during the CEQA process. Species that may be considered for review are identified as California Species of Special Concern by CDFW. These species numbers, reproductive success, or habitat may be in decline.

2.3 Local Regulations

2.3.1 Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive multi-jurisdictional habitat conservation plan focusing on the conservation of species and their associated habitats in western Riverside County. The MSHCP plan area encompasses 1.26 million acres (1,966 square miles), including all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, Menifee, and San Jacinto. The MSHCP serves as a habitat conservation plan pursuant to Section 10(a)(1)(B) of the FESA of 1973, as amended, as well as a natural community conservation plan under the Natural Community Conservation Planning Act of 2001. The MSHCP allocates responsibility for assembly and management of its Conservation Areas to local, state, and federal governments, as well as private and public entities engaged in construction that may impact MSHCP covered species.

The proposed Project site is located within the Western Riverside County Regional Conservation Authority (WRCRCA) MSHCP plan area (WRCRCA 2003). As lead agency, the District is not a participant in the MSHCP; however, the proposed Project demonstrates it would not prevent implementation of the conservation goals and objectives of the MSHCP (see Section 5.8, below). The proposed Project is not located within a designated criteria cell, so no mitigation for impacts to sensitive vegetation communities would be required by the MSHCP. No vernal pools, or narrow endemic plant species are present; however, riverine/riparian resources are present within the proposed Project site. The proposed Project site is also located within the MSHCP survey area for burrowing owl (*Athene cunicularia*). Consistency with the MSHCP’s provisions related to burrowing owl are discussed under Section 5.4, Sensitive Wildlife. The proposed Project is not located within any other plant or wildlife survey areas.

2.3.2 Stephens' Kangaroo Rat Habitat Conservation Plan

In 1996, the USFWS approved a long-term HCP for Stephens' kangaroo rat (*Dipodomys stephensi*) and granted an incidental take permit for Riverside County covering an estimated 30,000 acres of occupied habitat within portions of unincorporated Riverside County and 10 member cities: Perris, Temecula, Murrieta, Lake Elsinore, Corona, Riverside, Moreno Valley, Perris, Hemet, and Wildomar (Riverside County Habitat Conservation Agency [RCHCA] 1996). The Stephens' Kangaroo Rat HCP authorizes the incidental take of half of the occupied habitat remaining in the HCP plan area while using development fees to implement the plan, purchase private property, and create a reserve system. The Stephens' Kangaroo Rat HCP and corresponding permits are in effect for areas covered by the MSHCP; however, the Stephens' Kangaroo Rat HCP and the MSHCP remain separate. The Stephens' Kangaroo Rat Fee Areas are subject to mandatory conservation measures as outlined in the Stephens' Kangaroo Rat HCP (RCHCA 1996) and as subsequently modified.

The proposed Project is located within the Stephens' Kangaroo Rat HCP plan area. As lead agency, the District is not a participant in the Stephens' Kangaroo Rat HCP; however, the proposed Project would not prevent implementation of the conservation goals and objectives of the HCP as the proposed Project site is not part of a Stephens' kangaroo rat core reserve (RCHCA 1996). As individual projects are proposed and approved in the Stephens' Kangaroo Rat HCP plan area, public and private land developers are required to pay a mitigation fee for land that is developed and removes habitat for this species (RCHCA 2025).

3.0 Methods and Survey Limitations

3.1 Constraints Analysis (2020)

RECON Environmental, Inc. (RECON) completed a biological constraints report for the proposed Project in 2020. RECON performed a general biological survey within the proposed Project site and a 500-foot buffer. The survey was performed on July 22, 2020. Vegetation communities were mapped and a western burrowing owl habitat assessment was also conducted. RECON also assessed and mapped potential aquatic features (i.e., jurisdictional waters and wetlands) in the survey area. The biological constraints report is provided in Attachment 1.

3.2 Literature Review

Prior to conducting a field survey in 2025, RECON conducted a search of existing biological data for the survey area, including a review of biological databases for sensitive plant and animal species reported within one mile of the survey area and a review of the site's physical characteristics (e.g., location, elevation, soils/substrate, topography). Databases consulted included the California Natural Diversity Database (CNDDB; CDFW 2025a), the USFWS All Species Occurrences Database (USFWS 2024) and the Information for Planning and Consultation Database (IPaC; USFWS 2025a, Attachment 2). In addition, RECON consulted the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2025) for a list of sensitive plant species occurring within the Romoland quadrangle. Finally, a

review of the National Wetlands Inventory was conducted to identify any potential wetlands or water resources present in the vicinity of the survey area (USFWS 2025b).

3.3 General Biological Survey (2025)

RECON biologists Makela Mangrich and Camille Defrenne performed a general biological survey on August 13, 2025. The biological resources survey was conducted within a survey area that is defined as all areas within 500 feet of the potential Project components and work areas (see Figure 3). The survey was conducted from 9:15 a.m. to 3:30 p.m. and weather conditions ranged from 72 to 89 degrees Fahrenheit, with 0 to 5 percent cloud cover, and 0-to-3-mile-per-hour winds. The survey area was visually assessed by foot, where possible, and inaccessible portions were scanned using binoculars to provide visual coverage of the survey area.

Vegetation communities were mapped on high-resolution aerial imagery using hard copy printed maps and ArcGIS Field Maps applications. Wildlife species were either observed directly or detected from calls, tracks, scat, nests, den/burrow, or carcass. All plant species observed during the survey were noted, and plants that could not be identified in the field were identified later using taxonomic keys. Vegetation community classifications follow Oberbauer et al. (2008). Scientific and common names of plants were primarily derived from the Jepson Online Interchange (Jepson Flora Project 2025). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014), the U.S. Department of Agriculture (USDA) maintained database (USDA 2024), or the *Sunset Western Garden Book* (Brenzel 2001). Zoological nomenclature for invertebrates was obtained from NatureServe 2024 and Evans 2008; for reptiles and amphibians from Crother et al. (2017); for birds from the American Ornithological Society (Chesser et al. 2024); and for mammals from Bradley et al. (2014) and the American Society of Mammalogists (2021).

3.4 Aquatic Resources Assessment

RECON aquatic resource specialist Camille Defrenne conducted an aquatic resources assessment concurrent with the general biological survey to verify the presence and general extent of the aquatic resources mapped within the survey area in 2020 (see Attachment 1). The assessment was conducted to broadly identify areas that may fall under the jurisdiction of the USACE pursuant to Section 404 of the Clean Water Act, the RWQCB pursuant to the Porter-Cologne Water Quality Control Act, and the CDFW pursuant to Section 1602 of the California Fish and Game Code. Areas that may meet the definition of riparian/riverine areas were also evaluated in accordance with Section 6.1.2 (*Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*) of the MSHCP (WRCRCA 2003). Specifically, the MSHCP defines riparian/riverine areas as “lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with freshwater flow during all or a portion of the year.”

Prior to conducting the on-site assessment, RECON staff reviewed USGS topographic maps of the survey area, including the Romoland and Lake Elsinore 7.5-minute quadrangles (USGS 1979 and 1988; see Figure 3), USGS National Hydrography Dataset (USGS 2025), USDA soil maps of the survey area

(Figure 4), and USFWS National Wetlands Inventory (USFWS 2025b), to identify the potential location of aquatic resources within the survey area.

During the on-site assessment, RECON staff evaluated areas within the survey area that exhibited evidence of ponding, defined channels, drainage patterns, wetland or riparian vegetation, or indicators of wetland hydrology. Potential jurisdictional features were recorded using a hand-held global positioning system unit with a level of accuracy ranging from 2 to 5 feet. RECON staff later refined the data using 2-foot topographic contours to ensure accuracy.

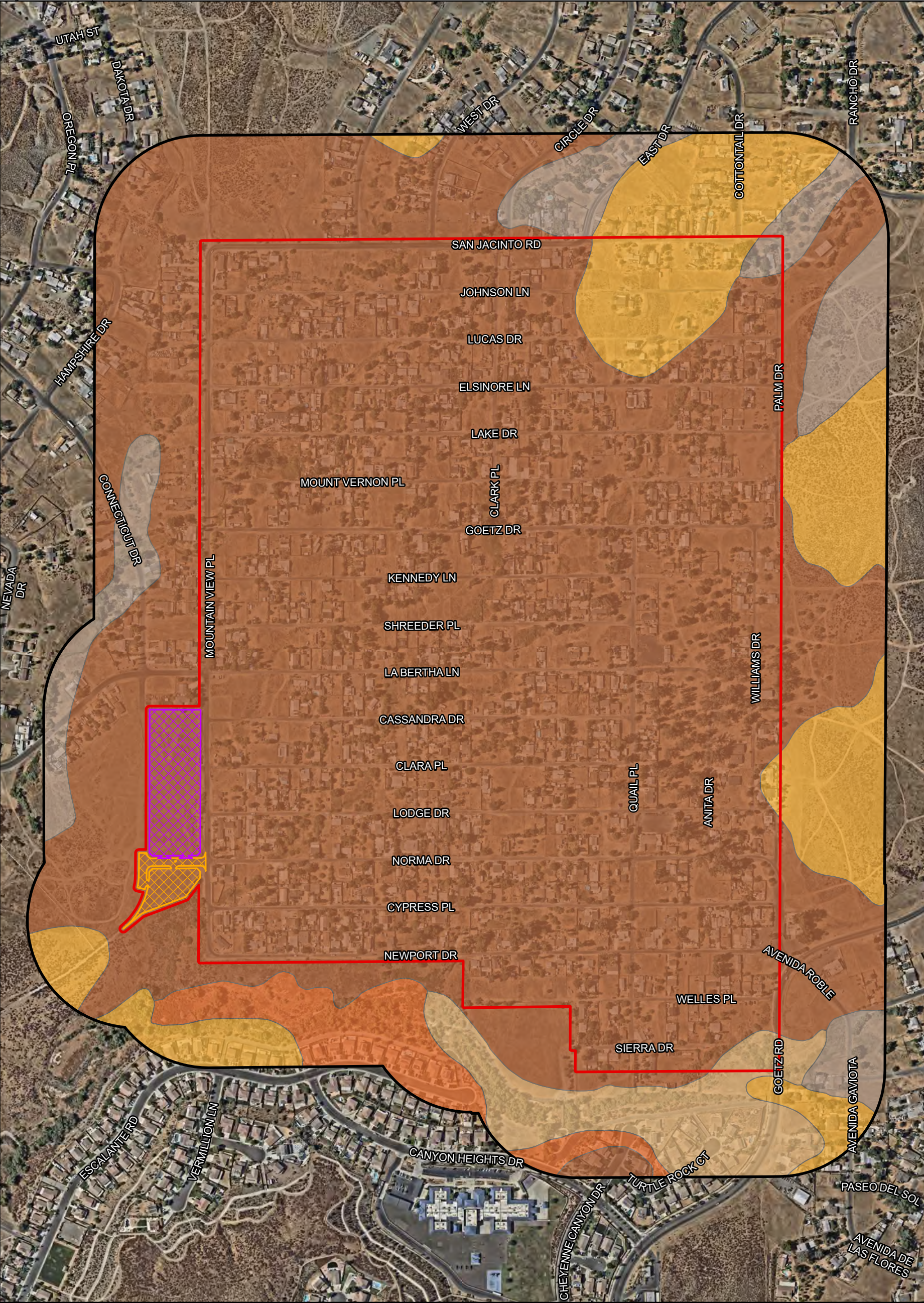
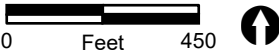
Because this assessment was conducted at a constraints level, RECON staff did not collect data in accordance with agency-approved methodologies, and therefore no formal aquatic resources delineation was conducted. Nonetheless, the following methodologies were generally considered: USACE Wetland Delineation Manual (USACE 1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0; USACE 2008); National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams (David et al. 2025); and State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (State Water Resources Control Board 2021).

Wetlands potentially under the jurisdiction of the USACE, RWQCB, and CDFW were identified based on a single parameter (i.e., wetland hydrology and/or wetland vegetation). Therefore, wetlands mapped as part of this assessment are not confirmed three-parameter wetlands and a formal aquatic resources delineation would be necessary to determine the presence or absence of jurisdictional wetlands. The general extent of streambeds that may fall under the jurisdiction of the CDFW was identified based on the presence of a "bed and bank," and associated riparian/wetland habitats were mapped as potential CDFW-jurisdictional wetland and/or riparian habitat within and/or beyond the banks of the streambeds.

3.5 Survey Limitations

As mentioned above, the surveyors did not have right-of-entry to access private parcels and as such, were only able to survey from the public rights-of-way. Biological conditions on these parcels were assessed using publicly available geographic information system (GIS) data (e.g., aerial imagery, topographic data from digital elevation models, etc.) and by using binoculars where appropriate, such as for the preserve areas on the southern portion of the survey area.

In addition, the biological survey was conducted in August when most spring and early summer plants are already senesced, which may reduce the number of species, particularly annuals, that were visible at the time. Furthermore, the general biological survey was conducted during the daytime to maximize visibility for the detection of plants and most animals. Plant and animal species inventories were limited by seasonal and temporal factors, as well as noise levels from the surrounding exurban development. To account for survey limitations, special-status plant and wildlife species that could occur based on species records, known ranges, and habitat preferences are analyzed herein based on their potential to occur.



- | | |
|------------------|--|
| Project Boundary | Soils |
| Survey Area | Arbuckle loam, 2 to 8 percent slopes |
| LS-1 Option 1 | Escondido fine sandy loam, 8 to 15 percent slopes, eroded |
| LS-1 Option 2 | Lodo rocky loam, 25 to 50 percent slopes, eroded |
| | Lodo rocky loam, 8 to 25 percent slopes, eroded |
| | Ysidora gravelly very fine sandy loam, 2 to 8 percent slopes, eroded |

FIGURE 4
Project Location on Soils Map

4.0 Survey Results

4.1 Physical Characteristics/Setting

The proposed Project site is located within Quail Valley Subarea 4, which is within the city of Menifee. The survey area includes open spaces on the western, southern, and eastern sides (see Figure 3). The survey area consists of a series of small hills, with elevations ranging from approximately 1,400 feet above mean sea level in a stream in the southwest corner of the survey area, to 1,700 feet above mean sea level in the on a hill in the eastern portion of the survey area.

There are several small drainages generally flowing northeast to southwest in low areas through the survey area. A larger unnamed stream flows east to west along the southern edge of the survey area. This larger stream drains into Canyon Lake, approximately 0.8 mile to the southwest.

4.2 Soils

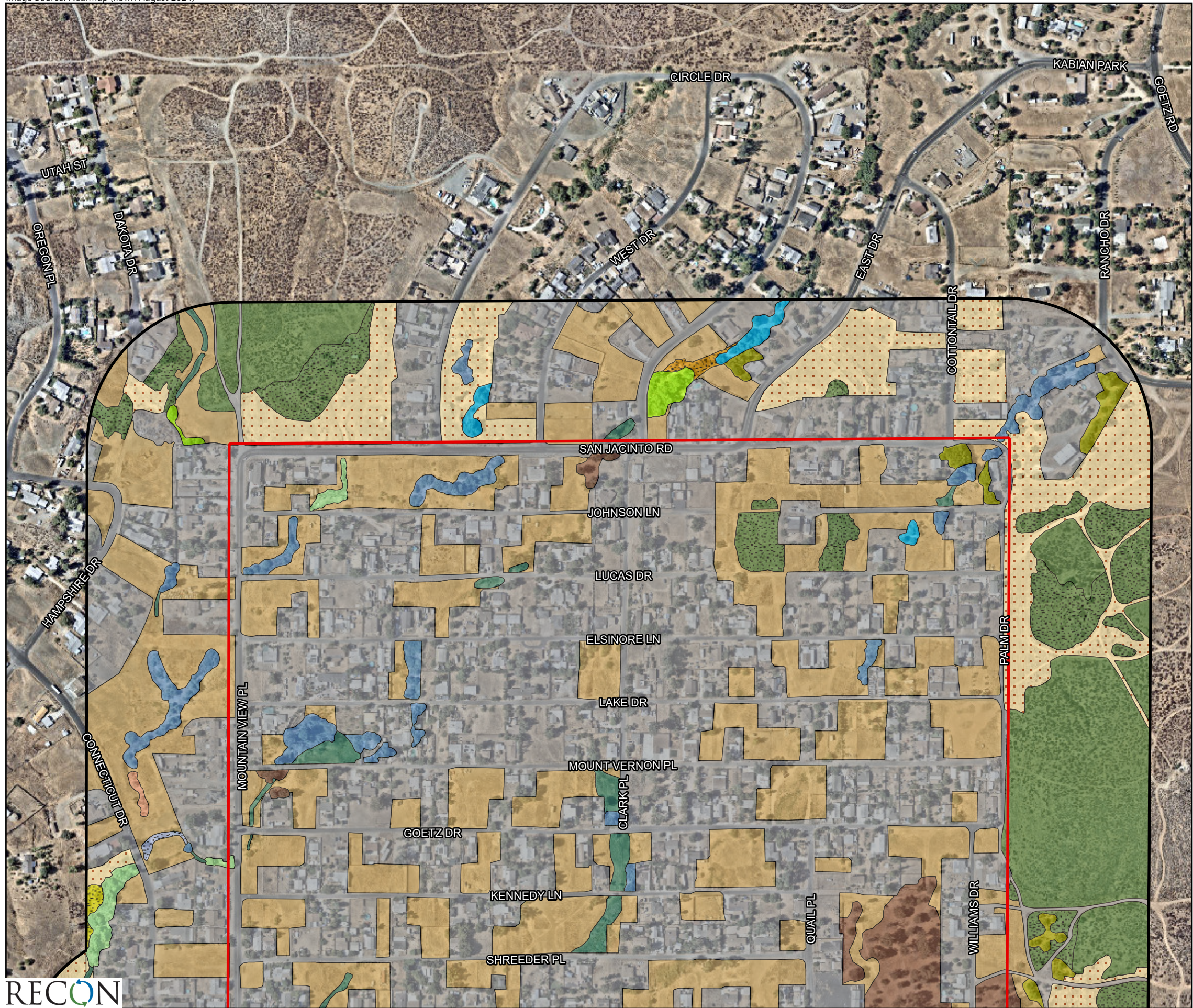
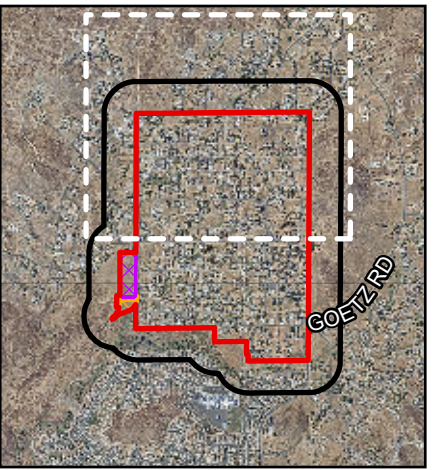
Four soil series occur within the survey area as described below (see Figure 4). The Lodo rocky loam soil unit is mapped throughout most of the proposed Project site, with a small area of Ysidora soils located in the northeast corner of the proposed Project. Based on the soil series descriptions (USDA 2025), the Lodo soils, as well as Arbuckle loam have the potential to contain sufficient clay content that they could potentially support clay-endemic soils as described in more detail in Section 5.3, Sensitive Plants, below.

- **Arbuckle loam, 2 to 8 percent slopes.** The Arbuckle series consists of very deep, well drained soils that formed in alluvium from sedimentary and metamorphic rocks. Arbuckle soils are on low terraces and have slopes of 0 to 75 percent. The texture includes loam, sandy loam, fine sandy loam, sandy clay loam, clay loam and gravelly equivalents. Clay content is from 18 to 32 percent.
- **Escondido fine sandy loam, 8 to 15 percent slopes, eroded.** The Escondido series soils have dark brown slightly acid very fine sandy loam A horizons and neutral very fine sandy loam B2 horizons over hard metamorphic bedrock at depths of about 29 inches.
- **Lodo rocky loam, 25 to 50 percent slopes, eroded and Lodo rocky loam, 8 to 25 percent slopes, eroded.** The Lodo series consists of shallow, somewhat excessively drained soils that formed in material weathered from hard shale and fine-grained sandstone. Lodo soils are on uplands and have slopes of 5 to 75 percent. Texture throughout is sandy loam, loam, silt loam, sandy clay loam or clay loam with about 18 to 35 percent clay. Most of the proposed Project site is mapped in the Lodo soil series.
- **Ysidora gravelly very fine sandy loam, 2 to 8 percents lopes, eroded.** The Ysidora series is a member of a fine loamy, mixed, thermic family of Haplic Durixeralfs. The soils have brown, medium textured, gravelly, medium acid surface horizons, reddish brown, moderately fine textured, very gravelly, slightly acid argillic horizons, and weakly cemented, very gravelly duripans.

4.3 Vegetation Communities

Twenty-one vegetation communities/land cover types were identified within the survey area (Table 1; Figure 5). The acreage of each of these vegetation communities/land cover types is summarized in Table 1. A complete list of the plant species identified within the survey area is provided in Attachment 3 and representative photographs of the survey area are provided in Attachment 4. Vegetation community and land cover descriptions below are provided below. These descriptions provide site-specific details applicable to the survey area.

Table 1 Vegetation Communities and Land Cover Types within the Survey Area		
Vegetation Community / Land Cover Type	Area (acre) ¹	Sensitive Natural Community? ²
Buckwheat Scrub	3.6	No
Buckwheat Scrub - Disturbed	3.3	No
Disturbed Habitat	82.1	No
Disturbed Wetland	2.3	Yes (potentially jurisdictional aquatic resource)
Eucalyptus Woodland	8.7	No
Freshwater Marsh - Disturbed	0.1	Yes (potentially jurisdictional aquatic resource)
Mule Fat Scrub	3.8	
Mule Fat Scrub - Disturbed	1.2	
Non-Native Grassland: Broadleaf-Dominated	34.1	No
Non-Native Riparian	6.4	Yes (potentially jurisdictional aquatic resource)
Non-Native Woodland	2.2	No
Riversidian Sage Scrub	16.6	No
Riversidian Sage Scrub - Disturbed	18.2	No
Southern Arroyo Willow Riparian Forest	6.2	Yes (potentially jurisdictional aquatic resources)
Southern Cottonwood Willow Riparian Forest	0.5	
Southern Willow Scrub	1.5	
Southern Willow Scrub - Disturbed	1.1	
Tamarisk Scrub	1.4	
Tamarisk Scrub - Disturbed	0.4	
Urban/Developed	202.8	No
Urban/Developed - Native Revegetated	1.3	No
TOTAL³	397.8	N/A
¹ The survey area is defined as all areas within 500 feet of proposed Project work areas.		
² Source: CDFW 2025b.		
³ Areas are presented in acres, rounded to the nearest 0.1; discrepancies are due to rounding.		



- Project Boundary
- Survey Area
- Vegetation Communities**
- Buckwheat Scrub - Disturbed
 - Disturbed Habitat
 - Disturbed Wetland
 - Eucalyptus Woodland
 - Freshwater Marsh - Disturbed
 - Mule Fat Scrub - Disturbed
 - Non-Native Grassland: Broadleaf-Dominated
 - Non-Native Riparian
 - Non-Native Woodland
 - Riversidian Sage Scrub
 - Riversidian Sage Scrub - Disturbed
 - Southern Cottonwood Willow Riparian Forest
 - Southern Willow Scrub
 - Southern Willow Scrub - Disturbed
 - Tamarisk Scrub
 - Urban/Developed

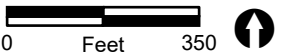
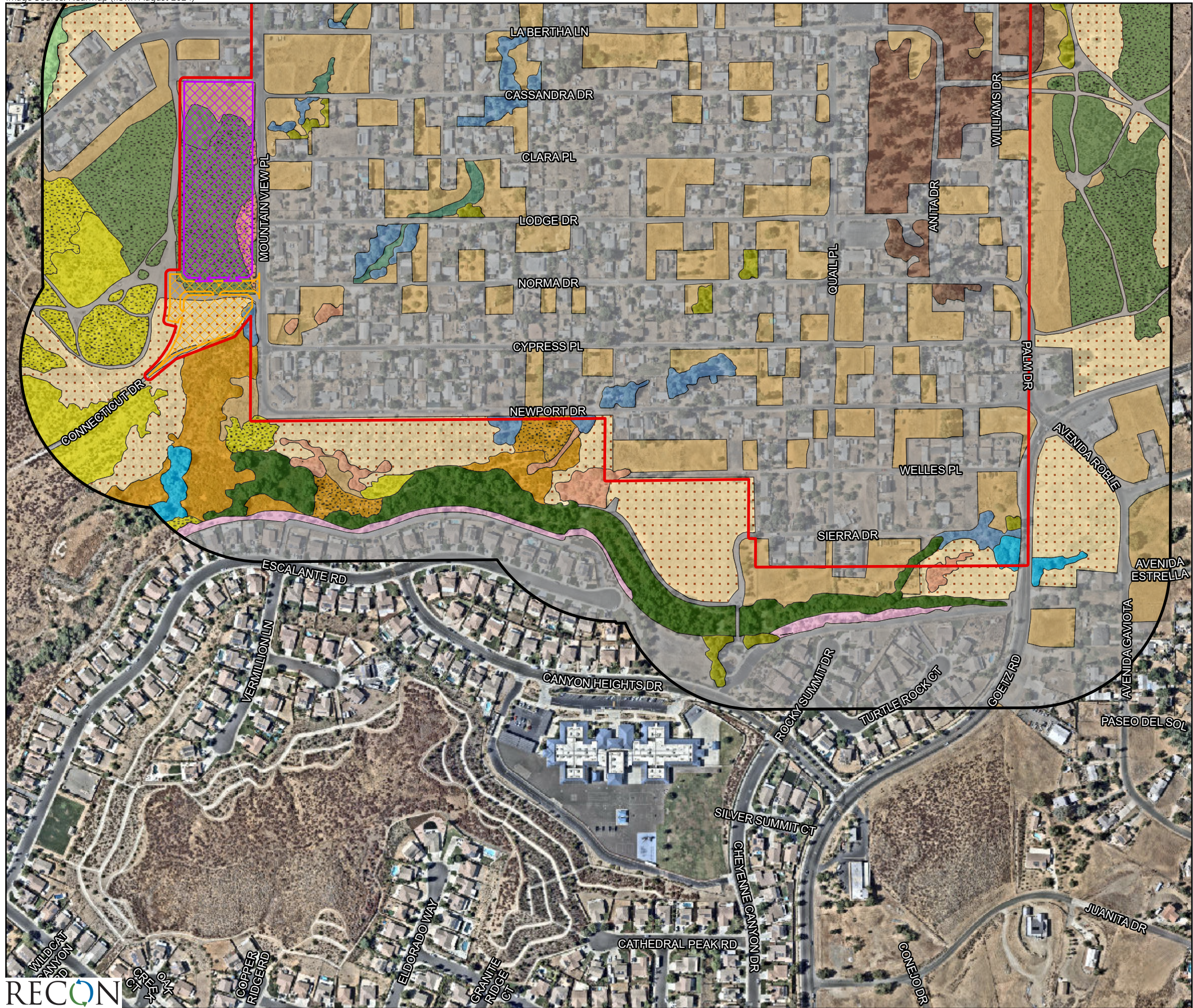
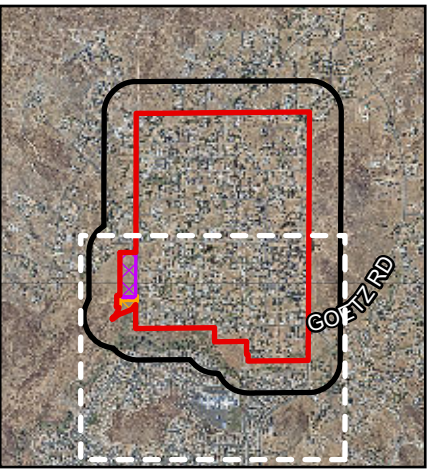


FIGURE 5-1
Vegetation Communities and Land Covers



- Project Boundary
 - Survey Area
 - LS-1 Option 1
 - LS-1 Option 2
- Vegetation Communities**
- Buckwheat Scrub
 - Buckwheat Scrub - Disturbed
 - Disturbed Habitat
 - Disturbed Wetland
 - Eucalyptus Woodland
 - Mule Fat Scrub
 - Mule Fat Scrub - Disturbed
 - Non-Native Grassland: Broadleaf-Dominated
 - Non-Native Riparian
 - Non-Native Woodland
 - Riversidian Sage Scrub
 - Riversidian Sage Scrub - Disturbed
 - Southern Arroyo Willow Riparian Forest
 - Southern Willow Scrub
 - Southern Willow Scrub - Disturbed
 - Tamarisk Scrub
 - Tamarisk Scrub - Disturbed
 - Urban/Developed
 - Urban/Developed - Native Revegetated

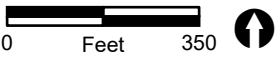


FIGURE 5-2
Vegetation Communities and Land Covers

Buckwheat Scrub

Buckwheat scrub on-site is a monotypic community containing almost exclusively California buckwheat (*Eriogonum fasciculatum*) in the shrub stratum with non-native grasses (*Bromus* spp.) and forbs such as dove weed (*Croton setiger*) in the herbaceous layer. Buckwheat scrub, which includes roughly 25 to 75 percent absolute cover of California buckwheat, were observed primarily in the southwestern portion of the survey area.

Buckwheat Scrub – Disturbed

Buckwheat scrub – disturbed is very similar to buckwheat scrub (described above) but includes a lower absolute cover of California buckwheat, between 10 and 15 percent total cover or less, with a high density of non-native grasses and weeds, including short-pod mustard (*Hirschfeldia incana*) and cheeseweed (*Malva parviflora*). The lower cover of California buckwheat and higher cover of invasive species indicates these stands were or are currently experiencing higher level of human-caused disturbance, such as edge effects from adjacent roads or other infrastructure.

Disturbed Habitat

Disturbed habitat consists of areas that have been previously disturbed by human activities and no longer function as a native or naturalized vegetation community. The disturbed habitat within the survey area predominantly consists of cleared, unvegetated areas, with low cover (usually less than 25 percent) of non-native grasses and forbs. These areas are primarily mapped within Subarea 4 in vacant lots. The majority of the plants found in the disturbed habitat are non-native species such as Mediterranean schismus (*Schismus barbatus*), red brome (*Bromus rubens*), long-beak filaree (*Erodium botrys*), and short-pod mustard. Native species are uncommon in the disturbed habitat but include herbaceous species, such as dove weed, at very low cover.

Disturbed Wetland

Disturbed wetland is a wetland vegetation community dominated by low-growing, wetland or hydrophytic species that occur in areas that have been significantly modified by human activity. It often occurs in drainages and is generally characterized by non-native wetland species intermixed with occasional native species. Disturbed wetland occurs in numerous patches along the smaller drainages throughout the survey area (see Figure 5). Characteristic plants occurring in the disturbed wetland include salt grass (*Distichlis spicata*), annual beard grass (*Polypogon monspeliensis*), African umbrella plant (*Cyperus involucratus*), spike rush (*Eleocharis* sp.), Bermuda grass (*Cynodon dactylon*), and western sunflower (*Helianthus annuus*).

Eucalyptus Woodland

Eucalyptus woodland occurs in one large patch in an undeveloped area in the eastern portion of the survey area, as well as in other smaller patches adjacent to existing residences. Eucalyptus woodland is dominated by exotic gum trees (*Eucalyptus* sp.). Gum trees are a non-native species that was historically planted in southern California. In some locations eucalyptus trees have become naturalized and spread into surrounding areas, often displacing native habitats.

Freshwater Marsh – Disturbed

The freshwater marsh – disturbed is a wetland habitat that is permanently flooded by fresh water and lacks significant current (Oberbauer et al. 2008). Within the survey area, it occurs along the western edge within a drainage feature and is only found in the survey buffer and not on the proposed Project. This stand is dominated by cattail (*Typha* sp.), with water speedwell (*Veronica anagallis-aquatica*). There was significant vegetation clearing noted within and adjacent to the drainage, which likely has resulted in increased sedimentation within the stand.

Mule Fat Scrub

Mule fat scrub is typically a tall, herbaceous riparian scrub strongly dominated by mule fat (*Baccharis salicifolia*). This early seral community is maintained by frequent flooding. Absent this, most stands would eventually mature into cottonwood- or sycamore-dominated riparian forests or woodlands. Mule fat scrub was mapped along the southwestern and southcentral portions of the survey area. These stands contain mule fat and Emory's baccharis (*Baccharis salicina* [= *Baccharis emoryi*]), with Emory's Baccharis at a higher absolute cover, usually more than 50-60 percent, while mule fat is present at roughly 20-30 percent absolute cover.

Mule Fat Scrub – Disturbed

Mule fat scrub – disturbed is like mule fat scrub (described above) but includes a lower absolute cover of mule fat and Emory's baccharis, with a high density of non-native grasses and weeds, including short-pod mustard and brome grasses. The lower cover of native shrubs and higher cover of invasive species indicates these stands were or are currently experiencing higher level of human-caused disturbance, such as edge effects from adjacent roads or other infrastructure.

Non-Native Grassland: Broadleaf-Dominated

This vegetation community is present in areas dominated by non-native grasses and invasive annuals such as short-pod mustard, located in areas outside of Subarea 4. These areas are distinct from disturbed habitat in that these stands are not located directly within residential areas, and as such, may provide foraging habitat for raptor species due to their location adjacent natural areas, such as the Bureau of Land Management administered lands around Canyon Lake to the west.

Non-Native Riparian

Non-native riparian habitat consists of moderately dense to dense thickets of non-native invasive riparian species. It occurs in several stands in and adjacent to the drainages throughout the survey area (see Figure 5). Within the survey area, these patches are dominated by exotic species including giant reed (*Arundo donax*), tamarisk (*Tamarix* sp.), Mexican fan palm (*Washingtonia robusta*), and Mexican palo verde (*Parkinsonia aculeata*).

Non-Native Woodland

Non-native vegetation is mapped in areas dominated by non-native or ornamental shrubs or trees that occur outside the limits of existing developed properties. Areas of ornamental landscaping on developed parcels are not included in this category. The most common species in the non-native woodland within the survey area are Mexican palo verde, Brazilian pepper tree (*Schinus terebinthifolius*), Peruvian pepper tree (*Schinus molle*), tree of heaven (*Ailanthus altissima*), Chinese elm (*Ulmus parvifolia*), and Mexican fan palm. Understory elements include bull thistle (*Cirsium vulgare*), Bermuda grass (*Cynodon dactylon*), and other non-native grasses.

Riversidian Sage Scrub

Riversidian sage scrub is a relatively open shrub community of soft-woody shrubs that generally reach up to 3 feet in height. It is found in dry areas in Riverside County. Within the survey area, this vegetation community is located primarily to the east and north of Subarea 4. Riversidian sage scrub is dominated by California buckwheat and brittlebush (*Encelia farinosa*), abundant non-native species, including red brome, Mediterranean schismus, Russian thistle (*Salsola tragus*), totalote (*Centaurea melitensis*), and long-beak filaree.

Riversidian Sage Scrub – Disturbed

Riversidian sage scrub – disturbed is very similar to Riversidian sage scrub (described above) but included a lower absolute cover in the shrub stratum, usually between 10 and 15 percent total cover or less, with a high density of non-native grasses and weeds, including short-pod mustard. The lower cover of shrubs and higher cover of invasive species indicates these stands were or are currently experiencing higher level of human-caused disturbance, such as edge effects from adjacent roads or other infrastructure.

There are patches of Riversidian sage scrub – disturbed within undeveloped areas in the northeast portion of the proposed Project site between Johnson Lane and Lucas Drive, to the east and west of a single-family residence. These patches appear to be cleared or trimmed regularly, likely for brush management purposes, and have a total shrub cover of approximately 15 percent.

Southern Arroyo Willow Riparian Forest

This vegetation community is a winter-deciduous riparian forest dominated by moderately tall broad-leafed trees such as arroyo willow (*Salix lasiolepis*) with closed or nearly closed canopies. They are usually located within sub-irrigated and frequently overflowed lands along rivers and streams.

The majority of the southern arroyo willow riparian forest within the survey area, is located along the larger stream, flowing east-west just to the south of the proposed Project area (see Figure 5). These stands are dominated by black willow (*Salix gooddingii*) with some red willow (*Salix laevigata*) and arroyo willow (*Salix lasiolepis*). These stands are tall and dense, indicating a forested community and not a scrub community. The understory is typically mule fat, with occasional Mexican fan palm, Mexican palo verde, and dwarf nettle (*Urtica urens*).

Southern Cottonwood Willow Riparian Forest

This vegetation community is similar to southern arroyo willow forest, and is a tall, open, broad-leaved winter-deciduous riparian forests dominated by willows (*Salix* spp.), but it also contains Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) as a co-dominant. The understory is also similar and contains shrubby willows and mule fat.

Southern Willow Scrub

This vegetation community is typically a broad-leaved, winter-deciduous riparian thicket dominated by several willow species. Most stands are too dense to allow much understory development and this early seral type requires repeated flooding to prevent succession to riparian forest communities. Within the survey area, southern willow scrub occurs along smaller drainages that serve as tributaries to the larger unnamed drainage located south of the proposed Project. These stands were less than 15-20 feet in height and were dominated primarily by immature willow trees.

Southern Willow Scrub – Disturbed

This vegetation community occurs in areas that met the criteria for southern willow scrub (described above) but also contained a higher percent cover of non-native riparian species, such as Mexican fan palm and salt cedar. This classification is found mostly within the western portion of the survey buffer, with a small patch occurring within the northwest portion of the proposed Project.

Tamarisk Scrub

Tamarisk scrub is a weedy, virtual monoculture of any of several tamarisk species (*Tamarix* spp.), usually supplanting native vegetation following major disturbance. Areas dominated by salt cedar were mapped as tamarisk scrub within the survey area.

Tamarisk Scrub – Disturbed

A few stands of tamarisk scrub were identified as having a higher cover of invasive species and lower overall cover of tamarisk. These areas were mapped as tamarisk scrub – disturbed and are located along a swale feature west of and parallel to Mountain View Place. This area appears to experience regular mowing of vegetation between the tamarisks, and the tamarisk shrubs are widely spaced apart.

Urban/Developed Land

Developed land within the survey area includes existing roads, sidewalks, residences and associated maintained landscaping, and commercial developments. Generally, vegetation in these areas is characterized by ornamental trees and shrubs, with occasional native or non-native species spreading into more open areas.

Urban/Developed - Native Revegetated

This land cover type was observed at the far southern edge of the survey area, south of the large tributary flowing into Canyon Lake, in a narrow strip of vegetation that is planted as part of the landscaping associated with the Canyon Heights Subdivision. This area is predominantly developed and maintained as part of the common areas of the subdivision, but the vegetation consists of native sage scrub species such as California buckwheat widely spaced and clearly planted after construction of the subdivision. The vegetation here is low density, with very low species diversity and does not currently provide quality habitat for sensitive species.

4.4 Common Wildlife

Eight common wildlife species were detected during the biological constraints survey in 2020¹: common buckeye (*Junonia coenia grisea*), cabbage white (*Pieris rapae*), American crow (*Corvus brachyrhynchos*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltirparus minimus melanurus*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos polyglottos*), and Botta's pocket gopher (*Thomomys bottae*). These species are characteristic of an exurban environment. The 2025 general biological survey was consistent with these findings of common animal species. A complete list of these species is provided in Attachment 1.

4.5 Special-Status Species

For purposes of this report, species will be considered sensitive if they are (1) covered species under the MSHCP; (2) listed by state or federal agencies as threatened or endangered or are proposed for listing (CDFW 2025b and 2025c); (3) designated as fully protected or species of special concern by CDFW (2025c); or (4) identified as California Rare Plant Rank (CRPR) 1B (considered endangered throughout its range), CRPR 2 (considered endangered in California but more common elsewhere), CRPR 3 (more information about the plant's distribution and rarity needed), or CRPR 4 (plants of limited distribution) on the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025).

4.5.1 Sensitive Plants

Seventeen special-status plant species documented as occurring within the Romoland quadrangle or within 1 mile of the proposed Project site (CDFW 2025a) were evaluated for their potential to occur (Attachment 5).

Paniculate tarplant (*Deinandra paniculata* [= *Hemizonia paniculata*]), a CRPR 4.2 species, was observed in two locations on the western portion of the survey area, just outside of the proposed Project site. Twelve special-status plants have a high or moderate potential to occur within the survey

¹ Note that Latin and common names listed here conform to the most recent nomenclature changes and may reflect the nomenclature used in the 2020 Biological Constraints Report provided in Attachment 1.

area, as well as within the proposed Project site, particularly within the proposed areas for LS-1 (Options 1 and 2):

- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)
- long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)
- Munz's onion (*Allium munzii*)
- Palmer's grapplinghook (*Harpagonella palmeri*)
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*)
- Payson's jewelflower (*Caulanthus simulans*)
- peninsular spineflower (*Chorizanthe leptotheca*)
- Robinson's peppergrass (*Lepidium virginicum* var. *robinsonii*)
- small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*)
- small-flowered morning-glory (*Convolvulus simulans*)
- smooth tarplant (*Centromadia pungens* ssp. *laevis* [= *Hemizonia pungens* ssp. *laevis*])
- southern California black walnut (*Juglans californica* [= *Juglans californica* var. *californica*])

No mapped clay soils are identified within either the survey area or proposed Project site, but two soil types (Arbuckle loam and Lodo rocky loam) contain sufficient clay soil content that could support clay soil endemics (e.g., Coulter's goldfields, Munz's onion, long-spined spineflower, Palmer's grapplinghook, small-flowered microseris, and small-flowered morning-glory). Undeveloped land in the southwest portion of the survey area, including within areas proposed for LS-1 (Options 1 and 2, as well as undeveloped land along the western edge of the survey area) have the highest potential to support these sensitive plant species.

4.5.2 Sensitive Wildlife

Twenty-one sensitive wildlife species were evaluated for their potential to occur in the survey area or proposed Project site because they were either noted within one mile of the survey area in the CNDDDB (CDFW 2025a) or are resources noted in the IPaC list (see Attachment 2). Sensitive wildlife species evaluated for the potential to occur based on a database review are presented in Attachment 6.

No sensitive wildlife species were detected within the survey area or proposed Project site during the general biological survey. The following 14 species were determined to have a moderate or high potential to occur in the proposed Project site and/or survey area:

- Invertebrates:
 - Crotch's bumble bee (*Bombus crotchii*)
- Reptiles
 - Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi* [= *Cnemidophorus hyperythrus*])
 - California glossy snake (*Arizona elegans occidentalis*)
 - red diamond rattlesnake (*Crotalus ruber*)
 - San Diegan tiger whiptail (=coastal whiptail) (*Aspidoscelis tigris stejnegeri*)

- Birds
 - Bell's sage sparrow (*Artemisiospiza* [= *Amphispiza*] *belli belli*)
 - burrowing owl (*Athene cunicularia*)
 - California horned lark (*Eremophila alpestris actia*)
 - coastal California gnatcatcher (*Polioptila californica californica*)
 - least Bell's vireo (*Vireo bellii pusillus*)
 - southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
- Mammals
 - San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
 - Stephens' kangaroo rat (*Dipodomys stephensi*)
 - western bonneted [=mastiff] bat (*Eumops perotis*)

Crotch's bumble bee. Crotch's bumble bee is a state candidate for listing as endangered. This species has a moderate potential to forage within and adjacent to the proposed Project site due to the presence of scattered floral resources within non-native grasslands: broadleaf-dominated, buckwheat scrub, Riversidian sage scrub and disturbed habitat within and adjacent to the proposed Project site. This species also has a moderate potential to nest within the proposed Project site due to the presence of bare ground and several rodent burrows, particularly within the proposed LS-1 (Options 1 and 2).

Orange throated-whiptail, San Diegan tiger whiptail, and Red-diamond rattlesnake. These species are CDFW species of special concern and MSHCP covered species. All three species may occur in the disturbed stands of Riversidian sage scrub within the proposed Project site, specifically within proposed LS-1 Option 2, and within the northeast proposed Project site (i.e., within Subarea 4).

California Glossy Snake. The California glossy snake is a CDFW species of special concern (CDFW 2025c). This species was not observed during surveys and it is not expected to occur within the developed roadways associated with the proposed Project; however, it has a moderate potential to occur within the LS-1 (Options 1 and 2).

Bell's Sage Sparrow and Southern California Rufous-Crowned Sparrow. Bells's sage sparrow and southern California rufous-crowned sparrow are CDFW watch list species and Western Riverside MSHCP covered species. Within the proposed Project site, these two species have a high potential to occur in the disturbed stands of Riversidian sage scrub, specifically within proposed LS-1 Option 2, and within the northeast portion (i.e., within Subarea 4).

Burrowing Owl. Burrowing owl is a state candidate for listing as endangered and a MSHCP covered species that occurs in a variety of open habitats such as grasslands where there are sufficient rodent burrows to utilize. No burrowing owl individuals, burrows or burrowing owl sign were present within the survey area or proposed Project site during the 2025 or 2020 surveys. The proposed Project site consists primarily of open grassland and scrub habitats, including numerous burrow surrogates (e.g., culverts) that could be used by this species. Potential prey items, including insects, lizards, and small mammals are anticipated to occur. Based on the presence of suitable habitat within survey area, particularly within undeveloped lands to the southwest and along the eastern edge of the survey area, this species has moderate potential to occur both within the proposed Project site and within the broader survey area.

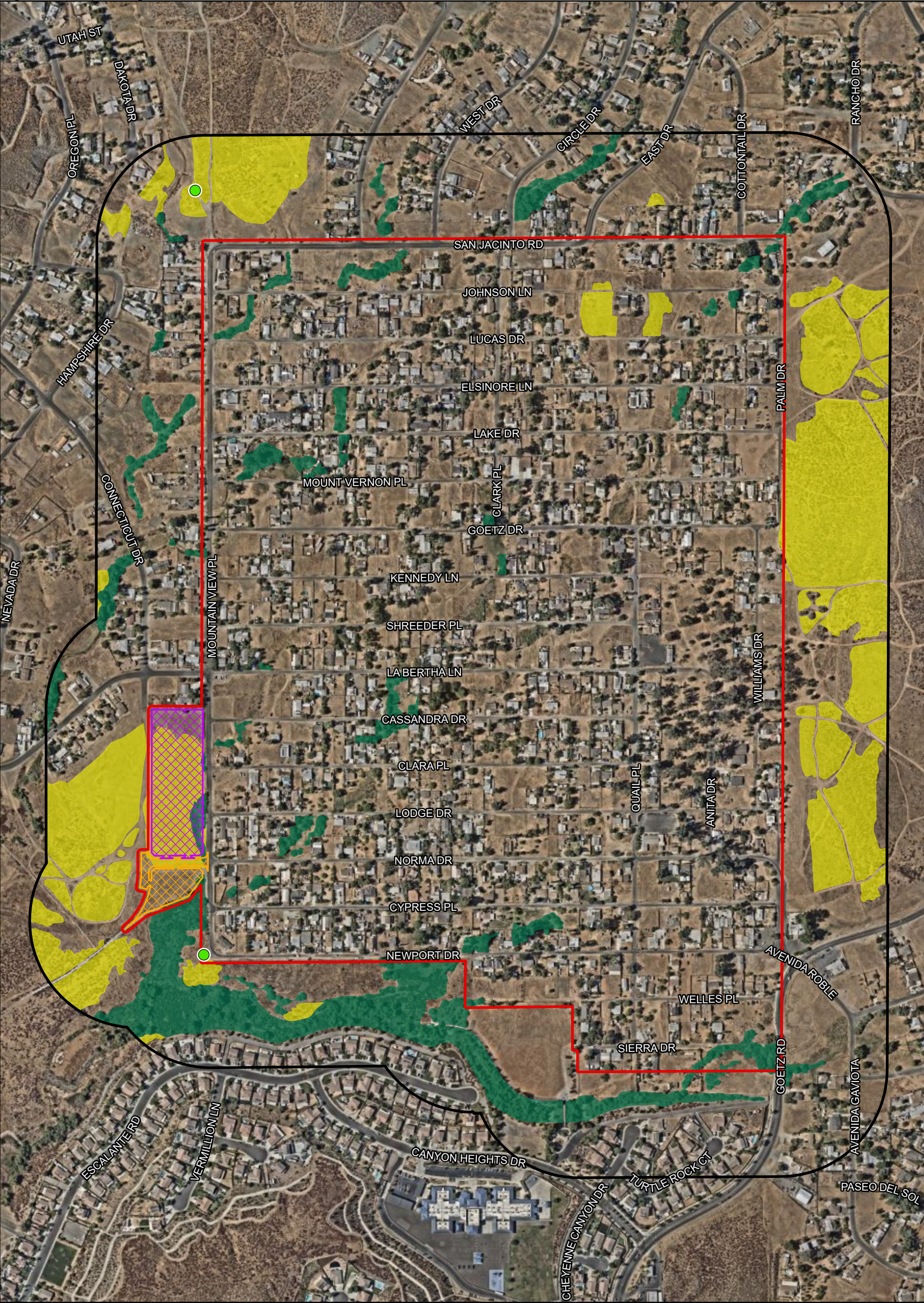
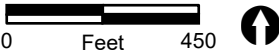
California Horned Lark. California horned lark is a CDFW watch list species and a MSHCP covered species. It occurs in arid grasslands, agricultural lands, and other disturbed, sparsely vegetated areas, but is not common in chaparral (Unitt 2004). The disturbed habitat, non-native grassland: broadleaf-dominated and Riversidian sage scrub on the proposed Project site and within the survey area provide suitable habitat for California horned lark. As such, this species has a high potential to occur.

Coastal California Gnatcatcher. The coastal California gnatcatcher is federally listed as threatened, a CDFW species of special concern, and a Western Riverside MSHCP covered species. The survey area and proposed Project site both support potentially suitable habitat for coastal California gnatcatcher (Figure 6). The proposed Project site supports a small patch of disturbed Riversidian sage scrub potentially capable of supporting this species within the area proposed for the LS-1 (Option 2). Suitable coastal California gnatcatcher habitat within the survey area is also present and includes California buckwheat and Riversidian sage scrub, but most of these stands also contain high density of non-native grasses and weeds (see Figure 6). Habitat within the survey area is further surrounded by open space, much of it scrub habitat, indicating that the suitable habitat within the survey area may be connected to larger stands of suitable habitat in the region. Due to the presence of suitable vegetation, albeit somewhat disturbed, and the fact that this habitat is contiguous with larger blocks of habitat, coastal California gnatcatcher has a moderate potential to occur within the survey area.

Least Bell's vireo. The least Bell's vireo is federally and state listed as endangered, and an MSHCP covered species (WRCRCA 2003). The survey area and proposed Project site both support potentially suitable habitat for least Bell's vireo (see Figure 6). The unnamed tributary along the southern edge of the survey area supports mature willows that are over 30 feet in height. There is also dense to moderately dense understory containing immature riparian shrubs and trees along this tributary, providing excellent cover. The vegetation along this tributary also contains some more open areas between mature trees where foraging may occur. Within the proposed Project site, there are only a few small stands of willows within the smaller tributaries flowing through Subarea 4, but there are non-native riparian woodlands and tamarisk scrub that may be used on occasion by this species. As such, there is a moderate potential for this species to occur within the proposed Project site, and a high potential for it to occur within the unnamed tributary along the southern edge of the survey area.

San Diego black-tailed jackrabbit. The San Diego black-tailed jackrabbit is an MSHCP covered species (WRCRCA 2003). This species was not observed during surveys but has a high potential to occur in the disturbed habitat, non-native grassland: broadleaf-dominated, buckwheat scrub and Riversidian sage scrub (including disturbed components of these communities) within the survey area, as well as within the proposed LS-1 areas (Option 1 and 2).

Stephen's kangaroo rat. The Stephen's kangaroo rat is a federally listed endangered, a state-listed threatened species, and an MSHCP and Stephen's Kangaroo Rat Habitat Conservation Program covered species (WRCRCA 2003). No Stephen's kangaroo rat or signs of the species were observed during surveys. Rodent burrows that could potentially be made by kangaroo rats were noted in the southwest corner of the survey area (Figure 7). Figure 7 provides the results of the Conservation Biology Institute's (CBI) species modeling (CBI 2019) as well as a Project-specific habitat analysis showing potential habitat. Potential habitat for this species includes much of the survey area outside of the proposed Project site, but only a small area within the proposed Project site, specifically in the



- Project Boundary

Survey Area

LS-1 Option 1

LS-1 Option 2
- Coastal California Gnatcatcher Potentially Suitable Habitat

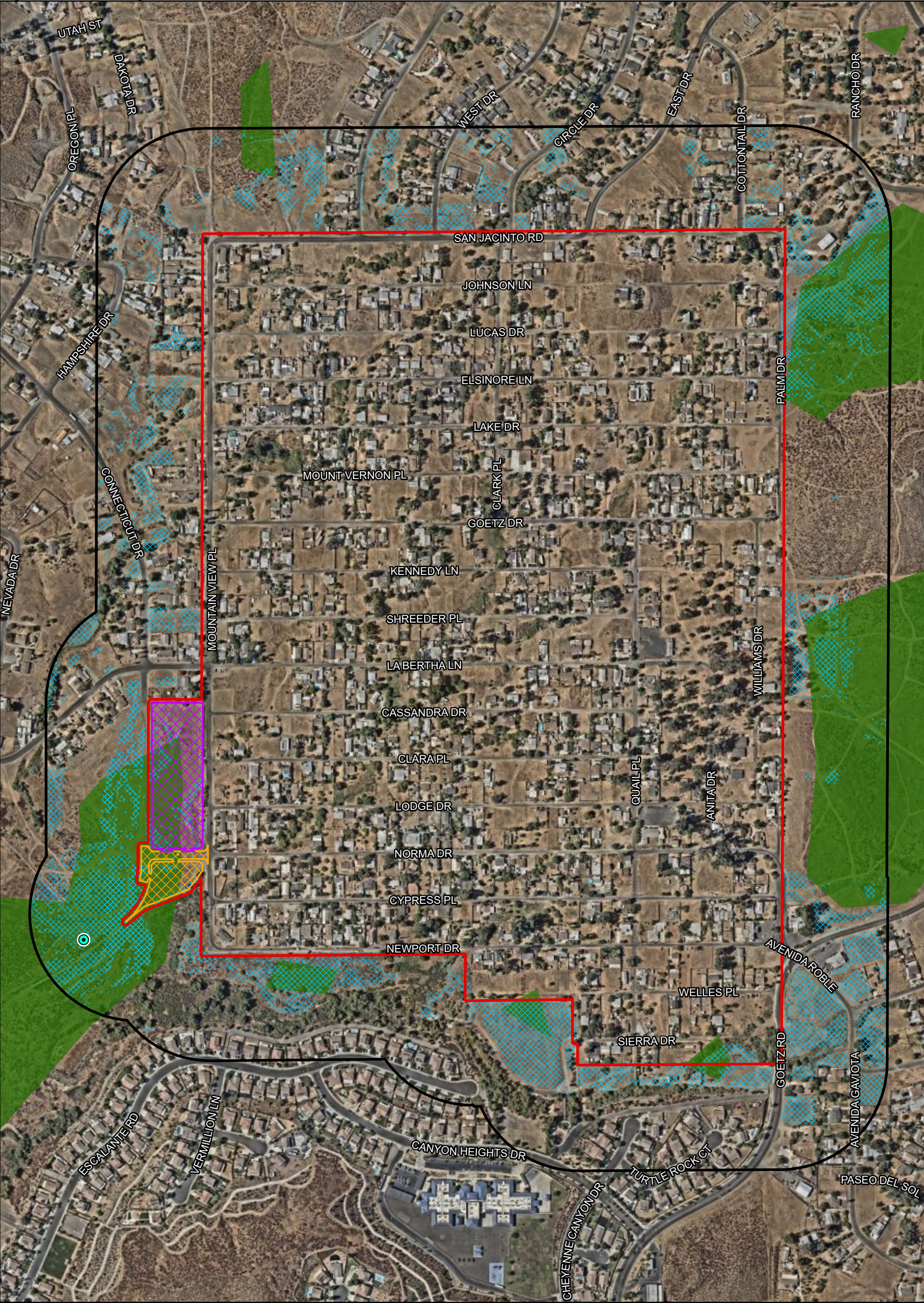
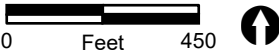
Least Bell's Vireo Potentially Suitable Habitat

Sensitive Species

Paniculate Tarplant
(*Deinandra paniculata*), CRPR 4.2

FIGURE 6

Special-Status Plants and Wildlife



- | | |
|------------------|--|
| Project Boundary | Potential Kangaroo Rat Burrow Complex |
| Survey Area | Stephens' Kangaroo Rat Potentially Suitable Habitat |
| LS-1 Option 1 | Stephens' Kangaroo Rat Habitat Model (Conservation Biology Institute 2019) |
| LS-1 Option 2 | |

FIGURE 7
Stephens' Kangaroo Rat Habitat

southwestern portion within the proposed LS-1 areas (Option 1 and 2). Three occurrences of this species were also reported in the CNDDDB within one mile of the proposed Project (CDFW 2025a). As such, this species has a high potential to occur within areas shown on Figure 7 as either the CBI modeled habitat or the Project-specific species analysis.

Western bonneted [=mastiff] bat. This species is a CDFW species of special concern that roosts mainly in cliff crevices, high buildings, trees, and tunnels. When roosting in rock crevices, this species needs vertical faces to drop off to take flight. It roosts alone, or in small colonies, usually of fewer than 100 bats. No cliff faces, tunnels, or high buildings were observed within the survey area, but tall trees are present within a few areas of the proposed Project site, such as the eucalyptus woodland in the eastern portion of the proposed Project, and within areas mapped as non-native woodland throughout the survey area. There are also large trees within the unnamed tributary to Canyon Lake located along the southern edge of the survey area. The survey area and proposed Project site also supports the presence of potential prey species (e.g., night-flying hymenopterous insects and moths), which indicates this species could forage over the proposed Project. As such, this species has a high potential to occur.

Migratory and Nesting Birds. The entire proposed Project site and survey area including ornamental vegetation within the developed areas of Subarea 4, support habitat for migratory and nesting bird species. Urban-adapted species have been known to nest within ornamental vegetation or the eaves of houses or openings in structures. In addition, several ground-nesting species have the potential to nest within the open areas found within and adjacent to the proposed Project site.

The IPaC resource list (USFWS 2025a; Attachment 2) identified the following federally-listed species that should be analyzed as part of the planning process based on the proposed Project location:

- monarch butterfly (*Danaus plexippus*)
- Quino checkerspot butterfly (*Euphydryas editha quino*)
- Riverside fairy shrimp (*Streptocephalus woottoni*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)
- coastal California gnatcatcher
- least Bell's vireo
- southwestern pond turtle (*Actinemys pallida*)
- western spadefoot (*Spea hammondi*)
- San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*)
- Stephens' kangaroo rat

Each of these species are discussed in more detail in Section 7. With the exception of coastal California gnatcatcher, least Bell's vireo, and Stephen's kangaroo rat, discussed above, these species are not expected to occur based on lack of suitable habitat within the survey area.

4.6 Critical Habitat

The USFWS designates critical habitat for endangered and threatened species under the FESA (16 United States Code § 1533 (a)(3)) for the survival and recovery of federally listed endangered and/or threatened species. Protected habitat includes areas for foraging, breeding, roosting, shelter, and movement or migration.

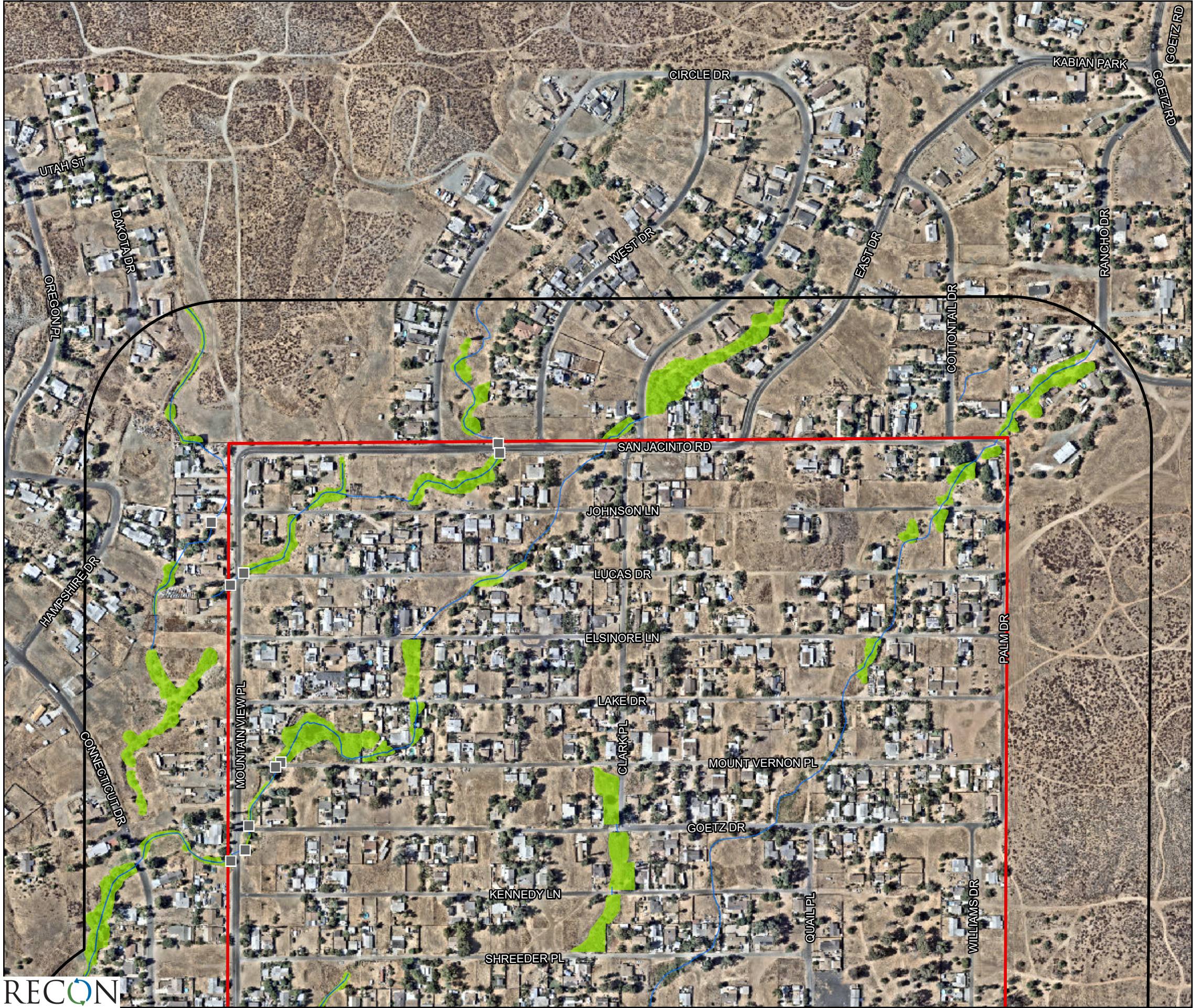
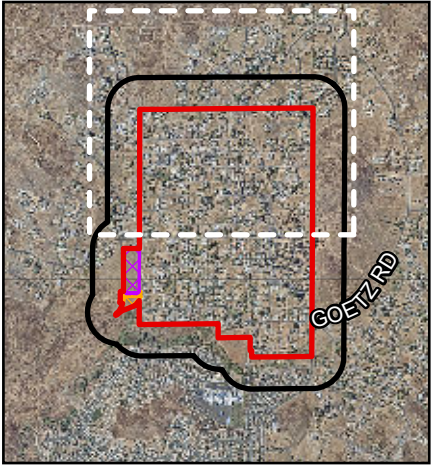
No critical habitat is present within the survey area for any federally listed species. Final designated critical habitat for coastal California gnatcatcher is mapped approximately 0.5 mile due east and approximately 0.5 mile due west of the proposed Project site (USFWS 2025c).

4.7 Aquatic Resources

Potential jurisdictional aquatic resources identified within the survey area total 24.64 acres (Table 2). This includes aquatic resources that are potentially under the jurisdiction of the USACE and RWQCB totaling 0.70 acres (15,158 linear feet) of potential non-wetland waters of the U.S./state consisting of natural and man-made channels, and 23.95 acres of potential wetland waters of the U.S./state consisting of areas mapped as disturbed wetland, freshwater marsh (disturbed), mule fat scrub (disturbed), non-native riparian, southern cottonwood willow riparian forest, southern willow scrub (including disturbed stands), and tamarisk scrub (Figure 8A). As noted in Section 3.4, a formal aquatic resources delineation would be necessary to determine the presence or absence of three-parameter wetlands.

Aquatic resources that are potentially jurisdictional to the CDFW consist of 0.70 acres (15,158 linear feet) of streambeds and 23.95 wetland and/or riparian habitat within and/or extending beyond the top of bank of the streambeds (Figure 8B).

Aquatic resources that are potentially jurisdictional in accordance with the Western Riverside County MSHCP consist of 24.64 acres of riparian/riverine areas (Figure 8C).



Project Boundary

Survey Area

Culvert

Potential Jurisdictional Resources

Non-wetland Waters of the U.S./State
(0.70 acres, 15,158 linear Feet)*

Wetland Waters of the U.S./State
(23.95 acres)*^

*Values represent approximate acreages
^Wetlands were delineated using one parameter only
and are not confirmed jurisdictional wetlands

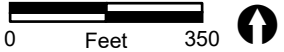
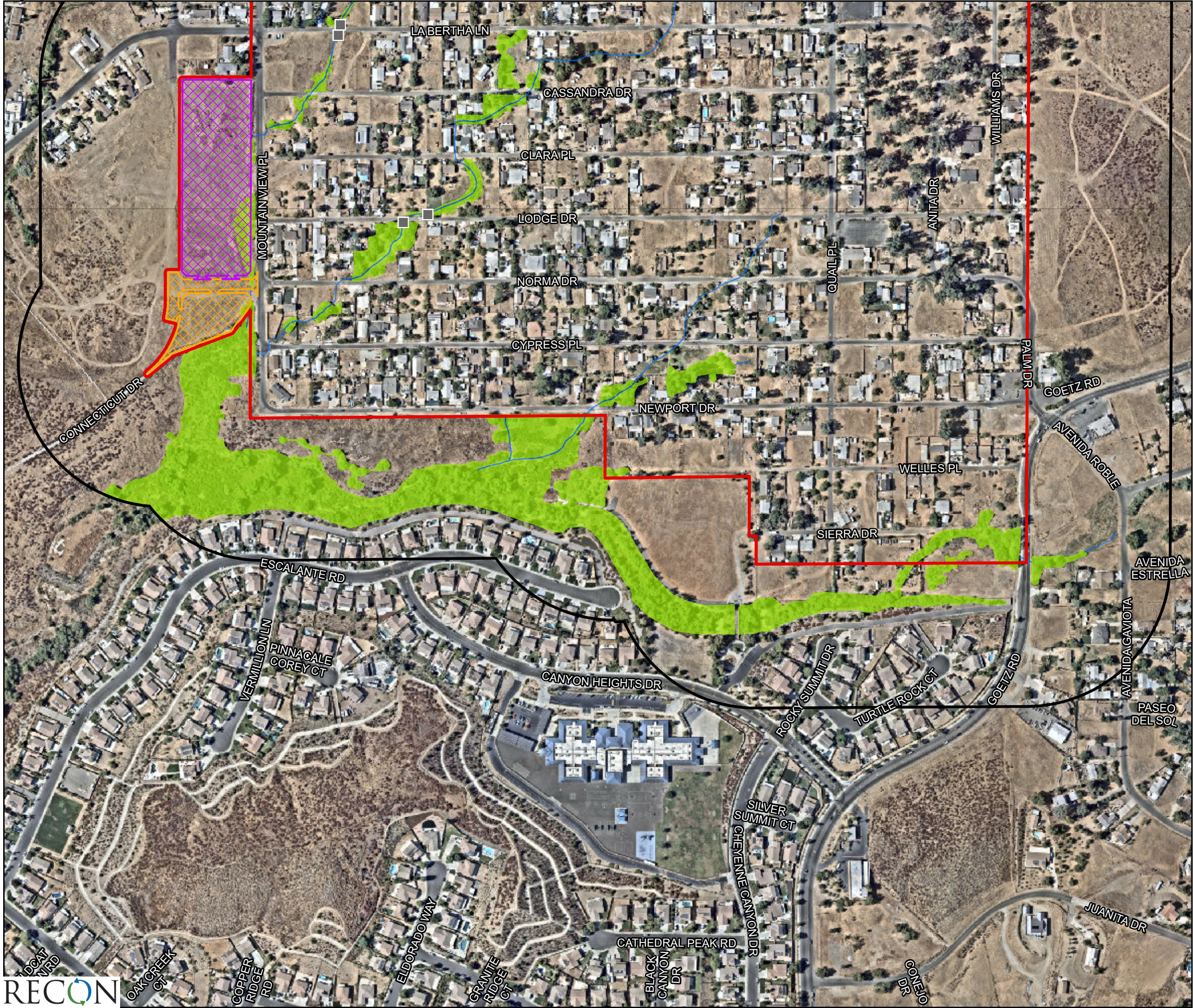
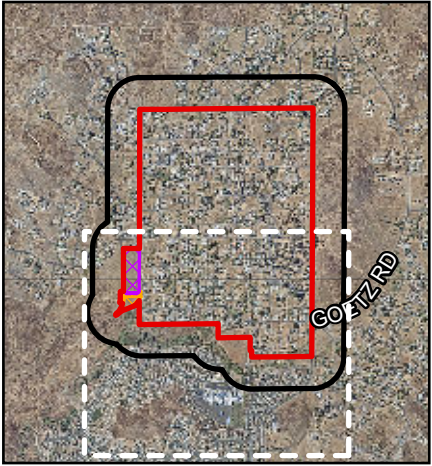


FIGURE 8A-1
Potential USACE/RWQCB Aquatic Resources



- Project Boundary
- Survey Area
- LS-1 Option 1
- LS-1 Option 2
- Culvert

Potential Jurisdictional Resources

- Non-wetland Waters of the U.S./State
(0.70 acres, 15,158 linear Feet)*
- Wetland Waters of the U.S./State
(23.95 acres)*^

*Values represent approximate acreages
^Wetlands were delineated using one parameter only
and are not confirmed jurisdictional wetlands

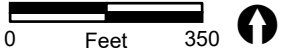
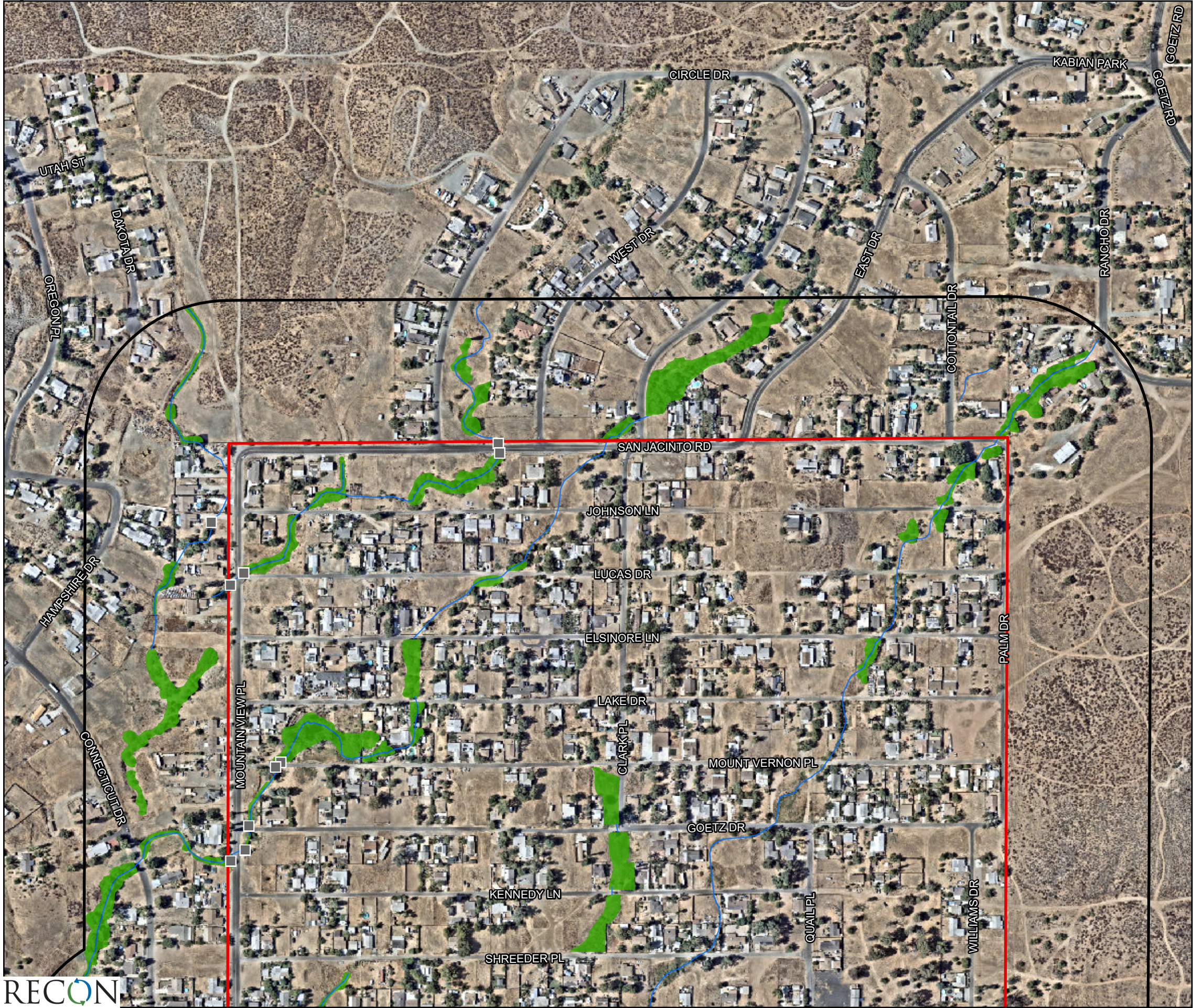
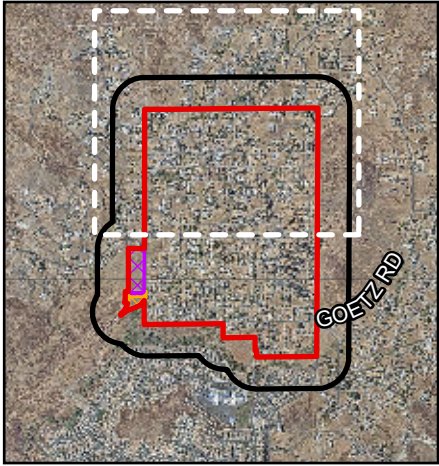


FIGURE 8A-2
Potential USACE/RWQCB Aquatic Resources



Project Boundary

Survey Area

Culvert

Potential Jurisdictional Resources

Streambed
(0.70 acres, 15,158 linear Feet)*

Wetland and/or Riparian Habitat
(23.95 acres)*

*Values represent approximate acreages

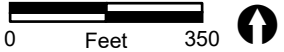
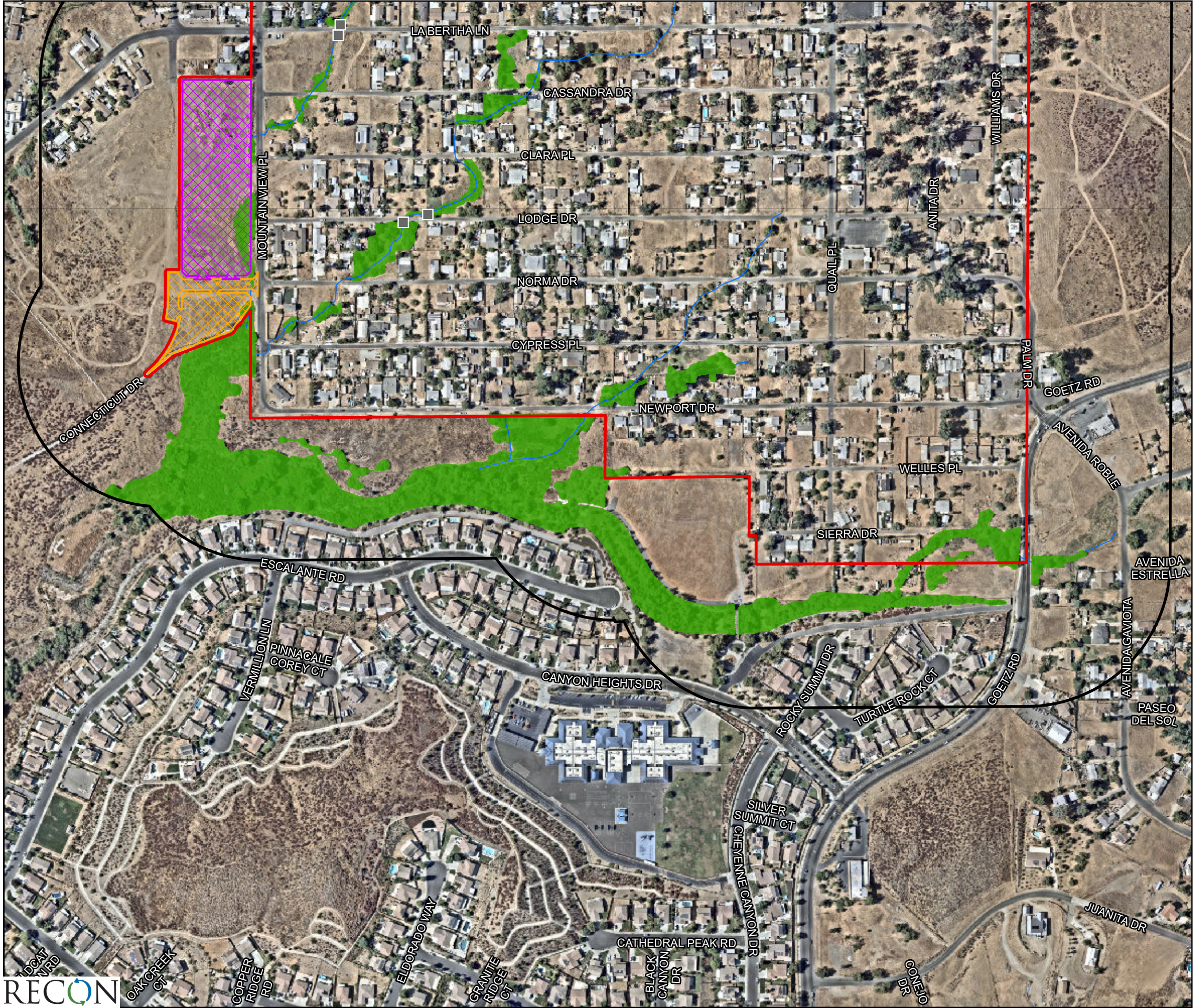
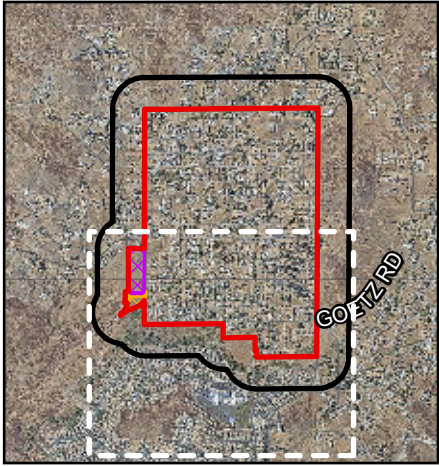


FIGURE 8B-1
Potential CDFW Aquatic Resources



- Project Boundary
- Survey Area
- LS-1 Option 1
- LS-1 Option 2
- Culvert

Potential Jurisdictional Resources

- Streambed
(0.70 acres, 15,158 linear Feet)*
- Wetland and/or Riparian Habitat
(23.95 acres)*

*Values represent approximate acreages

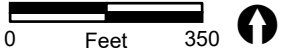
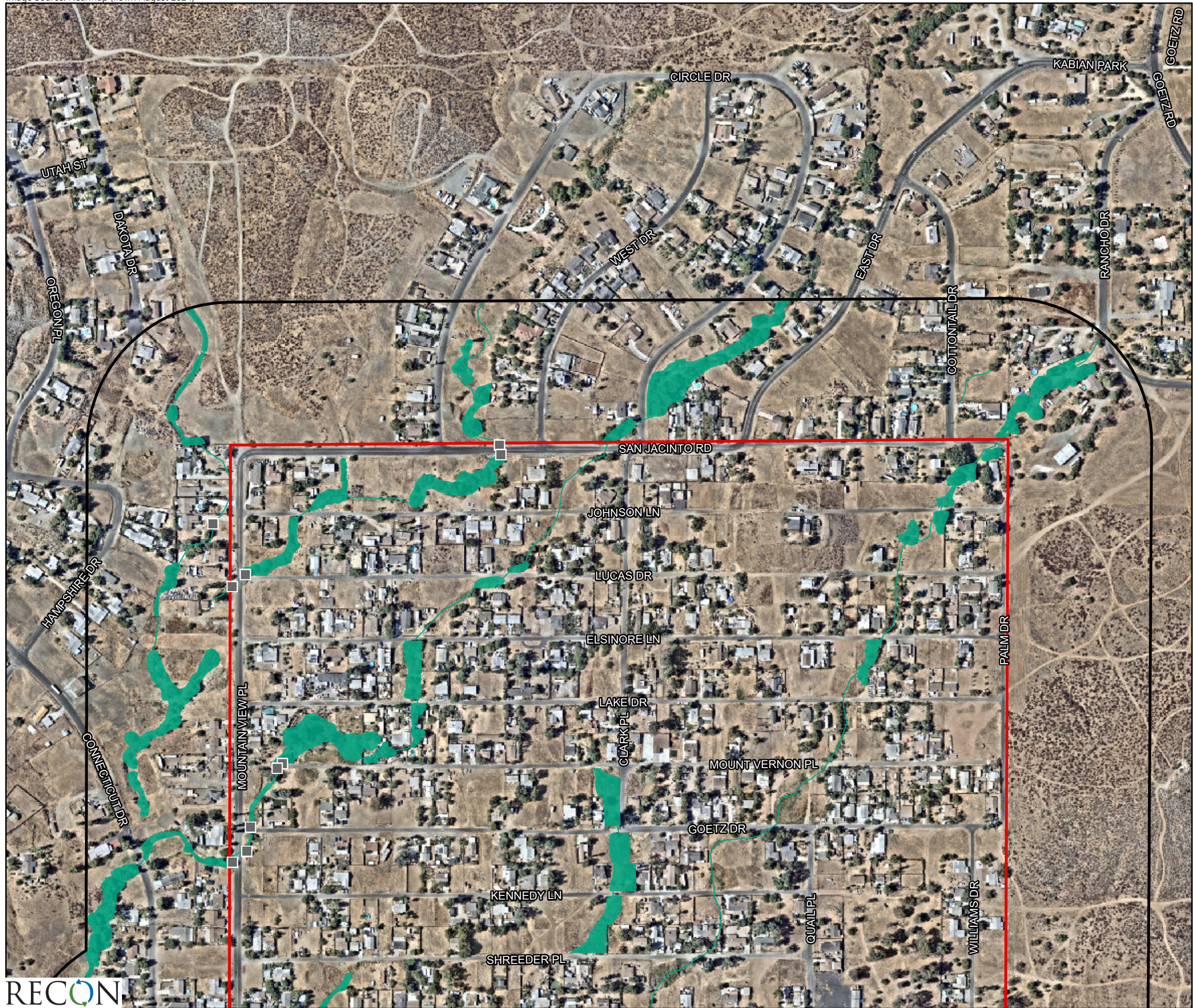
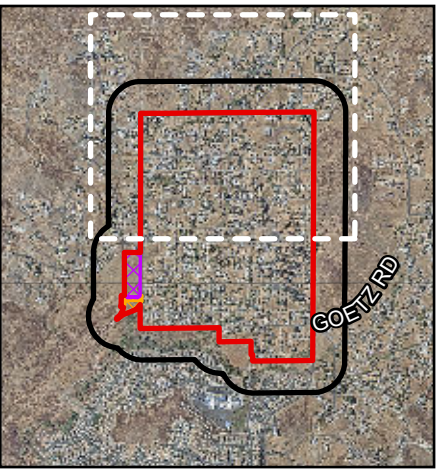


FIGURE 8B-2
Potential CDFW Aquatic Resources



- Project Boundary
- Survey Area
- Culvert
- Potential Jurisdictional Resources
- Riparian/Riverine Areas (24.64 acres)*

*Values represent approximate acreages

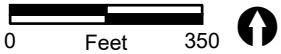
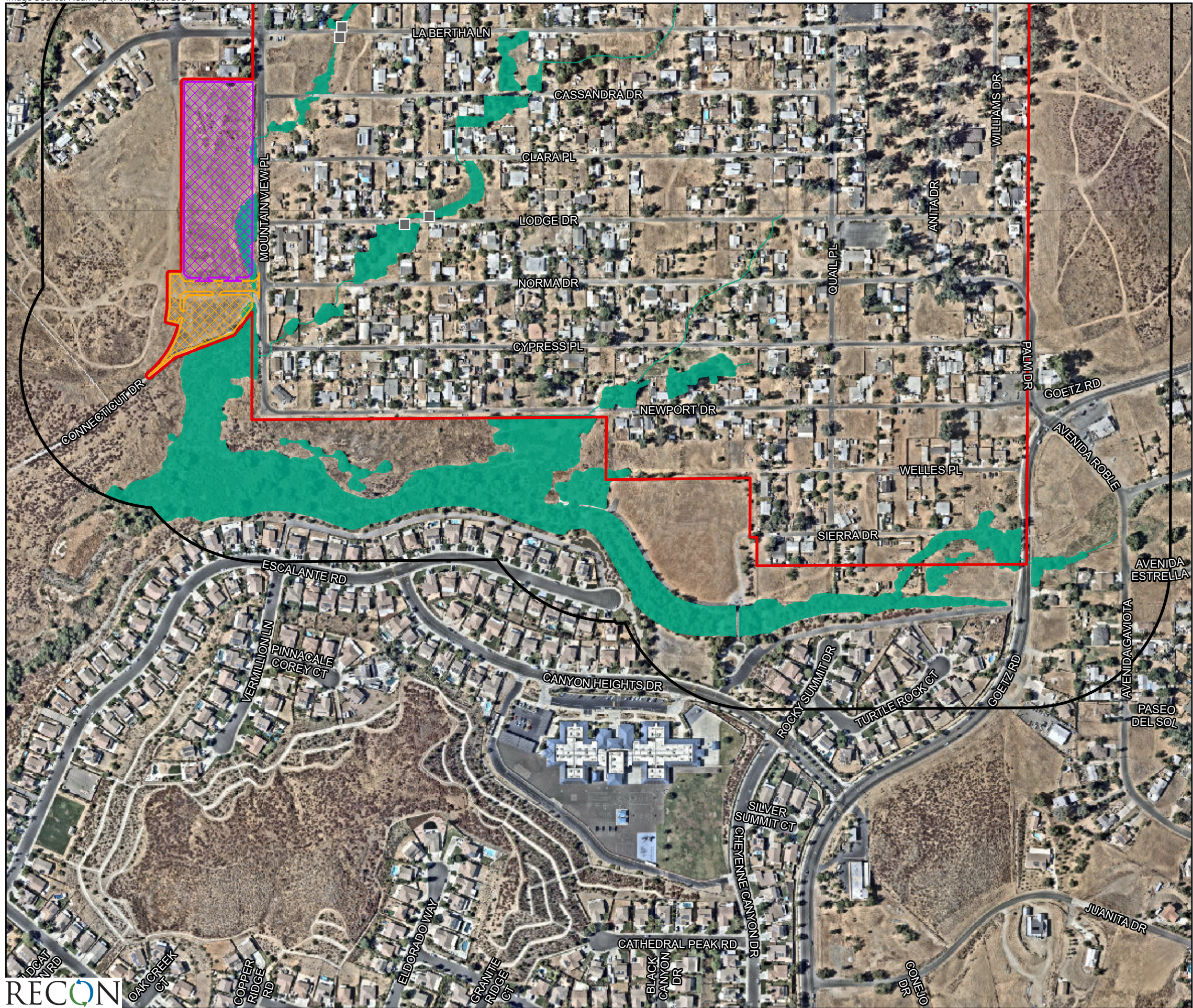
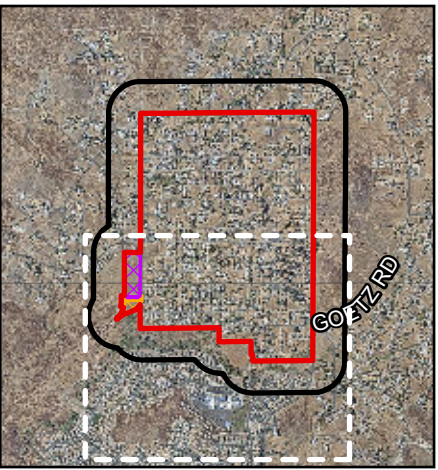


FIGURE 8C-1
Potential Western Riverside
MSHCP Riparian/Riverine Areas



- Project Boundary
- Survey Area
- LS-1 Option 1
- LS-1 Option 2
- Culvert
- Potential Jurisdictional Resources**
- Riparian/Riverine Areas (24.64 acres)*

*Values represent approximate acreages

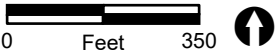


FIGURE 8C-2
Potential Western Riverside
MSHCP Riparian/Riverine Areas

Table 2 Potential Jurisdictional Resources within the Survey Area			
Agency	Aquatic Resource Type	Acre(s) ¹	Linear Feet ¹
USACE	Non-Wetland Waters of the U.S.	0.70	15,158
	Wetland Waters of the U.S.	23.95	Not Applicable
Total USACE Aquatic Resources		24.64	15,158
RWQCB	Non-Wetland Waters of the State	0.70	15,158
	Wetland Waters of the State	23.95	Not Applicable
Total RWQCB Aquatic Resources		24.64	15,158
CDFW	Streambeds	0.70	15,158
	Wetland and/or Riparian Habitat	23.95	Not Applicable
Total CDFW Aquatic Resources		24.64	15,158
Riverside County	Riparian/Riverine Areas	24.64	Not Applicable
Total Aquatic Resources		24.64	Not Applicable
¹ The reported acreage and linear footage are approximate, as they are based on a constraints-level delineation. A formal aquatic resources delineation would be required to determine precise values. Totals may not sum due to rounding.			

4.8 Wildlife Corridors and Wildlife Nursery Sites

Wildlife corridors are areas that link fragmented habitats. These linkages may be drainages, canyons, or ridgelines that provide access to foraging areas, water, breeding sites, and dispersal areas and provide cover and shelter during travel. Disturbance to wildlife corridors such as human disturbance and development can cause harm to migrating species, cause species to exceed the population thresholds, and/or prevent healthy gene flow between populations.

The proposed Project site, like much of southern California is located within the Pacific Flyway, a major north-south avian migratory corridor that extends along the West Coast from Alaska to Patagonia. As such, the proposed Project site provides suitable foraging and breeding habitat for many resident and migratory avian species. The Pacific Flyway links breeding grounds in the north to more southerly wintering areas and, therefore, is used by an abundance of bird species during migration.

The proposed Project site also contains limited connectivity for terrestrial animals, particularly within the vacant lots scattered through Subarea 4. However, the proposed Project site currently does not function as a high-quality regional wildlife corridor due to the presence of homes and roads in an exurban environment. Open space surrounds the proposed Project site to the west and north, and to a lesser extent on the east, and as such, likely constrains wildlife movement within the larger patchwork of open space, conservation lands, and urbanization.

The proposed Project site also contains habitat suitable to common and special-status bats, and this includes sites that could be used as nursery sites (i.e., maternal bat roost sites). The site contains numerous large palm trees, many of which have not been trimmed to remove the dead fronds. These thick, overlapping palm fronds support microhabitat for bat roost sites. In addition,

abandoned buildings or other lightly used infrastructure (e.g., sheds, outbuildings, bridges, etc.) could also support bat maternal roost sites for certain species of bats.

5.0 Impacts

5.1 Impact Summary

The following discussion describes the proposed Project's potential to affect special-status biological resources during construction of the proposed Project by phase. The District would operate in compliance with all state and federal laws, regulations, and permit conditions. This includes compliance with the CWA, Porter-Cologne Water Quality Control Act, FESA, MBTA, CFGC, CESA, and CEQA, and the requirements and protective measures from CDFW and USFWS.

5.1.1 Direct Impacts

Direct impacts are caused by the proposed Project and occur at the same time and place as the proposed Project. Any alteration, disturbance, or destruction of biological resources that would result from Project-related activities is considered a direct impact. Direct impacts would include direct losses to native habitats, potential jurisdictional waters, wetlands, and special status species; and diverting natural surface water flows. Direct impacts could include injury, death, and/or harassment of listed and/or special-status species. Direct impacts could also include the destruction of habitats necessary for species breeding, feeding, or sheltering. Direct impacts on plants can include crushing of adult plants, bulbs, or seeds.

Direct impacts were categorized into permanent and temporary impacts, as described below.

Permanent Impacts. Permanent impacts associated with the proposed Project include the above-ground components, specifically the construction of the lift stations and manhole covers. The entire area proposed for the lift station is presumed to cause a permanent direct impact, although in reality, some of the area may not be needed for the lift station. Manhole hole covers are assumed to create a 4-foot diameter (12.6 square feet) permanent direct impact. Most of these manhole covers would be constructed within already developed areas (i.e., streets).

Temporary Impacts. Temporary impacts associated with the proposed Project include the construction of below-ground proposed Project components, specifically the new sewer mains, the force mains, and connecting pipes installed through vacant lots, as well as any temporary construction work areas required to build the Project. The pipes would be installed via open cut trenching and assume a construction zone impact area (i.e., that work area extending beyond the immediate trenching area) equal to the width of the residential streets within which they would be placed, approximately 20 feet. As such, a 20-foot buffer around each linear component (10 feet on either side) is assumed to constitute the maximum extent of the workspace required to install these components. The construction zone includes trenching, access, staging, and other Project-related activities.

Table 3 summarizes the estimated total permanent and temporary impacts associated with the proposed Project by vegetation community and phase (Figure 9). Impacts associated with construction of LS-1 Option 1 would incur smaller permanent impacts than if LS-1 Option 2 is chosen. Note that the connector pipe options CP-2 and CP-3 would be comparable in size to those estimated for connector pipe associated with CP-1. As such, impacts for the two connector pipe options (CP-2 and CP-3) are assumed to be roughly equivalent to the impacts presented for CP-1.

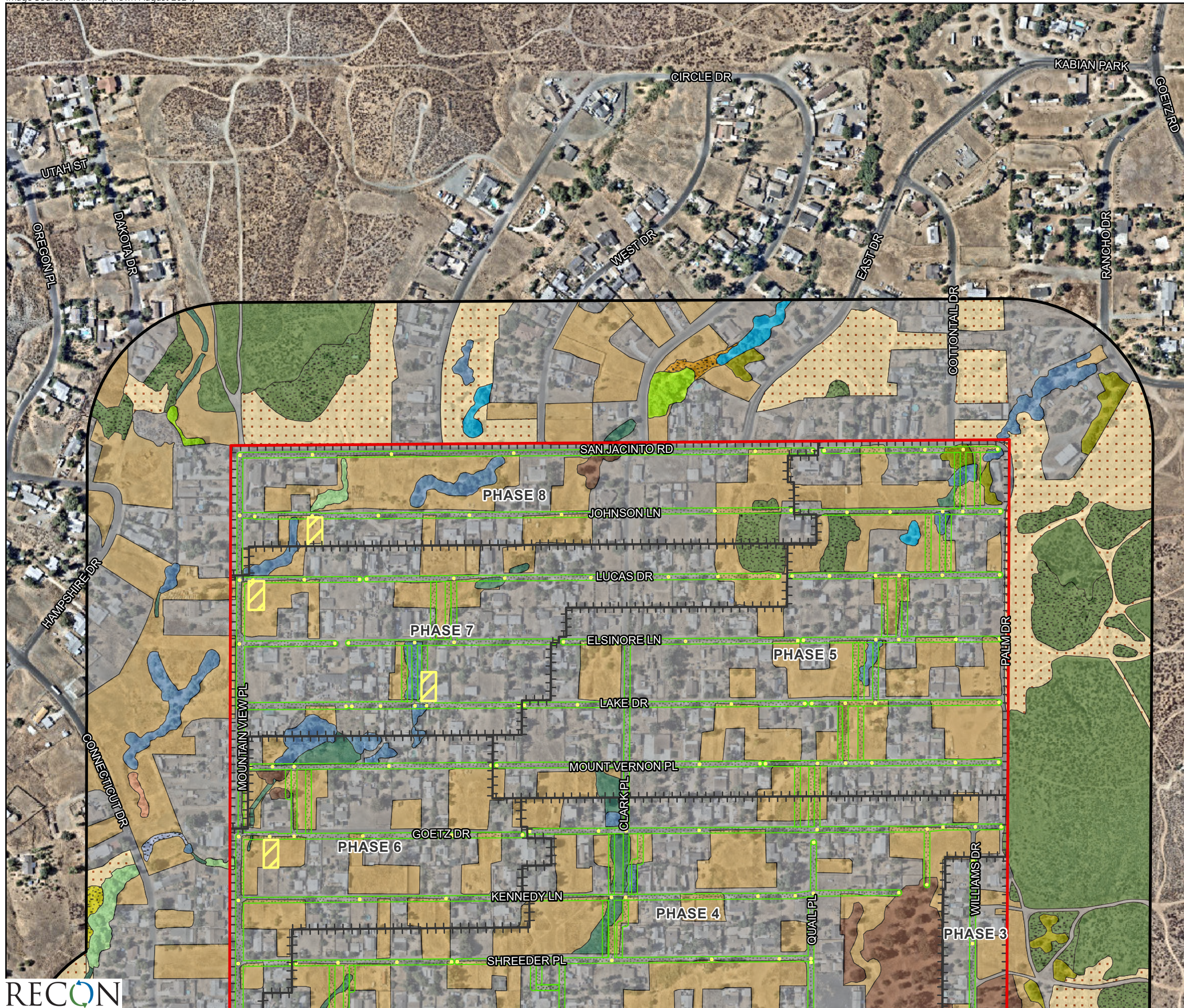
Note that Project impacts are estimates based on preliminary Project designs. As the proposed Project is further refined in the future, these impacts will change and impact analyses will be refined in Project-level impact analysis. The rough order of magnitude of these impacts is anticipated to be roughly equivalent to what is presented in Table 3, however. The majority of impacts are anticipated to urban/developed areas and during phase 1 of the proposed Project.

Table 3
Impacts on Vegetation Communities / Land Covers by Phase

Phase	Vegetation Community	Permanent Impact Area (acres)		Temporary Impact Area (acres)	
		Regional Lift Station 1 (Option 1), Lift Stations 2-5, Manholes	Regional Lift Station 1 (Option 2), Lift Stations 2-5, Manholes	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 1)	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 2)
1	Disturbed Habitat	--	0.62	0.33	0.36
	Mule Fat Scrub	0.00	<0.01	0.02	<0.01
	Non-Native Grassland: Broadleaf-Dominated	0.81	<0.01	0.24	0.12
	Non-Native Riparian	0.02	<0.01	0.10	0.09
	Non-Native Woodland	--	--	0.01	0.01
	Riversidian Sage Scrub	--	0.33	<0.01	0.01
	Riversidian Sage Scrub – Disturbed	0.21	2.54	0.11	0.19
	Tamarisk Scrub	<0.01	<0.01	0.04	0.04
	Tamarisk Scrub – Disturbed	<0.01	0.25	<0.01	<0.01
	Urban/Developed	0.18	0.01	3.15	3.12
Total Phase 1		1.23	3.75	3.99	3.93
2	Disturbed Habitat	<0.01	<0.01	0.40	0.40
	Disturbed Wetland	<0.01	<0.01	0.02	0.02
	Eucalyptus Woodland	--	--	<0.01	<0.01
	Non-Native Grassland: Broadleaf-Dominated	--	--	<0.01	<0.01
	Non-Native Riparian	--	--	0.04	0.04
	Non-Native Woodland	--	--	0.05	0.05
	Riversidian Sage Scrub – Disturbed	<0.01	<0.01	<0.01	0.02
	Tamarisk Scrub – Disturbed	0.01	<0.01	<0.01	0.05
	Urban/Developed	0.02	0.01	2.95	2.92
Total Phase 2		0.04	0.01	3.47	3.51
3	Disturbed Habitat	<0.01	<0.01	0.49	0.52
	Disturbed Wetland	--	--	<0.01	<0.01
	Eucalyptus Woodland	<0.01	<0.01	0.17	0.17
	Non-Native Riparian	--	--	0.06	0.06
	Non-Native Woodland	--	--	<0.01	<0.01
	Riversidian Sage Scrub - Disturbed	--	--	<0.01	0.02
	Tamarisk Scrub - Disturbed	--	--	<0.01	0.02
	Urban/Developed	0.01	0.01	3.14	3.16

Table 3
Impacts on Vegetation Communities / Land Covers by Phase

Phase	Vegetation Community	Permanent Impact Area (acres)		Temporary Impact Area (acres)	
		Regional Lift Station 1 (Option 1), Lift Stations 2-5, Manholes	Regional Lift Station 1 (Option 2), Lift Stations 2-5, Manholes	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 1)	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 2)
Total Phase 3		0.01	0.01	3.86	3.95
4	Disturbed Habitat	<0.01	<0.01	0.94	0.94
	Disturbed Wetland	<0.01	<0.01	0.15	0.15
	Eucalyptus Woodland	<0.01	<0.01	0.02	0.02
	Non-Native Riparian	<0.01	<0.01	0.04	0.04
	Urban/Developed	0.01	0.01	2.98	2.98
Total Phase 4		0.01	0.01	4.12	4.12
5	Disturbed Habitat	0.01	0.01	0.85	0.85
	Disturbed Wetland	<0.01	<0.01	<0.01	<0.01
	Non-Native Riparian	--	--	0.12	0.12
	Non-Native Woodland	<0.01	<0.01	0.06	0.06
	Riversidian Sage Scrub - Disturbed	<0.01	<0.01	0.01	0.01
	Urban/Developed	--	--	2.89	2.89
Total Phase 5		0.01	0.01	3.94	3.94
6	Disturbed Habitat	0.01	0.01	0.38	0.38
	Disturbed Wetland	0.11	0.11	0.02	0.02
	Eucalyptus Woodland	--	--	<0.01	<0.01
	Non-Native Riparian	--	--	0.01	0.01
	Urban/Developed	--	--	1.50	1.50
Total Phase 6		0.12	0.12	1.91	1.91
7	Disturbed Habitat	0.12	0.12	0.32	0.32
	Disturbed Wetland	0.12	0.12	0.02	0.02
	Non-Native Riparian	--	--	0.12	0.12
	Urban/Developed	<0.01	<0.01	2.05	2.05
Total Phase 7		0.25	0.25	2.51	2.51
8	Disturbed Habitat	0.25	0.25	0.30	0.30
	Eucalyptus Woodland	0.10	0.10	0.01	0.01
	Non-Native Riparian	--	--	<0.01	<0.01
	Riversidian Sage Scrub - Disturbed	--	--	0.02	0.02
	Urban/Developed	--	--	1.66	1.66
Total Phase 8		0.12	0.12	2.00	2.00
GRAND TOTAL		1.8	4.3	25.8	25.9



- Project Boundary
- Survey Area
- Phase
- Permanent Impact
- Temporary Impact
- Vegetation Communities**
 - Buckwheat Scrub - Disturbed
 - Disturbed Habitat
 - Disturbed Wetland
 - Eucalyptus Woodland
 - Freshwater Marsh - Disturbed
 - Mule Fat Scrub - Disturbed
 - Non-Native Grassland: Broadleaf-Dominated
 - Non-Native Riparian
 - Non-Native Woodland
 - Riversidian Sage Scrub
 - Riversidian Sage Scrub - Disturbed
 - Southern Cottonwood Willow Riparian Forest
 - Southern Willow Scrub
 - Southern Willow Scrub - Disturbed
 - Tamarisk Scrub
 - Urban/Developed

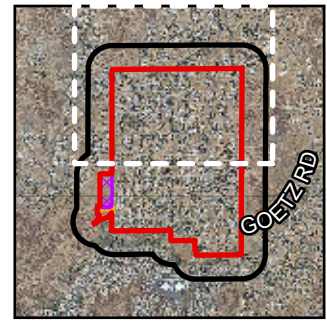
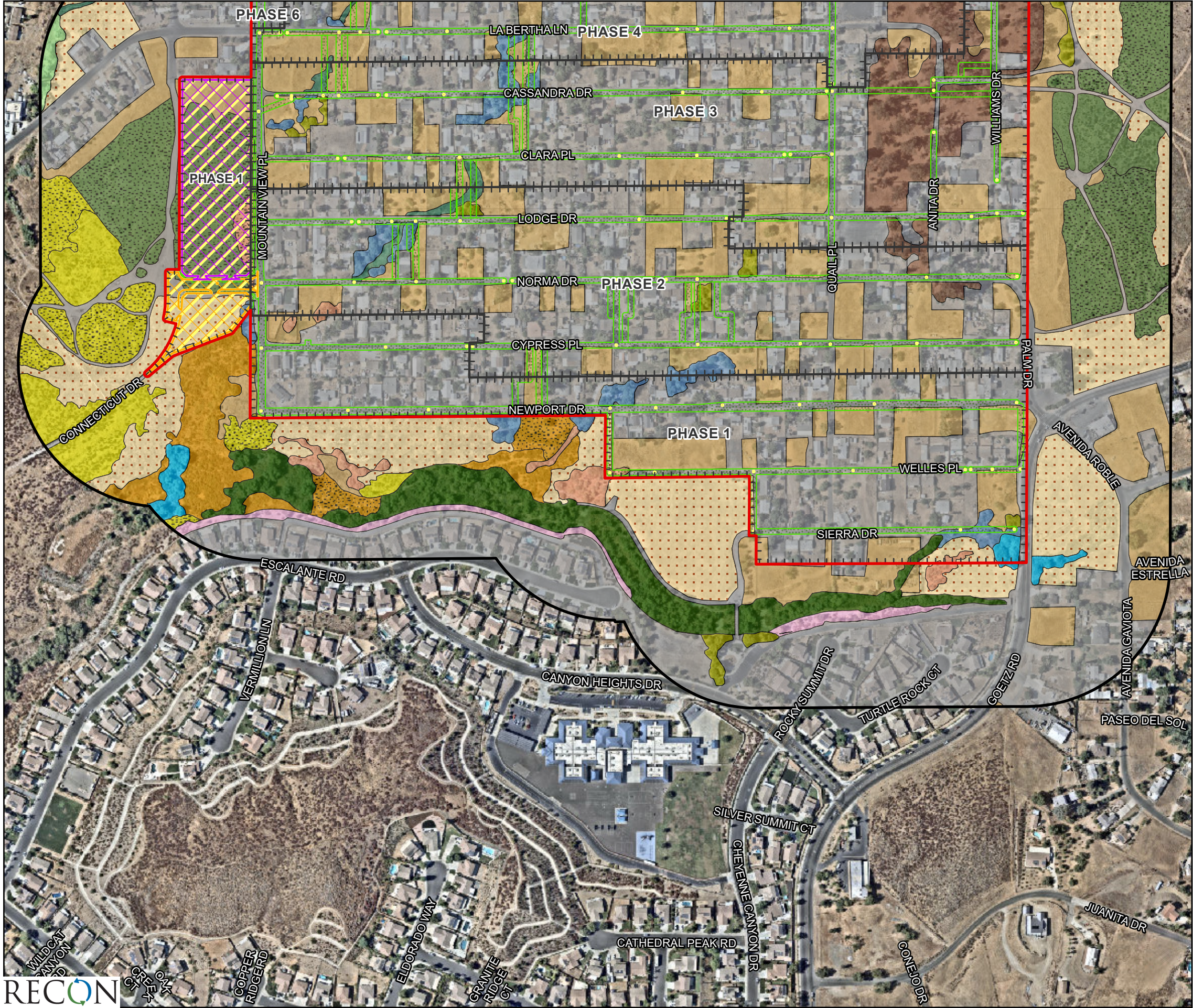
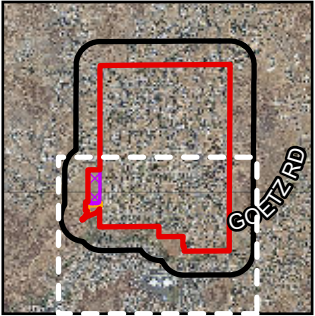


FIGURE 9-1
Impacts to Vegetation
Communities and Land Covers



- Project Boundary
- Survey Area
- Phase
- LS-1 Option 1
- LS-1 Option 2
- Permanent Impact
- Temporary Impact
- Vegetation Communities**
 - Buckwheat Scrub
 - Buckwheat Scrub - Disturbed
 - Disturbed Habitat
 - Disturbed Wetland
 - Eucalyptus Woodland
 - Mule Fat Scrub
 - Mule Fat Scrub - Disturbed
 - Non-Native Grassland: Broadleaf-Dominated
 - Non-Native Riparian
 - Non-Native Woodland
 - Riversidian Sage Scrub
 - Riversidian Sage Scrub - Disturbed
 - Southern Arroyo Willow Riparian Forest
 - Southern Willow Scrub
 - Southern Willow Scrub - Disturbed
 - Tamarisk Scrub
 - Tamarisk Scrub - Disturbed
 - Urban/Developed
 - Urban/Developed - Native Revegetated

0 Feet 350



FIGURE 9-2
Impacts to Vegetation
Communities and Land Covers

5.1.2 Indirect Impacts

As a result of Project-related activities, biological resources may also be affected in a manner that is not direct. Indirect impacts may occur later in time or at a place that is farther removed from the proposed Project, but indirect impacts are still reasonably foreseeable and attributable to Project-related activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Indirect impacts consist of secondary effects of a project, including noise, decreased water quality (e.g., through sedimentation, urban contaminants, or fuel release), fugitive dust, colonization of non-native plant species, animal behavioral changes, and night lighting. The magnitude of an indirect impact can be the same as a direct impact; however, the effect usually takes a longer time to become apparent. Indirect impacts on biological resources are described in Section 5.5, below.

5.2 Criteria for Determining Impact Significance

The significance of impacts to biological resources present or those with potential to occur was determined based upon the sensitivity of the resource and the extent of the anticipated impacts. For certain highly sensitive resources (e.g., a federally- or state-listed species), any direct impact would be significant. Conversely, other resources that are of low sensitivity (e.g., species with a large, locally stable population in the County but declining elsewhere) could sustain some impact with a less than significant effect.

According to Appendix G of the CEQA Guidelines, proposed Project impacts to biological resources would be considered significant if they would:

- (a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- (b) Have a substantial adverse effect on any riparian habitat or sensitive natural community identified by local or regional plans, policies, regulations or by CDFW or USFWS.
- (c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means.
- (d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- (e) Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- (f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.3 Sensitive Plants

Direct impacts to special-status plants could occur during removal of vegetation during construction of the proposed Project, particularly where construction occurs within native habitats (see Section 5.5, below), such as LS-1 (Options 1 and 2).

Paniculate tarplant (*Deinandra paniculata* [= *Hemizonia paniculata*]), a CRPR 4.2 species, was observed in two locations on the western portion of the survey area, just outside of the proposed Project site. There is a low potential that this species would be directly impacted from the proposed Project within LS-1 (Options 1 and 2). Direct impacts to CRPR 4 species would be considered less than significant unless a regionally significant population was removed such that there was an impact to the local long-term survival of that species. This threshold applies to the following potentially-occurring CRPR 4 species evaluated for the proposed Project:

- Palmer's grapplinghook
- paniculate tarplant
- Payson's jewelflower
- peninsular spineflower
- Robinson's peppergrass
- small-flowered microseris
- small-flowered morning-glory
- southern California black walnut, California black walnut

Because it is not known if a regionally significant population is present, the proposed Project could have a potentially significant impact on these CRPR 4 species.

Impacts to the following CRPR 1B.1 or 1B.2 species would be considered significant in nearly every instance, unless only a very small percentage of the known occurrence was impacted:

- Coulter's goldfields
- long-spined spineflower
- Munz's onion
- Parry's spineflower
- smooth tarplant

Impacts to CRPR 1, CRPR 2, and CRPR 4 sensitive plants would be significant absent mitigation (**Impact BIO-1**). Mitigation measures BIO-2a and BIO-2b (see Section 6) would require rare plant survey, avoidance of impacts and compensatory mitigation for these impacts. With implementation of these measures, impacts to sensitive plant species would be less than significant.

5.4 Sensitive Wildlife

5.4.1 Federally and State Listed Wildlife Species

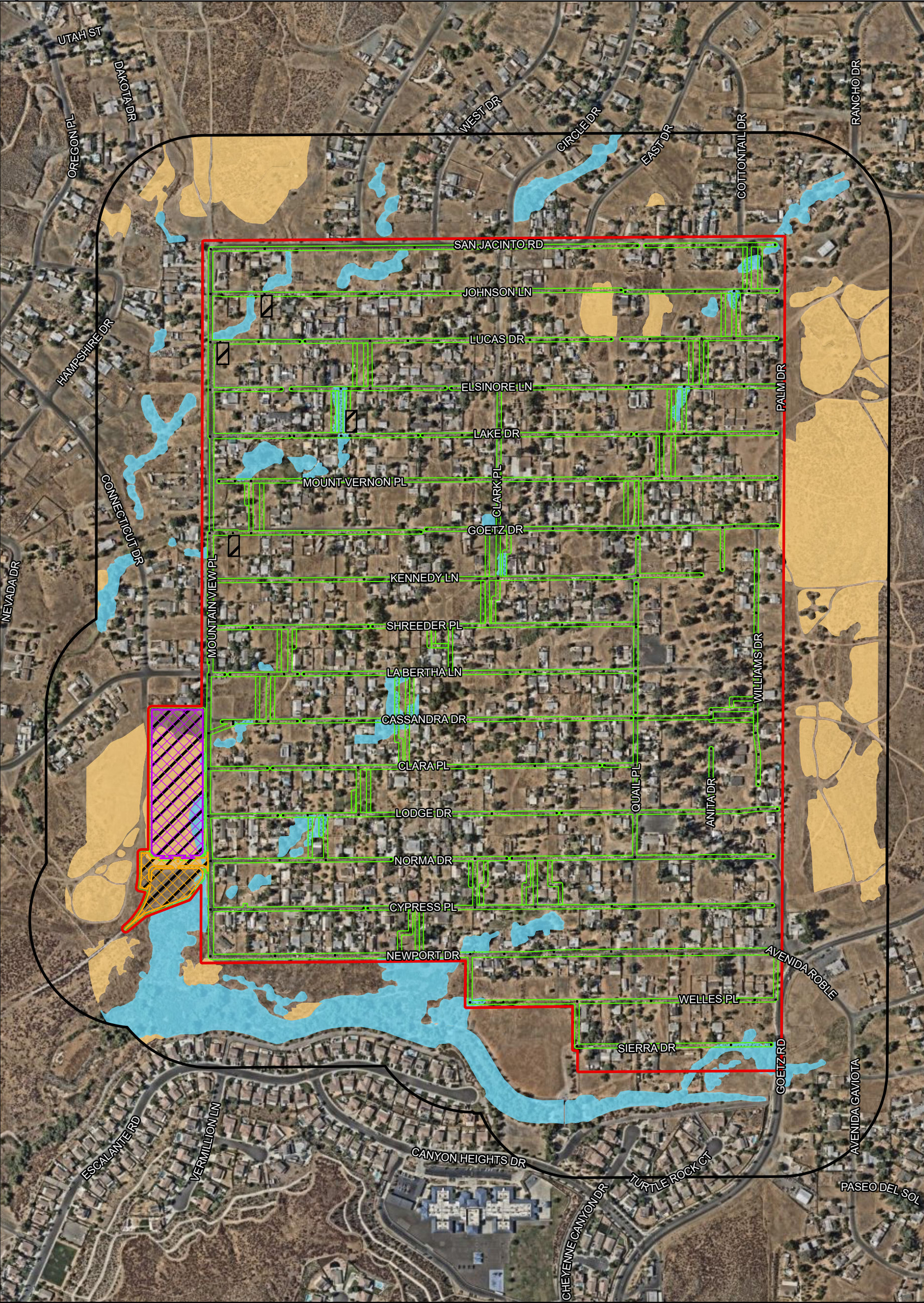
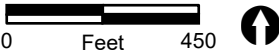
Direct impacts to the following federally or state listed wildlife species could occur during construction of the proposed Project through habitat removal/modification, with indirect impacts possible from noise impacts during construction.

- Crotch's bumble bee
- Burrowing owl
- Coastal California gnatcatcher
- Least Bell's vireo
- Stephens' kangaroo rat

Direct impacts to Crotch's bumble bee, burrowing owl, coastal California gnatcatcher, least Bell's vireo, and Stephens' kangaroo rat would occur if removal of habitat occurs during proposed Project construction activities, such as for grading of LS-1 (Options 1 and 2). Proposed Project activities could permanently affect approximately 0.2 acres to 2.9 acres of coastal California gnatcatcher habitat (i.e., Riversidian sage scrub) depending on whether LS-1 Option 1 or Option 2 were chosen, and from 1.0 acre to 2.9 acres of Stephens' kangaroo rat habitat, depending on whether LS-1 Option 1 or Option 2 were chosen. Similarly, burrowing owl habitat (i.e., Riversidian sage scrub, buckwheat scrub, non-native grassland: broadleaf-dominated, and disturbed habitat) could also be affected during site preparation activities for both the lift stations and pipeline infrastructure. Although no willow habitat will be directly impacted from the proposed Project, small areas (up to 0.25 acres) of mule fat scrub and tamarisk scrub could be permanently impacted, which could affect least Bell's vireo if present in those areas. In addition, the loss of floral resources for Crotch's bumble bee particularly during the colony active period could result in mortality to individuals utilizing those resources at the time of vegetation removal. Removal of habitat for listed species would be significant (**Impact BIO-2**).

Impacts to coastal California gnatcatcher, least Bell's vireo also may occur if noise thresholds over 60 decibels weighted hourly average [dB(A)] occur within potential habitat areas even where direct removal of vegetation does not occur. Noise thresholds over 60 dBA have the potential to result in changes to foraging behaviors and avoidance of habitat areas that could result in additional risks to the species (e.g., loss of thermal protection, distraction causing increased risk for vehicular strikes, etc.). Noise can also cause nest abandonment, resulting in the direct take of eggs or chicks in the case of the listed avian species which is prohibited under FESA and CESA.

Noise modeling occurred for the proposed Project to better understand the extent of construction noise impacts on listed avian species. Noise contours were developed showing areas of potential habitat for coastal California gnatcatcher and least Bell's vireo that would experience more than a 60 dB(A) during construction. These areas are shown on Figure 10. Approximately 89.4 acres of potential habitat for coastal California gnatcatcher and 50.6 acres of potential habitat for least Bell's vireo occurs within the modeled 60 dB(A) noise contour, indicating that noise impacts could occur to any individuals within that areas even though those areas may be located adjacent to and outside of Project work areas. Impacts to coastal California gnatcatcher and least Bell's within these areas could result in take of these species, particularly during the breeding season when nest abandonment may occur. These impacts would be considered significant (**Impact BIO-3**).



- | | | |
|--|---------------|------------------|
| Project Boundary | Survey Area | Permanent Impact |
| LS-1 Option 1 | LS-1 Option 2 | Temporary Impact |
| Modeled Noise Impacts Over 60 A-Weighted Decibels | | |
| Coastal California Gnatcatcher Habitat | | |
| Least Bell's Vireo Habitat | | |

FIGURE 10
Noise Impacts on Listed Avian Species

5.4.2 Other Special-Status Wildlife Species

5.4.2.1 Special-Status Reptiles

Four special-status reptile species have a moderate or high potential to occur within the survey area or proposed Project site: Belding's orange-throated whiptail, San Diegan tiger whiptail (=coastal whiptail), California glossy snake, and red-diamond rattlesnake. Permanent direct impacts could occur to individuals if they're present during construction activities, from vehicular or excavation equipment strikes. Permanent direct impacts from construction within suitable habitat for these species would vary from approximately 1.0 acre to 2.9 acres if Option 1 or Option 2 were chosen, respectively. Direct mortality to these individuals may also occur if they are present during vegetation removal activities to build LS-1. These direct impacts would be significant (**Impact BIO-4**).

Mitigation measures BIO-1, BIO-3c, BIO-11, BIO-12, and BIO-13 (see Section 6) would be implemented to reduce impacts to these species. Habitat-based mitigation would only be required under BIO-3c if a regionally significant population (multiple individuals within high-quality habitat) were observed during pre-construction surveys under BIO-1. The habitat supporting these species currently does not qualify as high-quality habitat due to the very low cover of natives, evidence of repeated human-caused disturbances and high cover of invasive and non-native plant species. As such, the proposed Project site likely does not currently support a regionally significant population of special-status reptiles. If a dramatic improvement in habitat quality occurs over the course of the proposed Project, a regionally significant population may be expected to occur within proposed Project areas, including within LS-1 (Options 1 and 2) at some point in the future, and implementation of habitat-based mitigation per BIO-3c would be required.

Special-status reptiles are not anticipated to be present within the areas proposed for the sewer system due to the predominantly urbanized nature of the proposed Project site in these work areas and as such, work activities within Subarea 4 (i.e., installation of sewer mains, force mains, connector pipes, etc.) are not anticipated to result in significant impacts on special-status reptile species.

5.4.2.2 Special-Status Avian Species

Proposed construction activities may impact up to three special-status avian species that have a high potential to breed or forage within the survey area:

- Bell's sage sparrow
- California horned lark
- southern California rufous-crowned sparrow

Permanent removal of habitat would be necessary for the installation of lift stations, including the LS-1 (Options 1 and 2) that would impact native habitat. Habitat for these species includes grasslands and/or sage scrub habitats. Proposed Project activities could permanently affect from 1.0 to 2.9 acres of habitat for these special-status avian species' foraging and/or nesting habitat, depending on whether LS-1 Option 1 or Option 2 were chosen, respectively. A variety of other avian species protected under the MBTA and CFGC, but not considered rare, threatened, or endangered by local,

state, or federal laws or regulations, would also be impacted by removal of these vegetation communities (see Section 5.4.3, below).

Permanent direct impacts may also occur on individuals from vehicular or excavation equipment strikes. Vehicular collisions occur most frequently during the vegetation clearing stage of construction, and involve eggs, nestlings, and recently fledged young that cannot safely avoid equipment. Proposed Project activities that could temporarily directly affect special-status avian species habitat include general construction-related activities, such as vegetation trimming and vegetation removal. Vegetation trimming and removal could result in temporary removal of nesting or foraging habitat and/or the removal of some food sources during construction. Noise impacts, discussed above for listed avian species, also can affect these three avian species in a similar way (i.e., result in direct mortality of eggs and chicks) so these would be considered direct impacts. These direct impacts would be significant (**Impact BIO-5**).

Habitat-based mitigation would only be required under BIO-3c if a regionally significant population (multiple individuals within high-quality habitat) were observed during pre-construction surveys under BIO-1. The habitat supporting these species currently does not qualify as high-quality habitat due to the very low cover of natives, evidence of repeated human-caused disturbances and high cover of invasive and non-native plant species. As such, the proposed Project site likely does not currently support a regionally significant population of special-status avian species. If a dramatic improvement in habitat quality occurs over the course of the proposed Project, a regionally significant population may be expected to occur within proposed Project areas, including within LS-1 (Options 1 and 2) at some point in the future, and implementation of habitat-based mitigation per BIO-3c would be required.

5.4.2.3 Special-Status Mammals

Proposed construction activities may impact San Diego black-tailed jackrabbit and western bonneted [=mastiff] bat that have a high potential to occur within the survey area. Proposed Project activities could permanently affect approximately 0.2 acres to 2.9 acres of San Diego black-tailed jackrabbit habitat (i.e., Riversidian sage scrub) depending on whether LS-1 Option 1 or Option 2 were chosen. Permanent direct impacts also could occur to San Diego black-tailed jackrabbit individuals from vehicular or excavation equipment strikes and habitat loss, like that described for special-status reptiles, above. These impacts would be significant, absent mitigation (**Impact BIO-6**). Due to the nocturnal nature of western bonneted bat, it is not anticipated that construction activities would increase the chance of vehicular or excavation equipment strikes.

Habitat-based mitigation would only be required under BIO-3c if a regionally significant population (multiple individuals within high-quality habitat) were observed during pre-construction surveys under BIO-1. The habitat supporting these species currently does not qualify as high-quality habitat due to the very low cover of natives, evidence of repeated human-caused disturbances and high cover of invasive and non-native plant species. As such, the proposed Project site likely does not currently support a regionally significant population of special-status mammal species. If a dramatic improvement in habitat quality occurs over the course of the proposed Project, a regionally significant population may be expected to occur within proposed Project areas, including within LS-

1 (Options 1 and 2) at some point in the future, and implementation of habitat-based mitigation per BIO-3c would be required.

Temporary direct impacts on habitat for San Diego black-tailed jackrabbit may result from the temporary removal of habitat due to the trenching and installation of the sewer force mains, gravity mains, and/or connecting pipes. Due to the limited habitat within the areas proposed for the sewer system (i.e., within predominantly urbanized areas), these temporary direct impacts would be less than significant.

Impacts to maternal roost sites, such as those occurring within tall trees in the proposed Project area, for western bonneted [=mastiff] bat could occur if those trees were removed during installation of proposed Project infrastructure. This could result in direct mortality to numerous immature bats, and potentially adult females tending the roost site. These direct impacts would be significant (**Impact BIO-7**).

5.4.3 Migratory Birds and Raptors

The proposed Project may result in direct removal of trees, native shrubs, and grassland habitat as a result of proposed Project construction. Each of these vegetation types potentially support avian species protected under the MBTA and CFGC. There is a potential that trees also may need to be trimmed to access construction areas. Tree removal and trimming has the potential to result in direct take of nesting bird species, including raptors, covered under the MBTA and CFGC Sections 3503 and 3503.5. In addition, noise, night lighting, and human presence from construction activities is expected near potential nest locations (i.e., trees). These construction activities could result in nest abandonment, which would result in direct take of eggs or chicks. These impacts would be significant, absent mitigation (**Impact BIO-8**). Avoidance measures for potential impacts to migratory bird and raptors are discussed below and are expected to prevent direct impacts and reduce the potential indirect impacts to this species to a level of less than significant.

5.5 Riparian Habitat and Sensitive Natural Communities

The proposed Project would not result in direct permanent impacts and temporary impacts to sensitive upland natural communities because none were observed on site. As mentioned in Section 4.3, above, buckwheat scrub and Riversidian sage scrub are native upland communities, but not sensitive natural communities as defined by CDFW (CDFW 2025d).

Direct impacts to riparian habitat could occur within mule fat scrub, tamarisk scrub and tamarisk scrub – disturbed (Table 4). Permanent and temporary impacts to riparian habitat are significant absent mitigation (**Impact BIO-9**).

Indirect impacts resulting from increased erosion or sedimentation on riparian habitat will be avoided through implementation of standard best management practices (BMPs) for stormwater, as described in more detail in Section 5.6 Aquatic Resources, below. At a minimum, fiber rolls and silt fencing will be installed adjacent to proposed Project work areas to reduce impacts from sediment.

Table 4 Impacts on Riparian Habitat by Phase					
Phase	Riparian Habitat	Permanent Impact Area (acres)		Temporary Impact Area (acres)	
		Regional Lift Station 1 (Option 1), Lift Stations 2-5, Manholes	Regional Lift Station 1 (Option 2), Lift Stations 2-5, Manholes	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 1)	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 2)
1	Mule Fat Scrub	<0.01	<0.01	0.02	<0.01
	Tamarisk Scrub	<0.01	<0.01	0.04	0.04
	Tamarisk Scrub - Disturbed	<0.01	0.25	<0.01	<0.01
Total Phase 1		<0.01	0.25	0.06	0.04
2	Tamarisk Scrub - Disturbed	0.01	<0.01	<0.01	0.05
Total Phase 2		0.01	<0.01	<0.01	0.05
3	Tamarisk Scrub - Disturbed	--	--	<0.01	0.02
Total Phase 3		--	--	<0.01	0.02
Phases 4 through 8		None	None	None	None
GRAND TOTAL		0.01	0.25	0.06	0.11

Mitigation for direct impacts to riparian habitat considered jurisdictional by the USACE, RWQCB and/or CDFW will be provided in accordance with mitigation measures BIO-14a and BIO-14b, described in Section 6.0, below.

5.6 Aquatic Resources

The proposed Project could result in permanent direct impacts to potential jurisdictional resources during installation of the lift stations and manhole covers. Temporary impacts also may occur to potential jurisdictional resources during installation of the sewer mains, force mains, and connector pipes, as well as within work areas around proposed Project components. Table 5 summarizes impacts to potential jurisdictional resources, as shown in Figure 11. These impacts may represent a potentially significant impact (**Impact BIO-11**).

It is expected that direct impacts to some jurisdictional aquatic resources would be avoided through construction methods such as jack and bore, micro-drilling, and/or the use of standard BMPs. Jack and bore is a method of digging a pit on both sides of a stream or riparian habitat and using a machine that drills under the resources and allows the pipe to be placed without surface impacts. This is a dry drill method that does not use water or mud that can spill (frack out) and pollute the resource. Micro-drilling is a trenchless boring method that involves drilling holes smaller than three millimeters in diameter using a remote-controlled tunnelling machine. This method provides a high degree of precision as it uses a laser-guided steerable remote-control system.

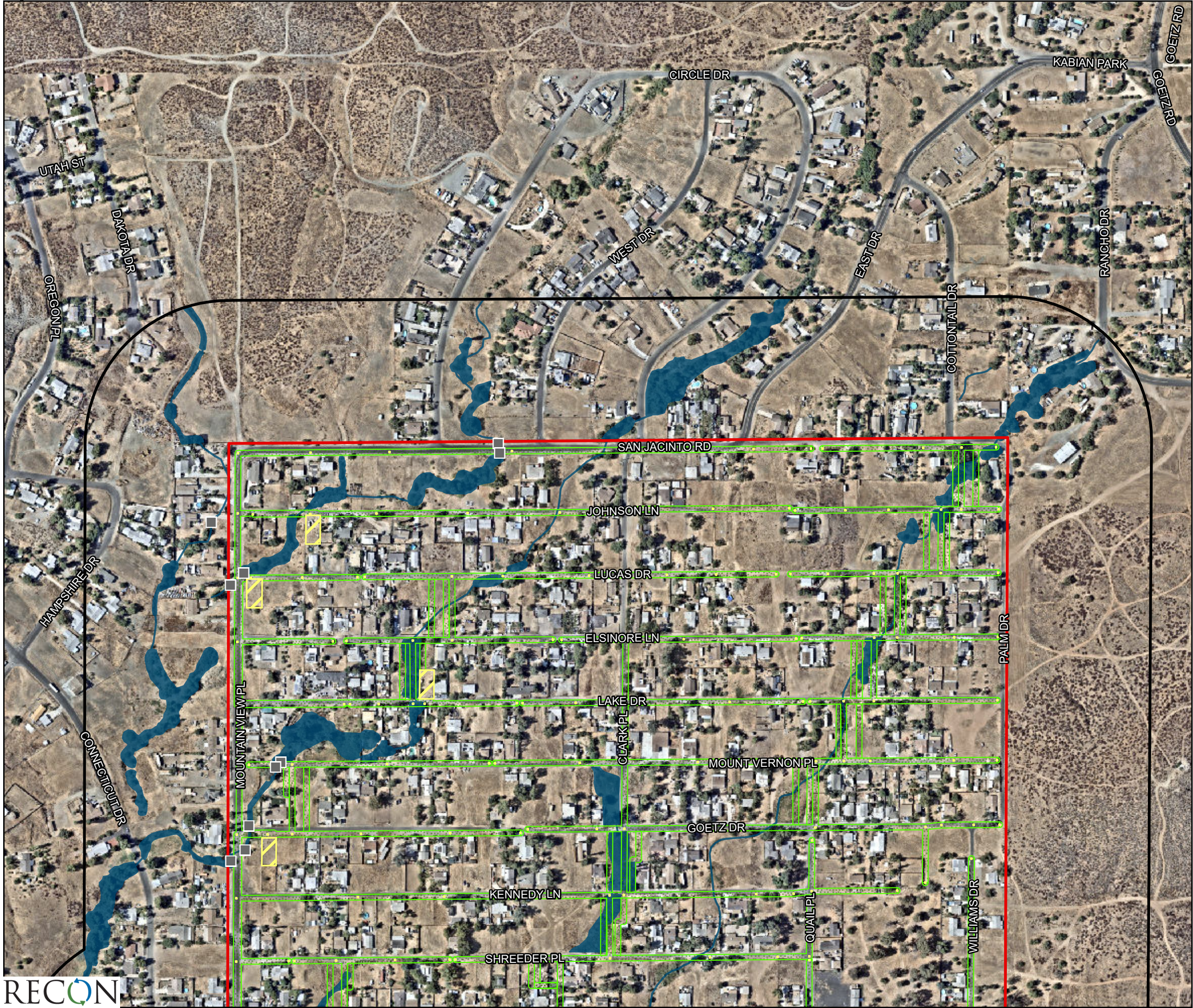
5.7 Indirect Impacts

The proposed Project has the potential to inadvertently indirectly impact sensitive native habitats, including those occupied by sensitive wildlife species. Indirect impacts are anticipated to occur to sensitive nesting birds (e.g., coastal California gnatcatcher), if present, due to increased access to the area by humans during construction, excessive noise, temporary removal of vegetation, and lighting generated by Project construction. Potential indirect impacts to sensitive bird species, if present, could occur from construction and implementation of the proposed Project. Any indirect impacts to sensitive bird species would be avoided through compliance with mitigation measures BIO-5, BIO-11, BIO-13, and BIO-15 presented in Section 6.0. Therefore, no significant indirect impacts are anticipated to occur.

Indirect impacts may occur to adjacent jurisdictional waters and native vegetation communities as a result of altered hydrology, fugitive dust, chemical and particulate pollution, and introduction of non-native plant species during construction activities. To reduce impacts to adjacent waters and riparian habitat, the proposed Project would implement mitigation measures BIO-14a, BIO-14b which require permits and mitigation for impacts to jurisdictional features, as well as mitigation measure BIO-11, which requires fencing around proposed Project work areas to reduce inadvertent impacts to areas not proposed for work activities. In addition, mitigation measure BIO-13 requires worker training that would reduce the risk of inadvertent impacts to riparian habitat and native plant communities. However, habitat degradation from non-native plant species infestations after ground disturbance associated Project activities has the potential to reduce the long-term availability of habitat for special-status plants and wildlife species. These impacts would be significant (**Impact BIO-10**). Revegetation of native upland habitats following Project work activities would be required under mitigation measure BIO-12, provided below.

Table 5 Direct Impacts to Potential Jurisdictional Resources					
Phase	Potential Jurisdictional Resource Type ²	Permanent Impact Area (acres)		Temporary Impact Area (acres)	
		Regional Lift Station 1 (Option 1), Lift Stations 2-5, Manholes	Regional Lift Station 1 (Option 2), Lift Stations 2-5, Manholes	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 1)	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 2)
1	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	<0.01	--	0.01	<0.01
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	0.02	0.25	0.16	0.13
Phase 1 Total		0.03	0.25	0.16	0.13
2	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	<0.01	<0.01	0.01	0.01
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	0.01	0.01	0.07	0.11
Phase 2 Total		0.01	0.01	0.08	0.12
3	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	--	--	0.01	0.01
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	--	--	0.06	0.08
Phase 3 Total				0.07	0.09
4	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	<0.01	<0.01	0.01	0.01
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	<0.01	<0.01	0.18	0.18
Phase 4 Total		<0.01	<0.01	0.19	0.19
5	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	<0.01	<0.01	0.02	0.02
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	<0.01	<0.01	0.12	0.12
Phase 5 Total		<0.01	<0.01	0.14	0.14
6	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	--	--	<0.01	<0.01
	USACE/RWQCB Wetland Waters / CDFW Wetland and/or Riparian Habitat	--	--	0.01	0.01

Table 5 Direct Impacts to Potential Jurisdictional Resources					
Phase	Potential Jurisdictional Resource Type ²	Permanent Impact Area (acres)		Temporary Impact Area (acres)	
		Regional Lift Station 1 (Option 1), Lift Stations 2-5, Manholes	Regional Lift Station 1 (Option 2), Lift Stations 2-5, Manholes	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 1)	Gravity Sewer with Connector Pipe Option 1, Force Mains, Manhole Work Areas, Regional Lift Station 1 (Option 2)
Phase 6 Total				0.01	0.01
7	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	<0.01	<0.01	0.01	0.01
	USACE/RWQCB Wetland Waters /CDFW Wetland and/or Riparian Habitat	<0.01	<0.01	0.14	0.14
Phase 7 Total		<0.01	<0.01	0.15	0.15
8	USACE/RWQCB Non-Wetland Waters / CDFW Streambed	--	--	<0.01	<0.01
	USACE/RWQCB Wetland Waters /CDFW Wetland and/or Riparian Habitat	--	--	<0.01	<0.01
Phase 8 Total				0.01	0.01
GRAND TOTAL ¹		0.04	0.25	0.80	0.83
The reported acreage and linear footage are approximate, as they are based on a constraints-level delineation. A formal aquatic resources delineation would be required to determine precise values.					
¹ Areas are presented in acres, rounded to the nearest 0.001; discrepancies are due to rounding.					
² Any potentially USACE or RWQCB jurisdictional areas are also considered Western Riverside MSHCP Riparian/Riverine Areas. As such, a separate table for these impacts is not provided.					



- Project Boundary
- Survey Area
- Culvert
- Permanent Impact
- Temporary Impact
- Potential USACE/RWQCB/CDFW Jurisdictional Resource

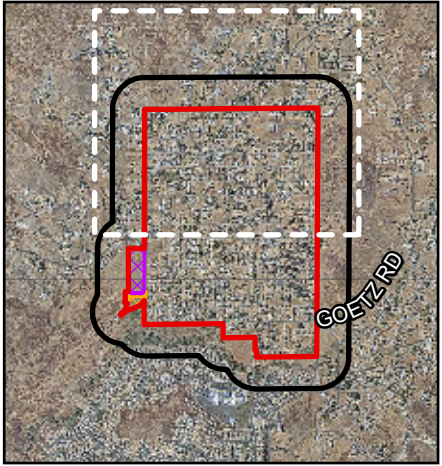
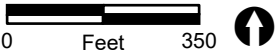
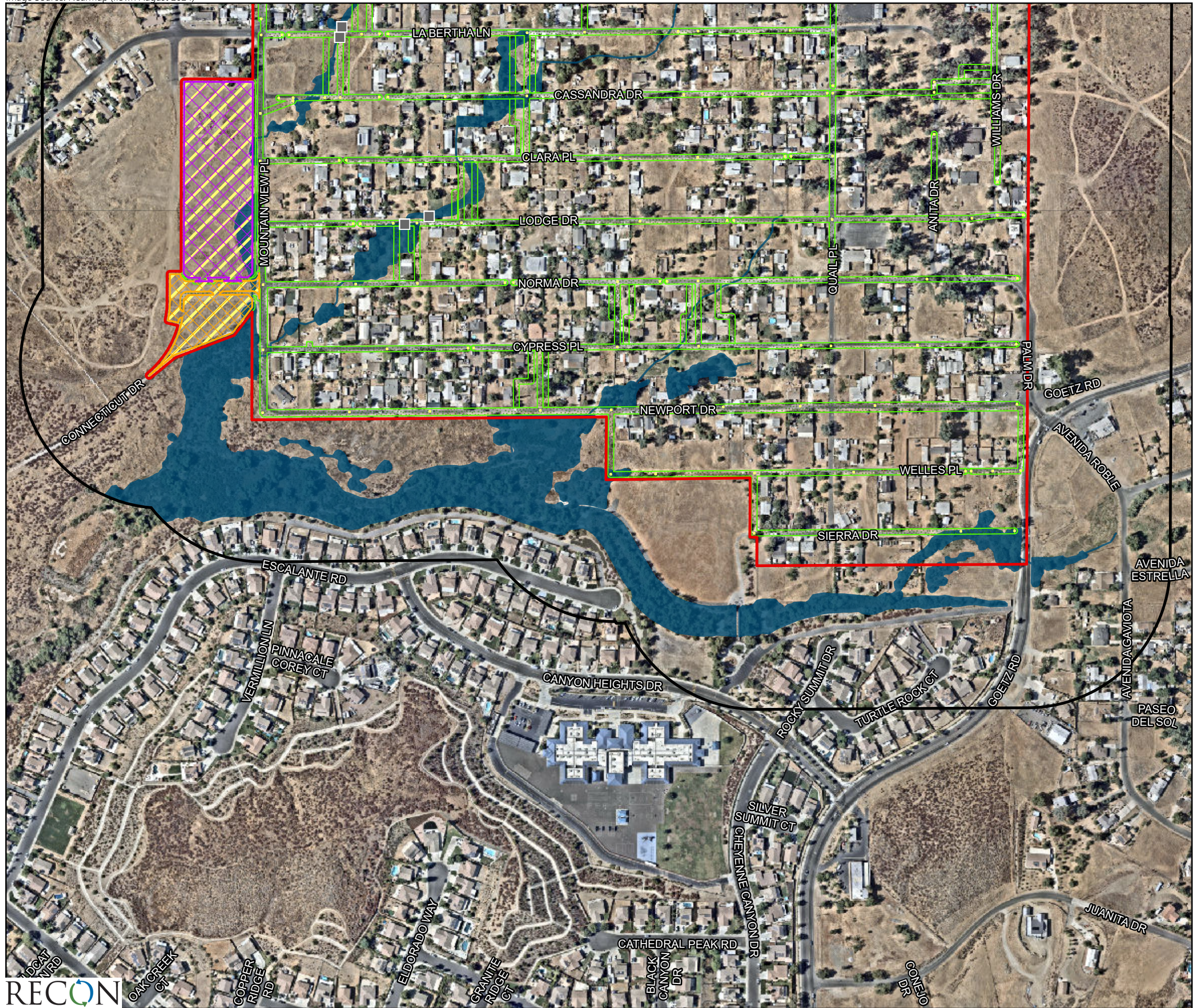
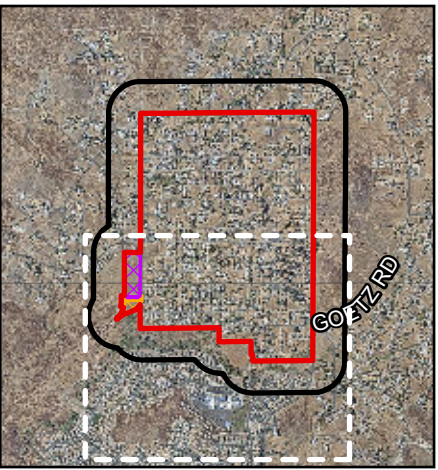


FIGURE 11-1
Impacts to Potential Jurisdictional Resources



- Project Boundary
- Survey Area
- LS-1 Option 1
- LS-1 Option 2
- Culvert
- Permanent Impact
- Temporary Impact
- Potential USACE/RWQCB/CDFW Jurisdictional Resource

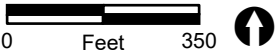


FIGURE 11-2
Impacts to Potential Jurisdictional Resources

If direct impacts cannot be avoided, permits and approvals from the USACE, RWQCB, and CDFW under Clean Water Act sections 404 and 401, and CFGC section 1600 would be obtained in accordance with mitigation measures BIO-14a and BIO-14b. Additional minimization measures and compensatory mitigation are typically required under these permits. Under the permits, the mitigation may include purchase of mitigation bank credits and/or habitat preservation, enhancement, restoration, or creation.

In addition, indirect impact would be reduced through implementation of standard Best Management Practices (BMPs) as part of the proposed Project's Storm Water Pollution Prevention Plan (SWPPP). Implementation of a SWPPP and associated BMPs are required under the statewide General Construction Permit (2009-0009-DWQ). Specific BMPs may include but would not necessarily be limited to maintaining the proposed Project work areas free of trash and debris; employing appropriate standard spill prevention practices and clean-up materials; installing and maintaining sediment and erosion control measures; maintaining effective control of fugitive dust; and properly storing, handling, and disposing of toxins and pollutants, including waste materials. BMPs also may avoid direct impacts by requirements that include flagging the limits of the wetland resources, not operating equipment within the limits of wetlands, and educating the workers on the location and significance of resources. Adherence to these BMPs and the SWPPP would reduce indirect impacts to aquatic resources to less than significant.

5.8 Wildlife Corridors and Wildlife Nursery Sites

The proposed Project is not anticipated to significantly alter the quality of habitat for migratory bird species because it would be predominantly underground. Similarly, the proposed Project would not impact the limited connectivity for terrestrial animals because the proposed Project would be mostly underground. The proposed lift stations would be above ground but LS-2 through LS-5 would be constructed within urban/developed areas that do not currently provide quality habitat for migratory bird species or support terrestrial wildlife connectivity. Only LS-1 (Options 1 and 2) would be constructed within native habitats, permanently impacting between 1.1 to 3.1 acres, depending on the location chosen. Both options would be constructed primarily within disturbed stands of Riversidian sage scrub, tamarisk scrub and/or non-native grassland dominated by broadleaf weedy species. As such, these locations do not currently provide high-quality habitat for terrestrial wildlife species or migratory bird species. Therefore, the proposed Project would not result in a significant physical barrier to large-scale wildlife movement.

The proposed Project site contains habitat suitable for roosting bats, including palm trees, many of which have not been trimmed to remove the dead fronds. These thick, overlapping palm fronds support microhabitat for bat roost sites, and removal of these palms during proposed Project construction could impact these potential nursery sites. Impacts could include direct mortality of maternal roost sites and multiple individual bats, some of which also could be sensitive. As stated above under Section 5.4, impacts to these potentially-occurring maternal bat roost sites would be significant, absent mitigation (**Impact BIO-7**). Mitigation measure BIO-10 would require surveys for maternal bat roost sites prior to construction in suitable habitat areas. With implementation of this measure, impacts to wildlife nursery sites would be mitigated to less than significant.

5.9 MSHCP Consistency

The proposed Project is not located within a designated criteria cell, so no mitigation for impacts to vegetation communities would be required by the MSHCP. No vernal pools, or narrow endemic plant species are present. The proposed Project site also occurs outside of any MSHCP narrow endemic plant species survey area, criteria area plant species survey area, or wildlife species survey area except for the small portion of the proposed Project site that is located within the MSHCP survey area for burrowing owl (*Athene cunicularia*). Specifically, options for LS-1 (Options 1 and 2) are located within the MSHCP survey area for burrowing owl.

The MSHCP requires projects with potential direct or indirect impact to riparian and riverine resources to avoid or mitigate for impacts. The proposed Project occurs adjacent to and directly within riparian and riverine habitats. Impacts to these habitats would be considered significant, as discussed above under Section 5.6.

The District is not a signatory to the MSHCP and, as such, is not subject to the requirements of the MSHCP. The District has the option to obtain take authorization for activities by receiving coverage through the Participating Special Entity (PSE) process. Coastal California gnatcatcher, least Bell's vireo, burrowing owl, and Stephen's kangaroo rat are covered species under the MSHCP and if the proposed focused surveys observed any of these species within any of the proposed Project phases, the District may consider pursuing the PSE process for take coverage. The details regarding the PSE option are discussed in mitigation measure BIO-3b.

Mitigation measures provided in Section 6, below, would ensure the proposed Project does not conflict with the MSHCP. These mitigation measures include focused plant and animal surveys, avoidance of impacts to wildlife species habitat during critical development stages, riparian/riverine avoidance and minimization measures, and habitat-based mitigation. As such, there is no conflict with the MSHCP from implementation of the proposed Project.

6.0 Mitigation Measures

The proposed Project would not result in significant impacts to the following two CEQA thresholds and as such, no mitigation is proposed:

- (e) Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- (f) Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Table 6
Summary of Impact and Mitigation

Significant Impact Description	Mitigation Measure to Reduce Impacts	Impact after Mitigation Measure Implementation
Impact BIO-1: Impacts to Sensitive Plant Species	BIO-1, BIO-2a, BIO-2b, BIO-2c, BIO-11, BIO-13	Less than Significant
Impact BIO-2: Removal of Habitat for Federally and State Listed Wildlife Species	BIO-1, BIO-3a, BIO-3b, BIO-4, BIO-6a, BIO-6b, BIO-6c, BIO-7a, BIO-7b, BIO-8, BIO-9, BIO-11, BIO-13	Less than Significant
Impact BIO-3: Noise Impacts on Federally and State Listed Wildlife Species	BIO-6b, BIO-7b	Less than Significant
Impact BIO-4: Impacts to Special-Status Reptiles	BIO-3c, BIO-11, BIO-13	Less than Significant
Impact BIO-5: Impacts to Sensitive Avian Species	BIO-5, BIO-3c, BIO-11, BIO-13	Less than Significant
Impact BIO-6: Impacts to Sensitive Mammal Species	BIO-3c, BIO-11, BIO-13	Less than Significant
Impact BIO-7: Impacts to Bat Maternal Roost Sites	BIO-10	Less than Significant
Impact BIO-8: Impacts to MBTA Avian Species and Raptors	BIO-5	Less than Significant
Impact BIO-9: Direct impacts to Riparian Habitat	BIO-11, BIO-13, BIO-14a, BIO-14b	Less than Significant
Impact BIO-10: Impacts to Native Vegetation Communities from Invasive Species	BIO-11, BIO-12, BIO-13	Less than Significant
Impact BIO-11: Impacts to Potential Jurisdictional Resources	BIO-11, BIO-13, BIO-14a, BIO-14b	Less than Significant

The following mitigation measures would ensure that potential significant impacts on sensitive biological resources and special-status plant and animal species are reduced to a level less than significant with implementation of mitigation.

BIO-1: Biological Resource Surveys. Prior to the construction of any project phase or component sited within or adjacent to an undeveloped open space area (i.e., an area supporting naturalized habitat, sensitive habitat, and/or habitat potentially suitable for special-status species), the Eastern Municipal Water District (District) shall retain a qualified biologist to perform a general biological survey/habitat assessment to verify existing biological resources on and adjacent to the Quail Valley Subarea 4 Project (proposed Project) construction areas. The general biological survey/habitat assessment shall occur within 500 feet of the proposed Project components where access is allowed, with binocular surveys conducted to the extent possible in areas where access is not secured. The District shall provide the biologist with a copy of project plans that clearly depict the construction work limits, including construction staging, storage, and access areas, to determine which specific portion(s) of the proposed Project will require inspection of adjacent open space areas. The survey shall verify whether sensitive natural communities, including habitat suitable for special-status species, in addition to potential jurisdictional aquatic resources occur within 500 feet from planned project activities.

The biologist shall perform a visual inspection of the survey area, characterize the existing habitat types, and determine the likelihood for special-status species to occur, including but not limited to the coastal California gnatcatcher, least Bell's vireo, burrowing owl, Crotch's bumble bee, migratory songbirds, and other bird species with the potential to breed in the area.

The survey results shall be submitted to the District to determine the need to implement project-specific mitigation measures (provided below) to avoid, minimize, and mitigate impacts to such resources. The report shall verify whether the construction activities result in direct or indirect impacts to sensitive natural communities, special-status species, and potential jurisdictional aquatic resources.

BIO-2a: Rare Plant Surveys. If it is confirmed through the implementation of BIO-1 that project components could impact suitable habitat for special-status plant species, the Eastern Municipal Water District shall retain a qualified biologist to conduct focused presence/absence surveys for rare plants prior to project construction within 500 feet of project work activities, if accessible. Surveys shall follow protocols and guidelines approved by the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and/or California Native Plant Society and shall be conducted by qualified biologists. Surveys for sensitive plants should occur during the blooming period of target species which may require two surveys to cover the spring and summer blooming species. One survey should occur in the spring (March to April), and a second survey should occur in summer (late May to early July). The specific timing shall be determined by the qualified biologist.

BIO-2b: Rare Plant Avoidance. If a rare plant species is identified within a project impact area, then the Eastern Municipal Water District (District) shall avoid impacts to the occurrence to the extent feasible through project-level design changes and/or construction methods (e.g., trenchless installation of pipelines, working on the other side of the road).

Prior to initiating construction activities, the District shall require that the rare plant locations detected during focused rare plant surveys are provided to the construction contractor and that the locations also are demarcated in the field by a qualified biologist. The rare plant locations to be avoided shall be protected-in-place through the installation of temporary construction fencing or alternative means that are approved by the qualified biologist. Staking and installation of construction fencing shall be monitored by the qualified biologist and conform to the conditions stated in **mitigation measure BIO-11**. The qualified biologist shall monitor construction activities, as appropriate and consistent with **mitigation measure BIO-11**, to help ensure avoidance of the demarcated areas and to ensure the fencing is kept in good condition.

BIO-2c: Rare Plant Mitigation. If project design (**BIO-2b**) cannot be modified to avoid impacts to rare plants species, the Eastern Municipal Water District (District) shall consult with a qualified biologist to determine the severity of those impacts. Significant impacts shall be assumed if more than five percent of a mapped rare plant occurrence (i.e., all individuals mapped within 500 feet of project work activities) of a California Rare Plant Rank 1 or 2 species or a regionally-significant population of California Rate Plant Rank 4 species will be permanently impacted (i.e., removed). If significant impacts occur to rare plants, the District

shall provide mitigation for those significant impacts that include one or a combination of the following:

- a. Purchase of preservation credits at a 1:1 mitigation ratio for habitat occupied by that species from a conservation bank approved by the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife;
- b. Acquisition and preservation of off-site mitigation land containing occupied habitat for that species; and/or
- c. Preparation and implementation of a rare plant salvage and relocation plan, to include the following requirements, at a minimum:
 - i. Evaluation of options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within existing or proposed preserved lands;
 - ii. Seed collection and/or transplantation to a suitable receptor site based on the most reliable methods of successful relocation;
 - iii. Recommendation for the method of salvage and relocation/application based on feasibility of implementation and likelihood of success; and
 - iv. Implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures.

In addition, a post-construction monitoring report shall be prepared by the qualified biologist and submitted to the District for their records summarizing monitoring activities conducted for special-status plants. The post-construction report shall be prepared within one month of the completion of construction activities and shall document what impacts occurred, if any, to special-status plant species. The report shall provide documentation showing where and how many special-status plants were (1) observed during pre-construction surveys, and (2) were impacted and/or avoided. Details on the duration and frequency of monitoring also shall be provided.

BIO-3a: Federal and State Wildlife Species Surveys and Avoidance. If it is confirmed through implementation of **BIO-1** that the Quail Valley Subarea 4 Project would impact suitable habitat for federally or state listed wildlife species, the Eastern Municipal Water District shall retain a qualified biologist to conduct focused, protocol-level surveys for special-status wildlife species prior to commencement of construction activities. Surveys shall follow protocols and guidelines approved by U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife and shall be conducted by qualified biologists permitted by the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife, as applicable. The qualified biologist shall prepare a Gantt Chart outlining the schedule for these needed protocol surveys.

If listed wildlife species are identified within a project impact area, the Eastern Municipal Water District shall avoid impacts to species and their habitat through project-level design changes and/or construction methods (e.g., trenchless installation of pipelines) or implement BIO-3b if avoidance is infeasible.

BIO-3b: Listed Wildlife Species Permitting. If impacts to listed wildlife cannot be avoided, the Eastern Municipal Water District (District) shall seek incidental take authorization by one of two methods, described below. Habitat-based compensatory mitigation for impacts to listed species shall be determined through the applicable regulatory mechanism.

1. Participating Special Entity process under the Multiple Species Habitat Conservation Plan (MSHCP). To obtain MSHCP coverage as a Participating Special Entity, the Quail Valley Subarea Project (proposed Project) is required to demonstrate MSHCP compliance through specific habitat assessments, applicable biological surveys, the provision of an MSHCP consistency analysis, and payment of impact fees. Additionally, impacts to certain species under the MSHCP will require a Determination of Biologically Equivalent or Superior Preservation. A Determination of Biologically Equivalent or Superior Preservation shall be prepared as appropriate and will be used to demonstrate avoidance and mitigation related to impacts.
2. Using the federal and/or state endangered species acts standard process. The District may elect to seek incidental take authorization from the U.S. Fish and Wildlife Service (USFWS) pursuant to Federal Endangered Species Act Sections 7 or 10 and/or California Department of Fish and Wildlife (CDFW) under California Fish and Game Code Sections 2080.1 and 2081(b), as applicable.
 - a. Where species protected under federal law may be impacted, the District shall either consult directly with the USFWS to develop and implement a habitat conservation plan and obtain an Incidental Take Permit pursuant to Federal Endangered Species Act Section 10(a) or, in the case of projects with a federal action agency, the District shall adhere to the requirements of Federal Endangered Species Act Section 7, which requires the federal action agency to consult with the USFWS to obtain a Biological Opinion and Incidental Take Statement for the proposed Project; and/or
 - b. Where species protected under state law may be impacted, the District shall consult with the CDFW pursuant to Sections 2081 or 2080.1 of the California Endangered Species Act. For projects with direct or indirect impacts to species that are only state listed and not federally listed as endangered or threatened, the District shall obtain a California Endangered Species Act Section 2081 Incidental Take Permit from the CDFW. For projects with impacts to species that are both state and federally listed as endangered or threatened, the District shall obtain a California Endangered Species Act Section 2080.1 Consistency Determination from the CDFW, unless otherwise required by the CDFW.

BIO-3c: Non-Listed Special-Status Wildlife Species Mitigation. For non-listed wildlife species, particularly reptiles and small mammals, an analysis shall be made after biological resource surveys are conducted in accordance with BIO-1, above to determine the potential level of impact the Quail Valley Subarea 4 Project (proposed Project) may have on these species. Unless there is a regionally significant population of a non-listed special-status wildlife species (e.g., multiple species within high-quality habitat, etc.) mitigation provided below such as biological construction monitoring, temporary construction fencing (**BIO-11**), revegetation of temporarily-impacted native vegetation (**BIO-12**), and worker training (**BIO-13**) shall be sufficient to reduce impacts to non-listed wildlife species.

If a regionally significant population of non-listed special-status wildlife are noted during surveys, the Eastern Municipal Water District shall compensate for the loss of occupied habitat through one or a combination of the following, at a minimum ratio of 1:1, as determined by the Eastern Municipal Water District in consultation with the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife, as applicable:

- a. Purchase of credits from a conservation bank approved by U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife; and/or
- b. Acquisition and preservation of off-site mitigation land containing occupied habitat.

BIO-4: Direct Impact Avoidance for Crotch's Bumble Bee. To avoid direct impacts to Crotch's bumble bee, the following seasonal restrictions shall be implemented:

- Removal, trimming or trampling of habitat (i.e., any areas with floral resources) in the proposed area of disturbance must occur outside of the Colony Active Period between April 1 and August 31. If removal of floral resources in the proposed area of disturbance must occur during the Colony Active Period, a foraging bumble bee survey shall be conducted within a year of project or phase commencement.
- Within potential overwintering or nest sites, no soil disturbance (grading, digging, etc.) will occur between August 31 and April 1. If ground disturbance must occur between September 1 and March 31, a qualified biologist shall conduct an overwintering/nest survey to determine the presence or absence of Crotch's bumble bee within the proposed area of disturbance.

The surveys shall be conducted within 300 feet of project work resulting in removal, trimming or trampling of habitat within one year prior to the initiation of project activities (including removal of vegetation). Survey methods will be developed in consultation with the California Department of Fish and Wildlife (CDFW) and follow existing guidance (e.g., Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species, dated June 6, 2023). Based on current standards, surveys may consist of three separate visits spaced two to four weeks apart. Survey results will be considered valid until the start of the next colony active period. Survey methods that involve lethal take of species are not acceptable. The qualified biologist and the District shall submit the results (including positive or negative survey results) of the pre-activity survey to CDFW for review.

If pre-activity surveys do identify Crotch's bumble bee individuals on-site, the qualified biologist shall notify and consult with CDFW to determine whether an avoidance plan would be an option. If it is determined that project activities would result in impacts to Crotch's bumble bee, an Incidental Take Permit (ITP) may be required. Take of any endangered, threatened, or candidate species that results from the Quail Valley Subarea 4 Project is prohibited, except as authorized by state law (CFGF Sections 86, 2062, 2067, 2068, 2080, 2085; California Code of Regulations, Title 14, Section 786.9) under the California Endangered Species Act.

Regardless of the outcome of the pre-activity survey, a qualified biologist shall conduct a pre-construction survey for Crotch's bumble bee within 14 days prior to ground-disturbing or vegetation removal activities, during suitable weather conditions. Surveys shall follow existing guidance (e.g., Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species) for pre-construction surveys. If Crotch's bumble bee or their nests are observed, the biologist shall defer to the avoidance plan (if applicable) and/or ITP (if applicable). If there is no existing Crotch's bumble bee avoidance plan, or ITP conservation measures, a no-disturbance buffer around the observation or nest site will be established until the completion of the colony active period.

BIO-5: Avoidance of Nesting Birds and Raptors. To prevent direct impacts to nesting migratory birds, or raptors, protected under the Migratory Bird Treaty Act and California Fish and Game Code, the Eastern Municipal Water District shall implement the following:

Any proposed activity that could affect nesting migratory birds or raptors shall occur outside of the general bird breeding season of February 15 to August 31. If such activities cannot be conducted outside the general bird breeding season, a qualified biologist with experience in conducting nesting bird surveys shall be retained to conduct a pre-activity nesting bird survey (i.e., prior to any project activities, such as ground disturbance or vegetation removal, that could disrupt nesting birds). The pre-activity survey shall occur within 500 feet of the construction activity and no more than three days prior to the activities to confirm the presence or absence of active bird nests. These survey parameters (i.e., within 500 feet and no more than three days prior) shall be implemented for linear construction projects such as pipelines, as well as work within a specific parcel such as for construction of the lift stations.

If an active nest is found by the qualified biologist, a nest avoidance buffer of 300 feet for passerine birds and 500 feet for raptors should be demarcated by temporary fencing, flagging, and or staking as deemed appropriate to avoid impacts. No project construction activities, including vegetation removal and/or trimming activities, will be allowed within the buffer until the qualified biologist has determined that the nest is no longer active. The qualified biologist shall monitor the active nest with sufficient frequency and duration to determine if the buffer distances are appropriately sized to protect the breeding success of the nest. Avoidance buffers may be either increased or decreased by the qualified biologist based on such factors as the avian species involved, ambient levels of human activity, and screening vegetation.

BIO-6a: Coastal California Gnatcatcher Protocol Surveys and Avoidance. A qualified biologist (possessing a valid Federal Endangered Species Act Section 10(a)(1)(A) Recovery Permit) shall survey those habitat areas (i.e., Riversidian sage scrub and buckwheat scrub) within the Quail Valley Subarea 4 Project limits and up to a 500-foot buffer where access permits. The protocol survey shall be conducted per the current U.S. Fish and Wildlife Service protocol that currently requires six surveys during the period of March 15 to June 30, or nine surveys between July 1 and March 14. If coastal California gnatcatchers are confirmed as not present, then no mitigation for this species is required.

If coastal California gnatcatchers are confirmed as present, then no clearing, grubbing, ground-disturbing, or other construction activity shall occur within 500 feet of occupied coastal sage scrub during the coastal California gnatcatcher breeding season (March 1 through August 15). If avoidance is not possible and construction activities must occur during the breeding season within 500 feet of occupied habitat, or if clearing of occupied habitat is required, the Eastern Municipal Water District shall implement **BIO-3b** and **BIO-6b**. If the Project elects to be a Participating Special Entity in the Multiple Species Habitat Conservation Program, this measure is not required.

BIO-6b: Coastal California Gnatcatcher Mitigation. If construction activities are proposed within 500 feet of an occupied nest, a biological monitor shall be required to observe the behavior of breeding coastal California gnatcatchers where accessible. The construction supervisor shall be notified if the construction activities appear to be altering the birds' normal breeding behavior, work will be halted if necessary and as determined by the qualified biologist, and the nest avoidance buffer shall be expanded and/or work activities shall be modified until there is no discernible disturbance to the nest occupants. No construction activities will be allowed within 500 feet of an occupied nest until additional minimization measures have been performed. For habitat that is accessible, such measures may include retaining a qualified acoustician to determine ambient noise levels and project-related noise levels at the edge of the occupied habitat. Noise levels at the edge of the occupied habitat shall not exceed an hourly average of 60 decibels (dB[A]), or a 3 dB(A) increase in noise levels if ambient noise levels exceed 60 dB(A). If Project-related noise levels at the edge of the occupied habitat are above 60 dB(A) or the 3 dB(A) increase in noise occurs or the habitat is not accessible for measuring the noise levels, additional minimization measures shall be taken to reduce project-related noise levels to an acceptable level as determined by the biological monitor. Measures may include, but are not limited to, limitations on the use of certain equipment, placement of equipment, restrictions on the simultaneous use of equipment, use of noise barriers, or other noise attenuation methods as deemed appropriate by the biologist and acoustician. If the biological monitor determines the construction activities are posing a potential risk to the nest after implementing the additional minimization measures, the noise generating construction activities shall cease until alternative methods are applied or the breeding season is over. The biological monitor shall prepare written documentation of all gnatcatcher monitoring activities at the end of each monitoring day, and also a compiled monitoring report at the completion of construction activities, both of which shall be submitted to the District.

BIO-7a: Least Bell's Vireo Protocol Surveys and Avoidance. Construction activities (i.e., earthwork, clearing, and grubbing) within 500 feet of potential least Bell's vireo habitat shall occur outside of the breeding season for least Bell's vireo (March 15 through August 31).

If construction activities (i.e., earthwork, clearing, grubbing, etc.) must occur within 500 feet of least Bell's vireo habitat during the breeding season, protocol surveys for least Bell's vireo shall be conducted prior to commencement of construction activities, within all suitable habitat located within a 500-foot buffer of project activities to determine whether the habitat is occupied. Habitat within the 500-foot buffer that is not accessible will be surveyed audibly from the accessible limits. Protocol surveys for least Bell's vireo shall be conducted by a qualified biologist and during the breeding season in accordance with the most recent U.S. Fish and Wildlife Service guidelines. Current survey guidelines require eight surveys 10 days apart from April 10 to July 31. The results of the protocol surveys shall be documented by the qualified biologist and submitted to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife.

If the qualified biologist determines that least Bell's vireo does not occur within 500 feet of the proposed construction, the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that the habitat is occupied by least Bell's vireo, the Eastern Municipal Water District shall clearly delineate the required avoidance buffer around the active least Bell's vireo nest. The buffer shall be clearly marked with flags and/or fencing prior to the initiation of construction activities. For work that is to occur within 500 feet of the occupied habitat, or if clearing of occupied habitat is required, then the Eastern Municipal Water District shall follow **BIO-3b** and **BIO-7b**.

BIO-7b: Least Bell's Vireo Mitigation. If construction activities are proposed within 500 feet of an occupied nest, a biological monitor shall be required to observe the behavior of breeding least Bell's vireo where accessible. The construction supervisor shall be notified if the construction activities appear to be altering the birds' normal breeding behavior work will be halted if necessary and as determined by the qualified biologist, and the nest avoidance buffer shall be expanded and/or work activities shall be modified until there is no discernible disturbance to the nest occupants. No construction activities will be allowed within 500 feet of an occupied nest until additional minimization measures have been performed. For habitat that is accessible, such measures may include retaining a qualified acoustician to determine ambient noise levels and project-related noise levels at the edge of the occupied habitat. Noise levels at the edge of the occupied habitat shall not exceed an hourly average of 60 decibels (dB[A]), or a 3 dB(A) increase in noise levels if ambient noise levels exceed 60 dB(A). If project-related noise levels at the edge of the occupied habitat are above 60 dB(A) or the 3 dB(A) increase in noise occurs or the habitat is not accessible for measuring the noise levels, additional minimization measures shall be taken to reduce project-related noise levels to an acceptable level as determined by the biological monitor. Measures may include, but are not limited to, limitations on the use of certain equipment, placement of equipment, restrictions on the simultaneous use of equipment, use of noise barriers, or other noise attenuation methods as deemed appropriate by the biologist and acoustician. If the biological monitor determines the construction activities are posing a potential risk to the nest after implementing the additional minimization

measures, the noise generating construction activities shall cease until alternative methods are applied or the breeding season is over. The biological monitor shall prepare written documentation of all monitoring activities at the completion of construction activities, which shall be submitted to the Eastern Municipal Water District.

BIO-8a: Burrowing Owl Focused Survey and Pre-Construction Burrowing Owl Survey. The Eastern Municipal Water District shall have a qualified biologist conduct focused burrowing owl surveys in accordance with the current guidelines at the time of the survey. At the time of this report, the survey would follow the California Department of Fish and Wildlife 2012 *Staff Report for Burrowing Owl Mitigation* unless the Quail Valley Subarea 4 Project has elected to be a Participating Special Entity under the Multiple Species Habitat Conservation Program, in which case the survey would follow the 2006 burrowing owl instruction for the Multiple Species Habitat Conservation Program. These focused surveys should be conducted either during the breeding season or non-breeding season in the year or months prior to the specific project phase if potential burrowing owl habitat is located within 500 feet of the proposed impact footprint for that project phase.

Additionally, 14-day and a 24-hour pre-construction "take avoidance" surveys for burrowing owls are required by the California Department of Fish and Wildlife 2012 guidelines (or a single survey 30-days prior if the project is permitted using the Participating Special Entity process) prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, grading, tree removal, site watering, equipment staging and trenching/excavation) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. These take avoidance surveys are required both inside and outside of the breeding season whenever work would occur within 500 feet of potential burrowing owl habitat. Working in collaboration with the construction contractor, the qualified biologist will ensure these survey parameters (i.e., within 14 days and again within 24 hours prior to the start of the activity) are implemented for linear construction projects such as pipelines, as well as work within a specific parcel such as for construction of the lift stations. If burrowing owl are not detected during the take avoidance survey, no further action is required. If burrowing owl are detected, the Eastern Municipal Water District will follow **BIO-8b**.

BIO-8b: Burrowing Owl Mitigation. A Burrowing Owl Take Avoidance Plan (BUOW Plan) shall be prepared by a qualified biologist. The BUOW Plan must be sent for approval by the California Department of Fish and Wildlife (CDFW) prior to initiating ground disturbance. The BUOW Plan shall include the number and location of occupied or known burrow sites, if applicable, and shall describe proposed avoidance (setback), shelter-in-place, unoccupied burrow/burrow surrogate collapse procedures, monitoring, minimization, and/or mitigation actions. The project proponent shall implement the BUOW Plan following CDFW review and approval. Avoidance and minimization measures may include:

- a) Setback: No construction activities shall occur within specified setback distances. The default setback distances from the CDFW 2012 Staff Report are provided below.

Time of Year	Level of Disturbance (meters/feet)		
	Low	Medium	High
April 1–Aug 15	200/656	200/656	500/1,640
Aug 16–Oct 15	200/656	200/656	200/656
Oct 16–Mar 31	50/164	100/328	500/1,640

When setback distances are applied to occupied burrows, an intensive monitoring program shall be implemented to ensure that the setback distance applied to the burrow is considered an effective buffer. Once a setback distance is applied to an occupied burrow, the biological monitor shall be present at all times during construction activities that occur adjacent to the setback distance to monitor the burrowing owl's behavior. The biological monitor will have the authority to increase the setback distance if the construction activities are affecting the burrowing owl. Setback distances may be reduced through shelter-in-place methods described below, which would be determined by the biological monitor.

- b) Shelter in Place: If a reduced setback is needed to complete construction, shelter-in-place can be implemented to minimize impacts while allowing existing burrows to remain intact. Where appropriate, the setback buffers may be reduced by screening burrows (i.e., installing hay bales to create a visual and auditory barrier between construction and the burrow) to minimize disturbance. During the breeding season, hay bales (or other similar material) shall be stacked up to three bales high and 25 feet on either side of the burrow for a total of 50 feet. During the non-breeding season, hay bales shall be stacked up to two bales high and 25 feet on either side of the burrow for a total of 50 feet. Hay bales are generally three feet long and 18 inches tall. A minimum distance of five feet between the hay bales and the occupied burrow shall be left, allowing for perches near the burrow to be maintained. The minimum distance may be increased depending on the slope and topography of the area adjacent to the burrows.

If shelter-in-place is determined feasible, the biological monitor will provide guidance to the construction contractor regarding the location of the hay bales. During and following installation of the hay bales, a biological monitor shall be present daily to evaluate the effectiveness of the hay bales, monitor burrowing owl behavior for signs of stress or disturbance due to construction, and make adjustments to the buffer and/or hay bales in order to minimize impacts on the burrowing owl. If the burrowing owl continues to appear distressed from construction, the biological monitor will have the authority to halt construction until the project proponent and the CDFW can be contacted to determine the best course of action. Following installation of the hay bales, the biological monitor shall provide a report to the Eastern Municipal Water District and the CDFW describing the installation time frame; a map of the area; photographs of hay bales and construction activities; and a description of site conditions (e.g., surrounding vegetation, topography, observed species, burrowing owl line-of-sight conditions).

- c) Burrow Collapse Procedures: No collapsing of occupied or known (i.e., those exhibiting signs of current or past burrowing owl use) burrows shall be conducted without a Section 2081 Incidental Take Permit, regardless of the time of year. Procedures for the

collapse of unoccupied/potential (i.e., any subterranean hole three inches or larger for which no evidence is present to conclude that the burrow is being used or has been used by a burrowing owl) burrows shall be included in the BUOW Plan. Unoccupied and potential burrowing owl burrows may be excavated under the direct supervision of the burrowing owl Authorized Biologist after approval of the BUOW Plan.

- d) If ground-disturbing activities occur but the site is left undisturbed for more than 14 days, another pre-construction "take avoidance" survey for burrowing owl shall be conducted and reported to CDFW as described above. If a burrowing owl is found, the same coordination described above shall be necessary.

No take of burrowing owl shall be conducted unless the project secures a Section 2081 Incidental Take Permit from CDFW. Take includes any actions that could harm burrowing owl, including but not limited to burrow exclusions on occupied or known burrows, passive relocation activities, and burrow collapse of an occupied or known burrow. Those activities shall only be conducted in accordance with the permit conditions contained in an Incidental Take Permit.

BIO-9: Stephens' Kangaroo Rat HCP Mitigation Fee. The Quail Valley Subarea 4 Project (proposed Project) is within the limits of the Stephens' Kangaroo Rat Habitat Conservation Plan Area. As such the proposed Project will pay the Stephens' Kangaroo Rat Mitigation fee of \$500 per acre of impact to the Riverside County Habitat Conservation Agency, which implements the Stephens' Kangaroo Rat Habitat Conservation Plan.

BIO-10: Maternal Bat Roost Avoidance. Prior to construction, the Eastern Municipal Water District shall have a qualified biologist conduct a survey of potential bat roosts located within and/or immediately adjacent to the areas where Quail Valley Subarea 4 Project activities have the potential to directly impact active roosts or disrupt bat breeding activities. Potential roost sites (e.g., palm fronds, trees, rock crevices, abandoned buildings, etc.) will be identified by a qualified bat biologist and searched for signs of bat use, such as urine streaking, grease marks and droppings, moth wings, and dead bats.

If any project activities are proposed during the bat maternity season (April 1 through August 31), a qualified biologist will conduct a dusk emergent bat survey of potential roost sites that have signs of bat use, no more than two weeks prior to construction. Dusk emergence count surveys shall be conducted on a warm night when nighttime lows are not less than 45 degrees Fahrenheit and during dry weather conditions. Surveys should be conducted from approximately 15 minutes before sunset to 1 hour after sunset. Prior to any dusk emergence count, the lead biologist shall identify the primary locations where bats may be roosting so these locations can be targeted during the emergence count. Surveys should include both a visual component using night visions goggles as appropriate, as well as an electronic acoustic monitoring device / bat detector (e.g., AnaBat).

If bats are detected during the dusk emergence surveys, the District will not trim or remove the roost (e.g., palm trees) until it can be determined that the bats no longer are present. In addition, if a maternal roost is identified, no construction will occur within 200 feet of the maternal roost during the pupping season (typically April 1 through August 31).

BIO-11: Biological Construction Monitoring and Temporary Construction Fencing. If it is confirmed through pre-construction surveys that the Quail Valley Subarea 4 Project would occur within or immediately adjacent to sensitive habitat areas (including aquatic resources) and/or habitat occupied by special-status species, then the Eastern Municipal Water District (District) shall retain a qualified biologist to monitor construction activities and supervise the installation of temporary construction fencing, which clearly delineates the edge of the approved limits of grading and clearing, and the edges of environmentally sensitive areas that occur beyond the approved limits. This fencing shall be installed prior to construction and maintained by the contractor for the duration of construction activity. Fencing shall be installed in a manner that does not impact habitats to be avoided.

Once the fencing is installed, the District and qualified biologist shall determine the need for additional inspections and monitoring activities throughout the duration of construction, not to be less than once per week. If determined necessary by the District and qualified biologist, the monitoring shall include the inspection of construction work areas, including staging and storage areas, to confirm that activities are kept within the approved limits and that best management practices are in place to prevent incidental animal entrapment and burrow and nest establishment within equipment and staged materials. Temporary construction fencing shall be maintained regularly and repairs to the fencing shall be made with one calendar day of any damage being noted. If work occurs beyond the fenced or demarcated limits of impact, or if a trapped animal or burrow or nest is found, work in the affected areas shall cease until the problem has been remedied to the satisfaction of the District and qualified biologist. Temporary construction fencing shall be removed upon completion of construction of the Quail Valley Subarea 4 Project.

BIO-12: Revegetation of Upland Native Vegetation. Prior to impacts to upland native vegetation, a biologist shall make a list of native plants occurring in each community. As soon as practical after construction is complete, temporary impacts to upland native vegetation shall be reseeded with a seed mix containing species observed within the habitat being impacted. Additionally, native vegetation being cleared and grubbed (duff) shall be collected, stored on-site, and pulled/raked back over the disturbed area after construction to allow for passive restoration over time. The construction contractor shall be responsible for the collection, storing and raking activities at the appropriate times during construction.

BIO-13: Worker Environmental Awareness Program. If it is confirmed through the implementation of pre-construction surveys that the Quail Valley Subarea 4 Project would occur within or immediately adjacent to sensitive habitat areas and/or habitat potentially suitable for special-status species, the Eastern Municipal Water District shall retain a qualified biologist to prepare and present a Worker Environmental Awareness Program to inform construction crews of the sensitive resources and associated avoidance and/or minimization requirements. The Worker Environmental Awareness Program shall be developed and presented prior to ground-disturbing activities by a qualified biologist and shall be available in both English and Spanish. Handouts summarizing potential impacts on special-status biological resources and the potential penalties for impacts on these resources shall be provided to all construction personnel. At a minimum, the education program shall include the following:

- a description of special-status species observed or potentially on the Project site including representative photographs and general ecology;
- sensitivity of the species to human activities;
- regulatory framework for biological resource protection and consequences if violated;
- occurrences of aquatic resource features regulated by the U.S. Army Corps of Engineers, Regional Water Quality Control Board and/or the California Department of Fish and Wildlife in the project area;
- avoidance and minimization measures designed to reduce the impacts on special-status biological resources
- environmentally responsible construction practices;
- reporting requirements and communication protocol to resolve conflicts that may arise at any time during the construction process

It shall be the responsibility of the construction contractor to maintain a copy of the Worker Environmental Awareness training materials on the jobsite for the duration of project activities. The construction contractor shall also ensure that all workers, including any new members entering the Project site for the first time, review the training materials. All construction workers shall sign an acknowledgement form indicating their understanding of the material before beginning work.

BIO-14a: Acquire Permits for Impacts to Jurisdictional Aquatic Resources . Prior to construction or ground-disturbing activities occurring within potentially jurisdictional aquatic resources for any phase or component of the Quail Valley Subarea 4 Project , the Eastern Municipal Water District (District) shall apply for and obtain the following regulatory permits and approvals from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and/or California Department of Fish and Wildlife, as applicable:

- Clean Water Act Section 404 Permit;
- Clean Water Act Section 401 Water Quality Certification; and/or
- California Fish and Game Code Section 1602 Streambed Alteration Agreement.

If the District elects to seek incidental take authorization through the Multiple Species Habitat Conservation Act Participating Special Entity process, the District shall also prepare for approval by the Western Riverside County Regional Conservation Authority, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife a Determination of Biologically Equivalent or Superior Preservation for impacts to Multiple Species Habitat Conservation Program Section 6.1.2, Riparian and Riverine Areas.

BIO-14b: Mitigation for Jurisdictional Impacts. The Eastern Municipal Water District shall mitigate for permanent and temporary impacts to jurisdictional aquatic resources off-site in accordance with the applicable permit condition(s) described in mitigation measure **BIO-14a**, estimated at no less than a 1:1 ratio. Temporary impacts are to be restored in place and permanent impacts shall include a minimum 1:1 establishment/re-establishment component, unless otherwise negotiated by the Eastern Municipal Water District with the regulatory agencies.

7.0 National Environmental Protection Act

The following section contains an analysis of the proposed Project's compliance with federal laws pertaining to biological resources and provides detailed needed to satisfy the National Environmental Policy Act (NEPA) analysis for biological resources. Italicized questions below correspond to those asked in the State Water Resources Control Board (State Water Board) Clean Water State Revolving Fund Program, Evaluation Form for Environmental Review and Federal Coordination.

7.1 Federal Endangered Species Act, Section 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on site, in the surrounding area, or in the service area?

The proposed Project primarily occurs along existing roadways and urban, vacant lots but also may directly or indirectly impact habitats that could support species listed in the FESA. The proposed Project does not occur within or immediately adjacent to designated critical habitat. Critical habitat for coastal California gnatcatcher (*Polioptila californica californica*) occurs approximately one half mile west and east of the proposed Project area. No other critical habitat occurs within a mile of the proposed Project. Therefore, the proposed action would have no effect on critical habitat.

Federally-Listed Plant Species. One federally-listed plant species has moderate potential to occur, the federal endangered Munz's onion and if present, the proposed Project may affect, but not likely to adversely affect this species. No additional federally-listed endangered (FE), threatened (FT), proposed threatened (FPT), or candidate (FC) plant species have the potential to occur in the vicinity of the study area. Mitigation measures BIO-1, BIO-2a, BIO-2b, and BIO-13, shall be implemented to avoid impacts to federally-listed plants.

Federally-Listed Animal Species. In total, 10 FE, FT, FC, or federal proposed as threatened animal species were generated as potentially-occurring within the proposed Project area in the IPaC (Attachment 2). These 10 species were evaluated for their potential to occur within the study area (Attachment 6). The analysis resulted in the following determinations:

- vernal pool fairy shrimp, FT, low potential, no effect
- Riverside fairy shrimp, FE, low potential, no effect
- monarch, FC, low potential, no effect
- Quino checkerspot, FE, low potential, no effect
- western spadefoot, FPT, unexpected due to lack of habitat, no effect

- southwestern pond turtle, FPT, unexpected due to lack of habitat, no effect
- least Bell's vireo, FE, high potential in survey area / Moderate potential in proposed Project site, may affect, not likely to adversely affect
- coastal California gnatcatcher, FT, moderate potential, may affect, not likely to adversely
- San Bernardino Merriam's kangaroo rat (San Bernardino kangaroo rat), FE, low potential, no effect
- Stephens' kangaroo rat, FT, high potential, may affect, not likely to adversely affect

Species with a may affect, not likely to adversely affect determination are discussed in more detail below.

The proposed Project has potential to result in impacts to federally-listed coastal California gnatcatcher where the proposed Project would result in the installation of LS-1 (Options 1 and 2) within Riversidian sage scrub habitat on the western edge of the proposed Project area. Direct impacts could occur as a result of removal of vegetation supporting an active nest and from a loss of foraging habitat. Indirect effects could occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active nest, such that the disturbance results in nest abandonment or nest failure. Implementation of mitigation measures BIO-1, BIO-3a, BIO-3b, BIO-5, BIO-10, BIO-12, and BIO-13, would reduce the impacts to less than significant.

The proposed Project has potential to result in impacts to the federally-listed least Bell's vireo (*Vireo bellii pusillus*) if present within small stands of riparian habitat within and adjacent to the proposed Project site. Although there are small, isolated patches of southern willow scrub within and directly adjacent to the proposed Project impact areas, the highest potential for least Bell's vireo is within the mature willow vegetation along the southern end of the survey area within an unnamed tributary flowing into Canyon Lake. Indirect effects could occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active nest, such that the disturbance results in nest abandonment or nest failure. Implementation of mitigation measures BIO-1, BIO-3a, BIO-3b, BIO-6a, BIO-6b, BIO-10, and BIO-13 would reduce the potential impacts to less than significant.

The proposed Project has potential to result in impacts to federally-listed Stephens' kangaroo rat where the proposed Project would result in the installation of LS-1 (Options 1 and 2) within Riversidian sage scrub habitat on the western edge of the proposed Project area. Payment of the mitigation fee for potential impacts to Stephens' kangaroo rat, per mitigation measure BIO-9, would reduce impacts on this listed species to less than significant.

With the implementation of mitigation measures, the proposed action would have no effect or a less than significant effect on federally-listed species or their critical habitat, and the proposed Project would be in conformance with the FESA.

7.2 Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat?

The proposed Project would be constructed primarily within upland areas and the affected aquatic resources are ephemeral freshwater features and lack marine resources and Essential Fish Habitat regulated under the Magnuson-Stevens Fishery Conservation and Management Act. No Essential Fish Habitat occurs in the immediate vicinity of the study area. Therefore, the proposed Project would have no effect on Essential Fish Habitat and would be in conformance with the Magnuson-Stevens Fishery Conservation and Management Act.

7.3 Coastal Zone Management Act

Is any portion of the project site located within the coastal zone?

The study area is not located within the Coastal Zone. The western portion of the study area is located more than 25 miles from the nearest Coastal Zone boundary. No coastal habitat occurs in the immediate vicinity of the study area. Therefore, the proposed Project would have no effect on any areas designated as Coastal Zone and would be in conformance with the Coastal Zone Management Act.

7.4 Migratory Bird Treaty Act

Will the project affect protected migratory birds that are known, or have a potential, to occur on site, in the surrounding area, or in the service area?

Construction of the proposed Project may result in the removal or trimming of trees and other vegetation during the general bird nesting season (January 15 through September 15) and, therefore, would have the potential to adversely affect nesting birds protected under the MBTA.

Implementation of mitigation measure BIO-5 would ensure the appropriate pre-construction surveys and avoidance measures are completed to prevent adverse effects on nesting birds. With the implementation of mitigation measures, the proposed Project would result in no effect on migratory birds and would be in conformance with the MBTA.

7.5 Protection of Wetlands

Does any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the United States Army Corps of Engineers?

The majority of the proposed Project occurs within existing roadways or vacant lots, but the proposed Project may include work within or adjacent to existing streams/drainages including those with potential wetland habitat. Work also occurs adjacent to streams/drainages and riparian/riverine habitat. Potential impacts to waters of the U.S. subject to the regulatory jurisdiction of the USACE shall be mitigated via mitigation measures BIO-1, BIO-11, BIO-13, BIO-14a, and BIO-14b, to reduce potential impacts to less than significant.

7.6 Wild and Scenic River Act

Is any portion of the project located within a wild and scenic river?

None of the proposed Project components are planned on or in the immediate vicinity of areas designated as Wild and Scenic River. Therefore, the proposed Project would have no effect on any areas designated as wild and scenic river and would be in conformance with the Wild and Scenic River Act.

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ATTACHMENTS

ATTACHMENT 1

Biological Constraints Report for the Quail Valley Subarea 4 Project



**Biological Constraints Report for
the Quail Valley Subarea 4
Project
Murrieta, California**

Prepared for
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August 20, 2020

A handwritten signature in blue ink, appearing to read "B R", with a long horizontal stroke extending to the right.

Brian Parker, Project Biologist

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Acronyms and Abbreviations

amsl	above mean sea level
CDFW	California Department of Fish and Wildlife
CFGF	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
District	Eastern Municipal Water District
MBTA	Migratory Bird Treaty Act
MSHCP	Multiple Species Habitat Conservation Program
OHWM	ordinary high water mark
project	Quail Valley Subarea 4 Project
RWQCB	Regional Water Quality Control Board
USACE	United States Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WRCRCA	Western Riverside County Regional Conservation Authority

Executive Summary

The Eastern Municipal Water District Quail Valley Subarea 4 Project (project) is located in the community of Quail Valley in the city of Murrieta, California. The project would include construction of new sewer pipelines to service the community. The project site is not located inside or immediately adjacent to any Criteria Area, Criteria Cell, or Conservation Area identified for conservation potential by the Western Riverside Multiple Species Habitat Conservation Plan, but is located within the western burrowing owl (*Athene cunicularia hypugaea*) survey area identified in the Western Riverside Multiple Species Habitat Conservation Plan (Western Riverside County Regional Conservation Authority 2003).

RECON Environmental, Inc. conducted a literature review, a general biological survey, a burrowing owl habitat assessment, and an assessment of potential jurisdictional wetlands and waters for the 229.46-acre project site plus all land within 500 feet, for a total survey area of 492.95 acres.

Potential biological constraints for the project include sensitive vegetation communities, plant and wildlife species, and jurisdictional wetlands and waters. For planning purposes, biological constraints are broken into three constraint levels: low, moderate, and high.

Four wetland vegetation communities occur in the survey area: southern riparian scrub, southern riparian woodland, disturbed wetland, and non-native riparian. Impacts to wetland vegetation communities would require mitigation. In addition, as these areas would likely also be wetlands under the jurisdiction of the United States Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife and may require permits from those resource agencies. Therefore, the constraint level from wetland vegetation communities would be considered high.

Two sensitive upland vegetation communities occur in the survey area: native grassland and Riversidean sage scrub (including disturbed). These communities would be considered moderate constraints because impacted areas would need to be revegetated and it may be necessary to have a biological monitor present during construction.

No sensitive or narrow endemic plant species were observed within the survey area; however, one sensitive plant species has moderate potential to occur in the survey area: smooth tarplant (*Centromadia pungens laevis*). Constraints from this species would be considered low because impacts would be considered less than significant, though topsoil salvage may be recommended to reduce potential impacts.

No sensitive wildlife species were observed, but 10 sensitive wildlife species have moderate potential to occur on the project site or in the surrounding survey buffer: orange-throated whiptail (*Aspidoscelis hyperythra*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), red diamond rattlesnake (*Crotalus ruber*), western burrowing owl (*Athene cunicularia hypugaea*), least Bell's vireo (*Vireo bellii pusillus*), coastal California gnatcatcher (*Polioptila californica californica*), California horned lark (*Eremophila alpestris actia*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Cooper's hawk (*Accipiter cooperii*), and San Diego black-tailed jackrabbit (*Lepus californica bennettii*).

San Diego black-tailed jackrabbit has moderate potential to occur. Any impacts to this species would be considered less than significant, so it is not expected to present a constraint on project implementation.

Cooper's hawk and other raptors have potential to nest within the survey area. No direct impacts are anticipated, but construction noise and activities have potential to cause indirect impacts. Avoidance measures and biological monitoring may be required. As a result, Cooper's hawk and other nesting raptors would be considered a moderate constraint.

Orange throated-whiptail, San Diegan tiger whiptail, and red-diamond rattlesnake have potential occur in habitat surrounding the project site. They are not expected to be a constraint to the project as impacts would be less than significant.

Western burrowing owl has potential to occur in Riversidean sage scrub and disturbed habitat in limited portions of the project site, and the surrounding survey buffer. Prior to any work in suitable habitat, focused surveys and pre-construction take avoidance surveys may be required and mitigation measures, including biological monitoring may be required. Therefore, constraints from western burrowing owl would be considered high.

Least Bell's vireo does not have potential to occur on the project site, but does have potential to occur in riparian habitats in the survey buffer. No direct impacts are anticipated, but if construction occurs during the breeding season (February 1 to August 31), construction noise has potential to cause indirect impacts. Protocol surveys, noise attenuation barriers, and construction monitoring may be required. Therefore, constraints from least Bell's vireo would be considered moderate.

Coastal California gnatcatcher has no potential to occur on the project site but has moderate potential to occur in the surrounding Riversidean sage scrub. No direct impacts to coastal California gnatcatcher are expected; however, if construction occurs during the breeding season (February 1 to August 31), construction noise has potential to cause indirect impacts. Protocol surveys, noise attenuation barriers, and construction monitoring may be required. Therefore, constraints from coastal California gnatcatcher would be considered moderate.

California horned lark and southern California rufous-crowned sparrow are not expected to occur on the project site but have potential to occur in the surrounding habitat. No direct impacts to these species are anticipated. While indirect noise impacts may occur, these impacts would not be significant. Therefore, these species would not present a constraint on the project.

In addition to sensitive species, general migratory birds protected by California Fish and Game Code Section 3503 have potential to nest throughout the survey area. Direct impacts could occur if vegetation removal occurs during the general bird breeding season (February 1 to August 31). Direct impacts would be considered significant and require pre-construction surveys, avoidance measures, and biological monitoring. Therefore, migratory birds would be considered a moderate constraint on the project.

Potential jurisdictional wetlands and waters are present within the project site. Impacts to these resources would require resource agency permitting, mitigation, and biological monitoring. Therefore, constraints from jurisdictional wetlands and waters would be considered high.

1.0 Introduction

This report describes potential biological constraints for the Eastern Municipal Water District (District) Quail Valley Subarea 4 Project (project). RECON conducted a general biological survey, jurisdictional assessment, and western burrowing owl habitat assessment of the 492.95-acre survey area, made up of a 229.46-acre project site plus a 500-foot off-site survey buffer comprising 263.49 acres.

The project site is located in the community of Quail Valley in the city of Menifee, California. It is approximately 1.5 miles north of Newport Road and 2.8 miles west of Interstate 215 in southwestern Riverside County, California (Figure 1). The survey area is located within the Sections 25 and 36, in Township 05S, Range 04W of the U.S. Geological Survey (USGS) 7.5-minute topographic map, Romoland quadrangle (Figure 2; USGS 2003). The survey area consists of a mix of sparsely developed and undeveloped land with single-family residences found on a grid of small neighborhood roads (Figure 3).

The project site is not located inside or immediately adjacent to any Criteria Area, Criteria Cell, or Conservation Area identified for conservation potential by the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP), but is located within the required survey area for western burrowing owl (*Athene cunicularia hypugaea*) identified in the Western Riverside MSHCP (Western Riverside County Regional Conservation Authority [WRCRCA] 2003).

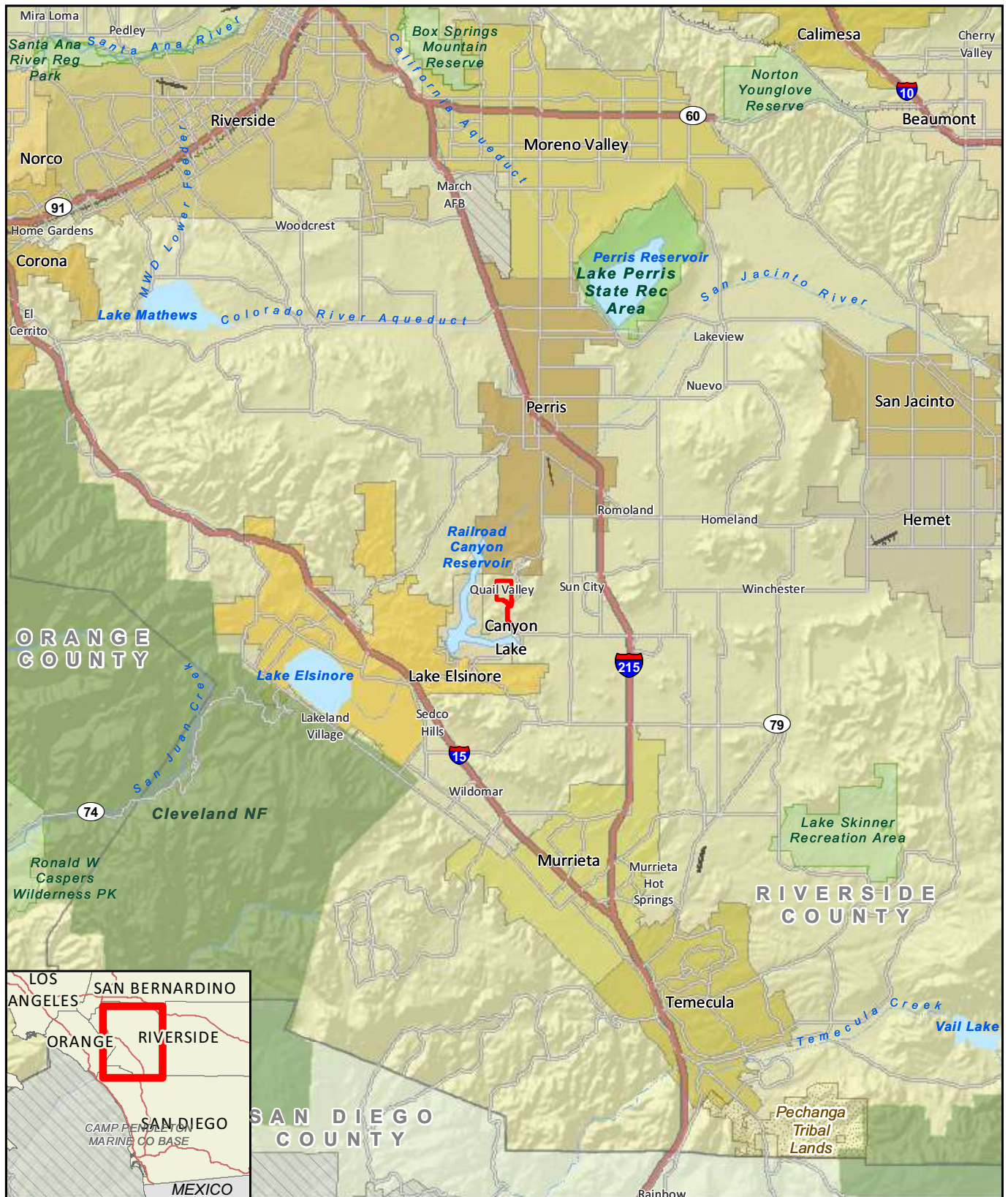
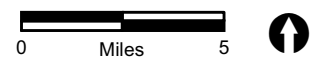
This report identifies biological constraints to assist the District in designing sewer infrastructure within the project site. Biological resources will be described and allocated into three increasing levels of constraint: low, moderate, and high.

2.0 Survey Methodology

RECON biologists Brian Parker and Andrew Smisek conducted a review of existing literature and databases, a general biological survey, a burrowing owl habitat assessment, and an assessment of jurisdictional wetlands and waters for the proposed project. All biological surveys were performed on July 22, 2020, and are detailed below.

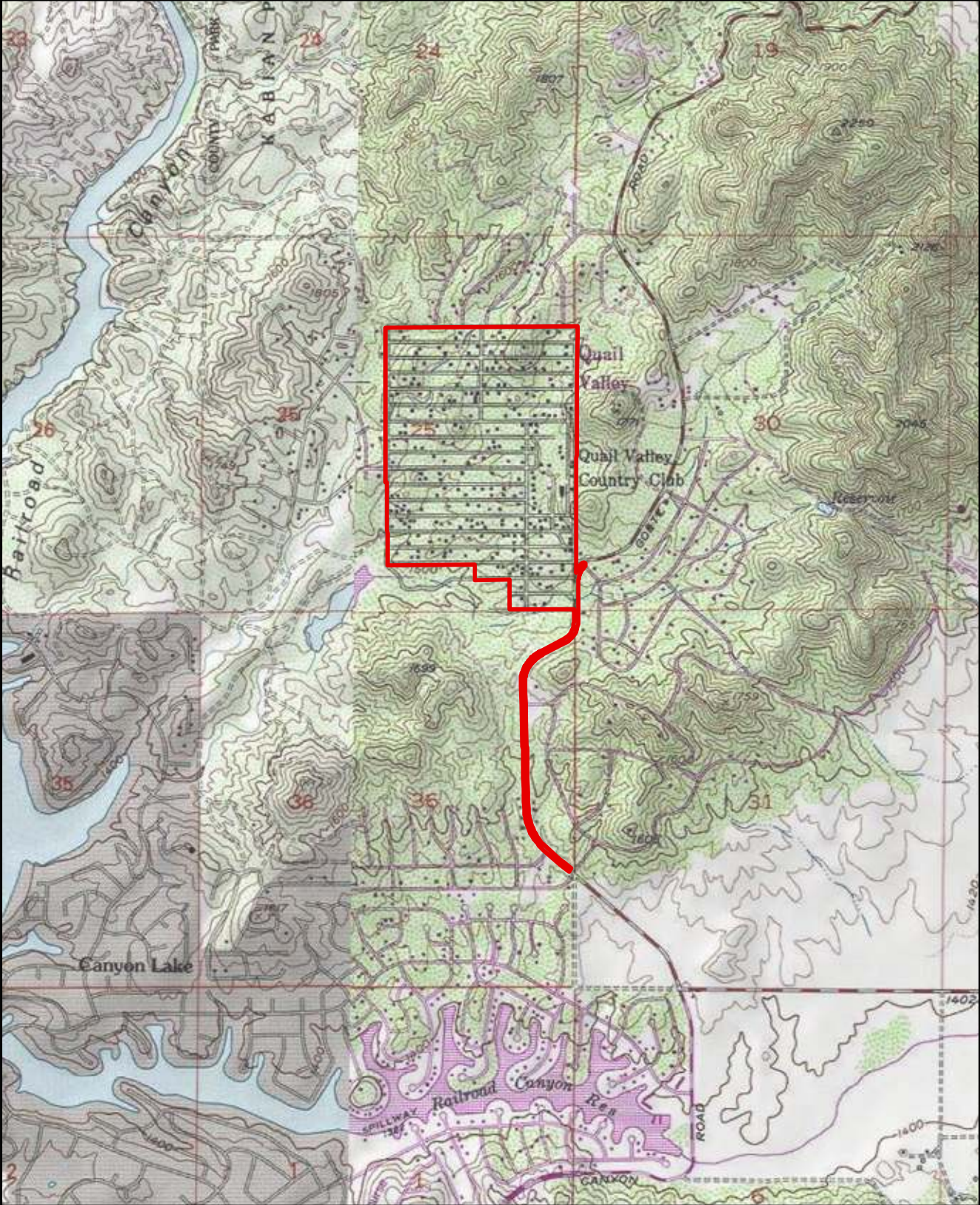
2.1 Literature Review

RECON conducted a search of existing biological data for the project site, including a review of biological databases for sensitive plant and animal species reported within two miles of the project site, and a review of the site's physical characteristics (e.g., location, elevation, soils/substrate, topography). Supplemental data sources included the California Natural Diversity Database (CNDDDB; California Department of Fish and Wildlife [CDFW] 2020a), the All Species Occurrences Database (U.S. Fish and Wildlife Service [USFWS] 2020a), the California Native Plant Society (CNPS) Online database (CNPS 2020), and the U.S. Department of Agriculture (USDA) Soil Conservation Service maps and descriptions (USDA 1971 and 2020).



✱ Project Location

FIGURE 1
Regional Location



 Project Boundary

FIGURE 2
Project Location on USGS Map

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2.2 General Biological Survey

RECON performed a general biological survey within the project site and a 500-foot buffer (survey area). The survey was performed on July 22, 2020, between 9:30 a.m. and 2:45 p.m., with temperatures ranging from 78.5 to 93.8 degrees Fahrenheit, winds from 0 to 6 miles per hour, and no cloud cover.

Vegetation communities were mapped in the field on a 1:2,400 scale aerial photograph of the survey area. Plant and animal species apparent at the time of the survey were recorded. Plants were visually identified in the field and wildlife species were identified visually or indirectly by identification of calls, scat, or burrows. Nomenclature in this report follows the Jepson Online Interchange (Jepson Flora Project 2020) and Rebman and Simpson (2014), for common plants, *Sunset Western Garden Book* (Brenzel 2001) for ornamental species, San Diego Natural History Museum (2002) for moths and butterflies, Crother et al. (2017) for amphibians and reptiles, Chesser et al. (2019) for birds, and Bradley et al. (2014) for mammals.

As much of the survey area occurs on private property, the survey was performed from public roadways. All roadways within the survey area were driven and/or walked, and undeveloped areas were investigated. However, some locations were not directly visible from public right-of-way due to the presence of buildings, tall hills, or large vegetation. Such areas were mapped based on aerial imagery and extrapolation from vegetation observed in adjacent accessible areas.

2.3 Western Burrowing Owl Habitat Assessment

Mr. Parker and Mr. Smisek conducted a western burrowing owl habitat assessment on July 22, 2020. The survey guidelines provided in the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (WRCRCA 2006) require biologists to walk the entire survey area. Due to the presence of private property, direct access to much of the survey area was not possible, so the habitat assessment methods were modified from the survey guidelines. Namely, habitat within the survey area was viewed from accessible rights-of-way. All accessible habitat in the survey areas was inspected, either directly or from accessible rights-of-way, habitat characteristics, dominant species, and habitat structure were noted. The biologists inspected the habitat for presence of potentially suitable burrows.

2.4 Jurisdictional Assessment

RECON wetland specialist Andrew Smisek conducted an assessment of potential jurisdictional waters and wetlands in the survey area on July 22, 2020, concurrent with the biological survey. Jurisdictional assessment methods were based on the guidelines from the U.S. Army Corps of Engineers (USACE; 1987, 2008a, 2008b) to identify potential of wetlands and/or waters under the jurisdiction of USACE, CDFW, and Regional Water

Quality Control Board (RWQCB). Due to the presence of private property, it was not possible to directly access much of the survey area. As a result, it was not possible to conduct a formal delineation according to the USACE guidelines. Areas with topography that could support wetlands or non-wetland waters were investigated, and indicators of hydrology and hydrophytic vegetation were noted during the survey. Additionally, the project location was reviewed using the USFWS National Wetland Inventory (USFWS 2020b).

Wetlands and waters are generally delineated based on the presence of the three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology, each of which is discussed below.

Hydrophytic Vegetation. Hydrophytic vegetation is defined as “the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content” (USACE 1987). The wetland indicator status of each species recorded on-site was determined by using the list of wetland plants for California provided by the USACE (Lichvar et al. 2016). The wetland indicator status of a plant can be one of the following:

Obligate (OBL) – Plants that have a 99 percent probability of occurring in wetlands under natural conditions.

Facultative-Wet (FACW) – Plants that occur in wetlands (67–99 percent probability) but are occasionally found in non-wetlands.

Facultative (FAC) – Plants that are equally likely to occur in wetlands or non-wetlands (estimated probability 34–66 percent).

Facultative Upland (FACU) – Plants that are most often found in upland sites (estimated probability 67–99 percent).

Upland (UPL) – Plants that almost always occur in upland sites (estimated probability greater than 99 percent).

No Indicator (NI) – Plants for which insufficient data are available to determine an indicator status for the local region. These are considered upland species unless other data to support a different status are available.

Hydric Soils. A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the accumulation of visible indicators of extended saturation (USACE 1987). Information on the soil types sampled in the project site is summarized from the Soil Survey for Riverside County (USDA 1971 and 2020) and the Hydric Soils of California list obtained from the Natural Resource Conservation Service (2020).

Hydrology. Wetland hydrology indicators are used to determine if inundation or saturation has occurred on a site. These indicators are features that suggest current or recent flows through an area but do not provide information about the timing, duration, or

frequency of the event. Hydrology features are generally the most ephemeral of the three wetland parameters (USACE 2008b). Hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrology indicators in the field.

2.4.1 Jurisdictional Criteria

2.4.1.1 U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the USACE regulates the dredging or discharge of fill material into waters of the U.S. including wetlands and non-wetland waters of the U.S. Waters of the U.S. are defined as “the territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters.”

Potential USACE jurisdictional wetlands may include those areas that meet all three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. Potential USACE jurisdictional non-wetland waters may include vegetated or unvegetated streams, open water, and other aquatic areas with strong hydrology indicators such as the presence of an ordinary high water mark (OHWM). An OHWM is defined as:

... that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 Code of Federal Regulations Part 328.3).

Areas delineated as non-wetland waters may lack wetland vegetation or hydric soil characteristics. Hydric soil indicators may be missing, because topographic position precludes ponding and subsequent development of hydric soils. Absence of wetland vegetation can result from frequent scouring due to rapid water flow.

2.4.1.2 California Department of Fish and Wildlife

Under Sections 1600–1607 of the California Fish and Game Code (CFGF), the CDFW regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. In most cases, CDFW jurisdictional areas overlap USACE jurisdictional areas; however, the CDFW also regulates native riparian vegetation associated with watercourses, regardless of USACE jurisdiction.

2.4.1.3 Regional Water Quality Control Board

The RWQCB is the regional agency responsible for protecting water quality in California. The jurisdiction of the RWQCB includes all waters of the State and all waters of the U.S. as mandated by both Section 401 of the federal Clean Water Act and the California Porter–Cologne Water Quality Control Act. State waters consist of areas that meet one of three wetland parameters (hydrology, hydric soils, or hydrophytic vegetation), and generally include, but are not limited to, all waters under the jurisdiction of USACE and CDFW.

3.0 Existing Conditions

3.1 Site Topography

The survey area consists of a series of small hills, with elevations ranging from approximately 1,400 feet above mean sea level (amsl) in a stream in the southwest corner of the survey area, to 1,700 feet amsl in the on a hill in the eastern portion of the survey area.

There are several small drainages generally flowing northeast to southwest in low areas through the main portion of the survey area. A larger unnamed stream flows east to west just south of Subarea 4. This larger stream drains into Canyon Lake, approximately 0.8 mile to the southwest.

3.2 Botanical Resources

The survey area supports 10 vegetation communities and land cover types: southern riparian scrub, southern riparian woodland, disturbed wetland, non-native riparian, native grassland, Riversidean sage scrub (including disturbed), disturbed habitat, eucalyptus woodland, non-native vegetation, and developed land (Table 1 and Figure 4). A total of 56 plant species were identified within the survey area, including 21 (38 percent) native species and 35 (63 percent) non-native species (Attachment 1). Sensitive plant species are discussed in Section 4.3.

Table 1 Vegetation Communities within the Survey Area (acres)			
Vegetation Community	Project Site	Survey Buffer	Total Survey Area
Southern riparian scrub	0.41	10.14	10.55
Southern riparian woodland	-	1.31	1.31
Disturbed wetland	2.21	1.10	3.31
Non-native riparian	1.27	1.16	2.43
Native grassland	0.20	-	0.20
Riversidean sage scrub	0.80	35.73	36.53
Disturbed habitat	69.45	91.88	161.33
Eucalyptus woodland	5.40	-	5.40
Non-native vegetation	0.98	-	0.98
Developed land	148.74	122.17	270.91
Total	229.46	263.49	492.95

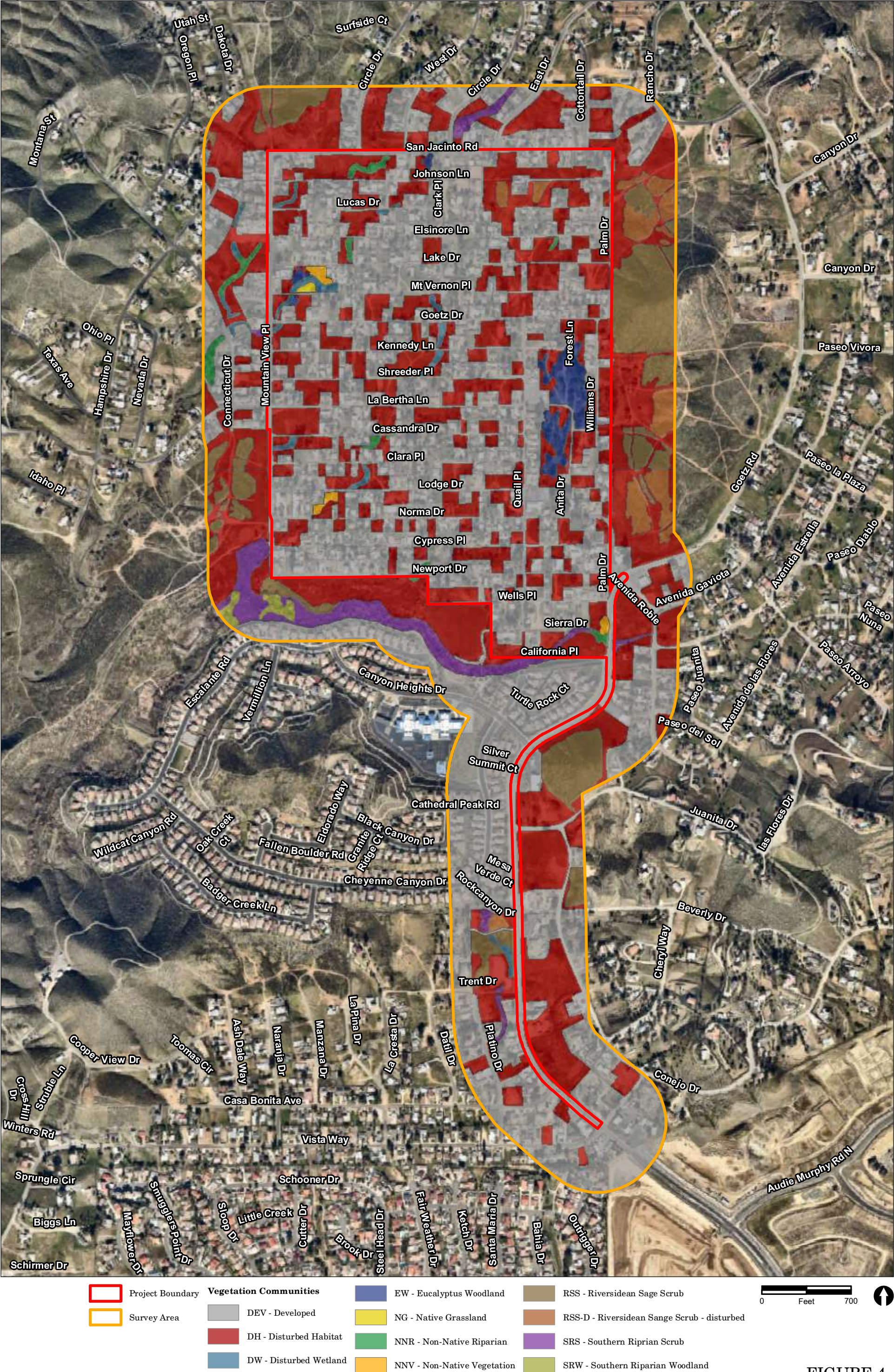


FIGURE 4

Vegetation Communities and Potential Habitat

Southern riparian scrub. Southern riparian scrub is dominated by a variety of broad-leaved, winter-deciduous trees and shrubs. This plant community is typically found along drainages with frequent flooding or other disturbance that prevents succession into a larger tree-dominated woodland. The majority of the southern riparian scrub within the survey area is located along the larger stream, flowing east-west just to the south of Subarea 4 (see Figure 4). The western stretch of this southern riparian scrub, beginning north of Escalante Road, supports a higher vegetation density, whereas the habitat to the east of this area is more open, with an Arizona crossing, a pedestrian bridge, and riprap for erosion control. One other patch of southern riparian scrub occurs along a drainage north of San Jacinto Road in the northern portion of the 500-foot survey buffer (see Figure 4). The southern riparian scrub is dominated by red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), and mule fat (*Baccharis salicifolia*), with occasional Mexican fan palm (*Washingtonia robusta*), palo verde (*Parkinsonia* sp.), and dwarf nettle (*Urtica urens*).

Southern Riparian Woodland. Southern riparian woodland is dominated by moderately larger woody riparian trees with a sparse cover by riparian shrubs and smaller trees (Oberbauer et al. 2008). It occurs along drainages, often in areas with moderate levels of flooding or scour. Within the survey area, southern riparian woodland occurs in two patches along the east-west stream just southwest of Subarea 4 (see Figure 4). It is dominated by Fremont cottonwood (*Populus fremontii*), red willow, Goodding's black willow (*Salix gooddingii*), and Mexican fan palm.

Disturbed Wetland. Disturbed wetland is a wetland vegetation community dominated by low-growing, wetland species that occur in areas that have been significantly modified by human activity. It often occurs in drainages and is generally characterized by non-native wetland species intermixed with occasional native species. Disturbed wetland occurs in numerous patches along the smaller drainages throughout the survey area (see Figure 4). Characteristic plants found in the disturbed wetland include annual beard grass (*Polypogon monspeliensis*), African umbrella plant (*Cyperus involucratus*), spike rush (*Eleocharis* sp.), Bermuda grass (*Cynodon dactylon*), and western sunflower (*Helianthus annuus*).

Non-native Riparian. Non-native riparian habitat consists of thickets of non-native invasive riparian species. It occurs in several small patches in the drainages throughout the survey area (see Figure 4). These patches are dominated by exotic species including giant reed (*Arundo donax*), tamarisk (*Tamarix* sp.), Mexican fan palm, and palo verde.

Native Grassland. Native grassland is a vegetation community dominated by perennial native grass species. There is one small area of native grassland in the survey area, consisting of a patch of salt grass (*Distichlis spicata*) located just north of Mt. Vernon Place, just outside one of the small drainages (see Figure 4).

Riversidean Sage Scrub. Riversidean sage scrub is a relatively open shrub community of soft-woody shrubs that generally reach up to 3 feet in height. It is found in dry areas in Riverside County. There are two small patches of Riversidean sage scrub on the project site and several larger patches within the 500-foot survey buffer. The two small patches in the project site are between Johnson Lane and Lucas Drive, to the east and west of a single-family residence. These patches appear to be cleared or trimmed regularly, likely for

brush management purposes, and have a total shrub cover of approximately 20 percent. The patches outside the project site, in the 500-foot survey buffer have somewhat higher shrub cover, approximately 35 percent, but are intersected by numerous well-established off-road vehicle trails. The Riversidean sage scrub is dominated by California buckwheat, with lesser amounts of brittlebush (*Encelia farinosa*), abundant non-native species, including red brome (*Bromus rubens*), Mediterranean schismus (*Schismus barbatus*), Russian thistle (*Salsola tragus*), tocalote (*Centaurea melitensis*), and long-beak filaree (*Erodium botrys*).

Disturbed Habitat. Disturbed habitat consists of areas that have been previously disturbed by human activities and no longer function as a native or naturalized vegetation community. These areas include previously graded lands such as fire breaks, off-road vehicle trails, and construction staging sites (Oberbauer et al. 2008). The disturbed habitat predominantly consists of cleared, unvegetated areas, with patches of non-native grasses and forbs. The majority of the plants found in the disturbed habitat are non-native species such as wild oats (*Avena* sp.), Mediterranean schismus, red brome, long-beak filaree, and short-pod mustard (*Hirschfeldia incana*). Native species are uncommon in the disturbed habitat, but include scattered California buckwheat, paniculate tarplant (*Deinandra paniculata*), and salt grass.

Eucalyptus Woodland. Eucalyptus woodland occurs in one large patch in an undeveloped area in the eastern portion of the survey area, as well as two small patches adjacent to existing residences. Eucalyptus woodland is dominated by exotic gum trees (*Eucalyptus* sp.). Gum trees are a non-native species that was historically planted in southern California. In some locations eucalyptus trees have become naturalized and spread into surrounding areas, often displacing native habitats.

Non-native Vegetation. Non-native vegetation is mapped in areas dominated by non-native or ornamental shrubs or trees that occur outside the limits of existing developed properties. Areas of ornamental landscaping on developed parcels are not included in this category. The most common species in the non-native vegetation is palo verde, with lesser amounts of Brazilian pepper tree (*Schinus terebinthifolius*) and Mexican fan palm. Understory elements include bull thistle (*Cirsium vulgare*), Bermuda grass (*Cynodon dactylon*), and non-native grasses.

Developed Land. Developed land within the survey area includes existing roads, sidewalks, residences and associated maintained landscaping, and commercial developments. Generally, vegetation in these areas is characterized by ornamental trees and shrubs, with occasional native or non-native species recruiting into more open areas.

3.3 Zoological Resources

Given the nature of the biological survey and lack of access to much of the survey area, the number of wildlife species detected was very low, with only eight species recorded (Attachment 2). These are largely urban-adapted species typical of disturbed areas, including common buckeye (*Junonia coenia grisea*), cabbage white butterfly (*Pieris rapae*),

American crow (*Corvus brachyrhynchos hesperis*), black phoebe (*Sayornis nigricans semiatra*), bushtit (*Psaltiriparus minimus melanurus*), house finch (*Haemorrhous mexicanus frontalis*), northern mockingbird (*Mimus polyglottos polyglottos*), and Botta's pocket gopher (*Thomomys bottae*). Section 4.4 addresses sensitive wildlife species and their potential to occur.

3.4 Burrowing Owl Habitat Assessment

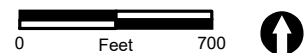
The western burrowing owl is a CDFW species of special concern. It generally prefers open, short-grass areas with level to gentle topography and well-drained soils, including open sage scrub, desert scrub, grasslands, and disturbed and agricultural areas. These areas are also often associated with burrowing mammals. MSHCP-designated burrowing owl survey area occurs primarily in the 500-foot survey buffer, but extends a small way onto the project site in the eastern and southwestern portions of the site (Figure 5).

No owls, burrows, or owl sign were detected during the surveys, although suitable habitat is present. Within the MSHCP designated burrowing owl survey area, the Riversidean sage scrub and disturbed habitat would be considered suitable for western burrowing owl includes. The Riversidean sage scrub has a moderate shrub component, which reduces visibility for the owls, affecting their ability to find prey and detect predators. Although this is not ideal for western burrowing owl, the habitat in the survey area is generally somewhat open, so it is not possible to exclude it as potentially suitable. Figure 5 shows suitable habitat for western burrowing owl based on the biological survey and habitat assessment.

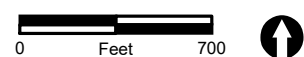
Although no California ground squirrels or burrows were observed during the surveys, they are expected to be present throughout the suitable habitat in the 500-foot survey buffer. Potential prey items, including insects, lizards, and small mammals are anticipated to occur. Based on the presence of suitable habitat within the MSHCP designated burrowing owl survey area, this species has moderate potential to occur.

3.5 Potential Jurisdictional Wetlands/Waters

The survey area supports a series of small swales and drainages, generally flowing from the northeast to southwest as these features cross through the northern portion of the survey area (Figure 6). These features drain into a stream channel and riparian corridor that occurs along the northern boundary of a large housing development south and east of the survey area (see Figure 6). This stream channel continues southwest out of the survey area to drain into nearby Canyon Lake. In the southern portion of the survey area, drainage and swale features occur on the east and west side of Goetz Road, generally flowing south out of the survey area and draining into the eastern bay of Canyon Lake.



*Note: The suitable habitat shown is limited to portions of the survey area that are within the MSHCP burrowing owl survey area.



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Within the survey area, the drainage and swale features exhibit hydrology indicators, including signs of sediment and drift deposits and the presence of a bed and bank. The width and depth of features vary greatly and show signs of disturbance and/or modification as they weave between developed and undeveloped land. Culverts occur where the larger drainages cross roads. However, the majority of crossings occur without a culvert as water appears to flow directly over the road surface.

Most portions of the drainage and swale features are either unvegetated or contain sparsely vegetated disturbed habitat and may be considered jurisdictional as non-wetland waters of the U.S./State (see Figure 6). However, hydrophytic vegetation has developed in some portions in the form of southern riparian scrub, southern riparian woodland, disturbed wetland, and non-native riparian as described above. With the presence of hydrophytic vegetation and hydrology, these areas may be considered jurisdictional as wetland waters of the U.S./State (see Figure 6).

4.0 Sensitive Biological Resources

4.1 Sensitivity Criteria/Regulatory Setting

For purposes of this report, species will be considered sensitive if they are (1) listed or proposed to be listed by state or federal agencies as threatened or endangered; (2) on California Rare Plant Rank (CRPR) 1B (considered endangered throughout its range), CRPR 2 (considered endangered in California but more common elsewhere), CRPR 3 (more information about the plant's distribution and rarity needed), or CRPR 4 (plants of limited distribution) of the CNPS Inventory of Rare and Endangered Vascular Plants of California (2020); or (3) considered rare, endangered, or threatened by CDFW (CDFW 2020a–c).

4.1.1 State Regulations

Under Section 3503 of the CFGC, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. CFGC Section 3503.5 prohibits take, possession, or destruction of any birds in the orders Falconiformes (raptors) or Strigiformes (owls) or of their nests and eggs.

4.1.2 Federal Regulations

The federal Migratory Bird Treaty Act of 1918 (MBTA) was established to provide protection to the breeding activities of migratory birds throughout the U.S. The MBTA protects migratory birds and their breeding activities from direct take. U.S. Department of the Interior Memorandum M-37050 interpreted the federal MBTA to no longer cover incidental take of migratory birds (U.S. Department of the Interior 2017). That interpretation was rejected in federal court on August 11, 2020, a federal district court decision rejected that interpretation.

4.1.3 County Regulations

The project site is located within the boundaries of the Western Riverside MSHCP (WRCRCA 2003). The MSHCP allocates responsibility for assembly and management of its Conservation Areas to local, state, and federal governments, as well as private and public entities engaged in construction that may impact MSHCP covered species. As lead agency, the District is not a participant in the MSHCP; however, the project must still demonstrate it would not prevent implementation of the conservation goals and objectives of the MSHCP.

Criteria Cells. The proposed project is not located within a designated criteria cell so no mitigation for impacts to vegetation communities would be required by the MSHCP.

Riparian/Riverine Areas and Vernal Pools. Section 6.1.2 of the MSHCP addresses protection of riparian habitat, vernal pools, and the listed species dependent on them. No vernal pools were found or are expected to occur in the project site. No vernal pools were observed in the 500-foot survey buffer; however, lack of direct access to private property reduced the ability to view the entirety of the buffer. Any vernal pools that may occur in the survey buffer would lie outside the footprint of the proposed project and are not expected to be a constraint to proposed project.

There are several small patches of wetland habitat within the project site and a riparian corridor in the survey buffer to the south of Subarea 4 that may meet the definition of riparian/riverine per the MSHCP. The riparian corridor in the survey buffer has moderate potential to support least Bell's vireo or other listed species identified in Section 6.1.2 of the MSHCP. An assessment of potential for listed and sensitive species to occur in the survey area is presented in Section 4.3.

Narrow Endemic Species. Section 6.1.3 of the MSHCP identifies Narrow Endemic Plant Species survey areas, which are intended to protect species that have very limited ranges and specific habitat requirements. The survey area does not lie within a Narrow Endemic Plant Species survey area and no narrow endemic species have moderate or high potential to occur.

Urban/Wildlands Interface. Section 6.1.4 of the MSHCP addresses guidelines to address indirect effects on species and habitats occurring in natural areas adjacent to development. Specifically, it addresses drainage, toxics, lighting, noise, and invasive species in areas adjacent to designated MSHCP Conservation Areas. Although there are natural habitats within and adjacent to the survey area, no MSHCP Conservation Areas occur in the survey area, so these guidelines would not apply.

Burrowing Owl Survey Area. Portions of the project are located within the MSHCP designated burrowing owl survey area (see Figure 4), so a habitat assessment and focused surveys are anticipated to be required for this species per Section 6.3.2 of the MSHCP. These requirements are discussed in Section 5.3, below.

4.2 Sensitive Vegetation Communities

Six vegetation communities within the survey area would be considered sensitive: southern riparian scrub, southern riparian woodland, disturbed wetland, non-native riparian, native grassland, and Riversidean sage scrub (including disturbed). These sensitive vegetation communities are most abundant in the 500-foot survey buffer, but also occur in limited patches within the project site, primarily associated with drainages.

4.3 Sensitive Plants

No sensitive or narrow endemic plant species were observed within the survey area during the biological surveys. Five sensitive species have database records within approximately two miles of the project site: smooth tarplant (*Centromadia pungens* ssp. *laevis*; CRPR 1B.1), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*; CRPR 1B.1), Parry's spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1), Munz's onion (*Allium munzii*; federally endangered, state threatened, CRPR 1B.1), and thread-leaved Brodiaea (*Brodiaea filifolia*; federally endangered, state threatened, CRPR 1B.). None of these species is expected to occur in the project site due to the high level of disturbance in and a lack of suitable habitat; however, smooth tarplant has moderate potential to occur in the 500-foot survey buffer (Attachment 3).

Smooth tarplant. Smooth tarplant has no state or federal status, but is a CRPR 1B.1 species. It blooms from April through September (Munz 1974) and occurs in grasslands, open scrub habitats, and disturbed areas. The survey was performed during this species' blooming period and no individuals were detected. However, due to limited access to the surrounding 500-foot survey buffer, an exhaustive search was not possible. The database search identified a 2017 record of this species disturbed, vacant lot near the Southern California Edison Newcomb Substation approximately two miles southeast of the project site. Based on the presence of suitable habitat and the presence nearby records, smooth tarplant is considered to have moderate potential to occur in the disturbed habitat and Riversidean sage scrub both within the project site and the surrounding 500-foot survey buffer.

4.4 Sensitive Wildlife

No sensitive wildlife species were observed within the survey area. Two sensitive wildlife species, Cooper's hawk and San Diego black-tailed jackrabbit, have moderate potential to occur on the project site.

Cooper's hawk. Cooper's hawk is a CDFW watch list species and an MSHCP covered species. It has moderate potential to nest within the large stand of Eucalyptus woodland in the eastern portion of the project site. The willow and cottonwood trees in the southern riparian scrub and woodland along the east-west stream to the south of Subarea 4, in the survey buffer, also have moderate potential for Cooper's hawk nesting.

San Diego black-tailed jackrabbit. San Diego black-tailed jackrabbit is a CDFW species of special concern. It has moderate potential to occur within several of the larger patches of the disturbed habitat and other native habitats in the project site, particularly in areas adjacent to the native habitats in the surrounding 500-foot survey buffer.

Nine sensitive species were determined to have moderate potential to occur in the 500-foot survey buffer. These species are listed below and presented in Attachment 3.

Orange-throated whiptail
San Diegan tiger whiptail
Red diamond rattlesnake
Western burrowing owl
Least Bell's vireo
Coastal California gnatcatcher
California horned lark
Southern California rufous-crowned sparrow
Cooper's hawk

Orange throated-whiptail, San Diegan tiger whiptail, and Red-diamond rattlesnake. These species are CDFW species of special concern and MSHCP covered species. They may occur in the Riversidean sage scrub and riparian habitat in the areas surrounding the project site but are not expected to occur on the project site.

Western burrowing owl. The western burrowing owl is a CDFW species of special concern and MSHCP covered species. MSHCP designated burrowing owl survey areas are present in survey area. As discussed in Section 3.4, the Riversidean sage scrub and disturbed habitat in the designated burrowing owl survey area would be considered suitable for western burrowing owl (see Figure 5). This species has low potential to occur within the project site, and moderate potential to occur in the surrounding 500-foot survey buffer.

Least Bell's vireo. Least Bell's vireo is a federal and state-listed endangered species and is an MSHCP covered species. The species is exclusively found in riparian woodlands, forests, and scrubs. It requires dense canopy for foraging and a dense cover understory for nesting (Unitt 2004; USFWS 1998). The disturbed wetland and non-native riparian habitats on-site are dominated by exotic species and are highly disturbed, making them unsuitable for least Bell's vireo. The southern riparian scrub and woodland in the wide portion of the east-west stream in the southwestern portion of the 500-foot survey buffer is moderately suitable; however, the narrower portions in the south-central and southeastern portions of the survey buffer are likely too sparse and disturbed to provide suitable habitat. The small patch of southern riparian scrub in the northern portion of the survey buffer, north of San Jacinto Road and east of Circle Drive, has suitable willows, but is likely too isolated and restricted to provide suitable habitat for this species.

Coastal California gnatcatcher. Coastal California gnatcatcher is a federally listed threatened and a CDFW species of special concern. This species occurs in or near mature coastal sage scrub habitat (Atwood and Bontrager 2001), generally in areas with

lower-growing (less than 3 feet) shrub and sub-shrub species. This species' ideal host shrub is California sagebrush (*Artemisia californica*), but it may also use California buckwheat, encelia, and broom baccharis (*Baccharis sarothroides*; Unitt 2004). The Riversidean sage scrub on the project site is too limited and disturbed to provide suitable habitat; however, the habitat found on the hills in the eastern and northwestern portions of the 500-foot survey buffer is moderately suitable. This habitat has somewhat limited shrub diversity and is largely dominated by California buckwheat, with little or no California sagebrush observed in the accessible areas. The Riversidean sage scrub in the survey buffer to the west of the project site is very sparse and only marginally suitable. The patches to the east and west of Goetz Road south of Subarea 4 are likely too small to support this species.

California horned lark. California horned lark is a CDFW watch list species and a MSHCP covered species. It occurs in arid grasslands, agricultural lands, and other disturbed, sparsely vegetated areas, but is not common in chaparral (Unitt 2004). The disturbed habitat and Riversidean sage scrub on the project site are largely too fragmented and urbanized to provide suitable habitat for California horned lark. However, the Riversidean sage scrub and other open habitats in the 500-foot survey buffer likely provide moderately suitable habitat.

Southern California rufous-crowned sparrow. Southern California rufous-crowned sparrow is a CDFW watch list species and an MSHCP covered species. It is found in sage scrub, broken or burned chaparral habitats, and grasslands with scattered shrubs, and exhibits a strong preference for moderate to steep, south-facing, dry, rocky slopes with moderate percent cover of low shrubs (Unitt 2004; Collins 1999). The habitat on the project site is too urbanized and disturbed to provide suitable habitat for this species; however, the Riversidean sage scrub in the surrounding 500-foot survey buffer provides moderately suitable habitat.

4.5 Potential Jurisdictional Wetlands/Waters

As described in Section 3.5, the survey area supports drainage and swale features, portions of which contain wetland vegetation. These features have potential to be considered jurisdictional wetland or non-wetland waters of the U.S. and/or State. Jurisdictional wetlands and waters are considered sensitive resources and impacts may require permits and mitigation.

4.6 Wildlife Movement Corridors

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provide corridors for wildlife travel. Wildlife movement corridors are important because they provide access to mates, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations (Beier and Loe 1992). Wildlife movement corridors are considered sensitive by resource and conservation agencies.

No wildlife corridors occur in the project site as it is largely developed and highly disturbed. The riparian corridor along the east-west stream south of the western portion of Subarea 4, in the survey buffer may provide moderate corridor functions; however, it is somewhat disturbed, with road crossings and stormwater control features. The Riversidean sage scrub on the hills surrounding the project site likely provides moderate to high-quality habitat for wildlife, but would not be considered a movement corridor.

5.0 Biological Constraints

The proposed sewer expansion within the project site could be constrained by sensitive biological resources. The project would be required to avoid or mitigate impacts to sensitive biological resources. Biological resources on the property that may be considered constraints include sensitive vegetation communities, plant and wildlife species, and jurisdictional wetlands and waters. For planning purposes, biological constraints are broken into three constraint levels, as follows:

- Low** These areas may require additional studies or focused surveys. Impacts would not require revegetation or mitigation. No or limited construction monitoring may be required.
- Moderate** These areas may require additional studies or focused surveys. Impacts may require revegetation and/or mitigation. Limited to moderate construction monitoring may be required.
- High** These areas may require additional studies or focused surveys. Resource agency permits may be required. Impacts would require restoration/revegetation and mitigation. Full-time construction monitoring may be required.

The overall constraint level from each of these resources is shown on Figure 7.

5.1 Vegetation Communities

Sensitive Vegetation Communities. Sensitive vegetation communities within the survey area include southern riparian scrub, southern riparian woodland, non-native riparian, disturbed wetland, native grassland, and Riversidean sage scrub. Wetland vegetation communities (southern riparian scrub, southern riparian woodland, non-native riparian, and disturbed wetland) entirely overlap with the jurisdictional wetlands and constraints from these communities are discussed in Section 5.4. Impacts to native grassland and Riversidean sage scrub are not anticipated to require mitigation; however, impacted areas would need to be revegetated in-kind following construction. A biological monitor would be required during construction within or adjacent to these areas. Therefore, the constraint level from these vegetation communities would be considered **moderate**.

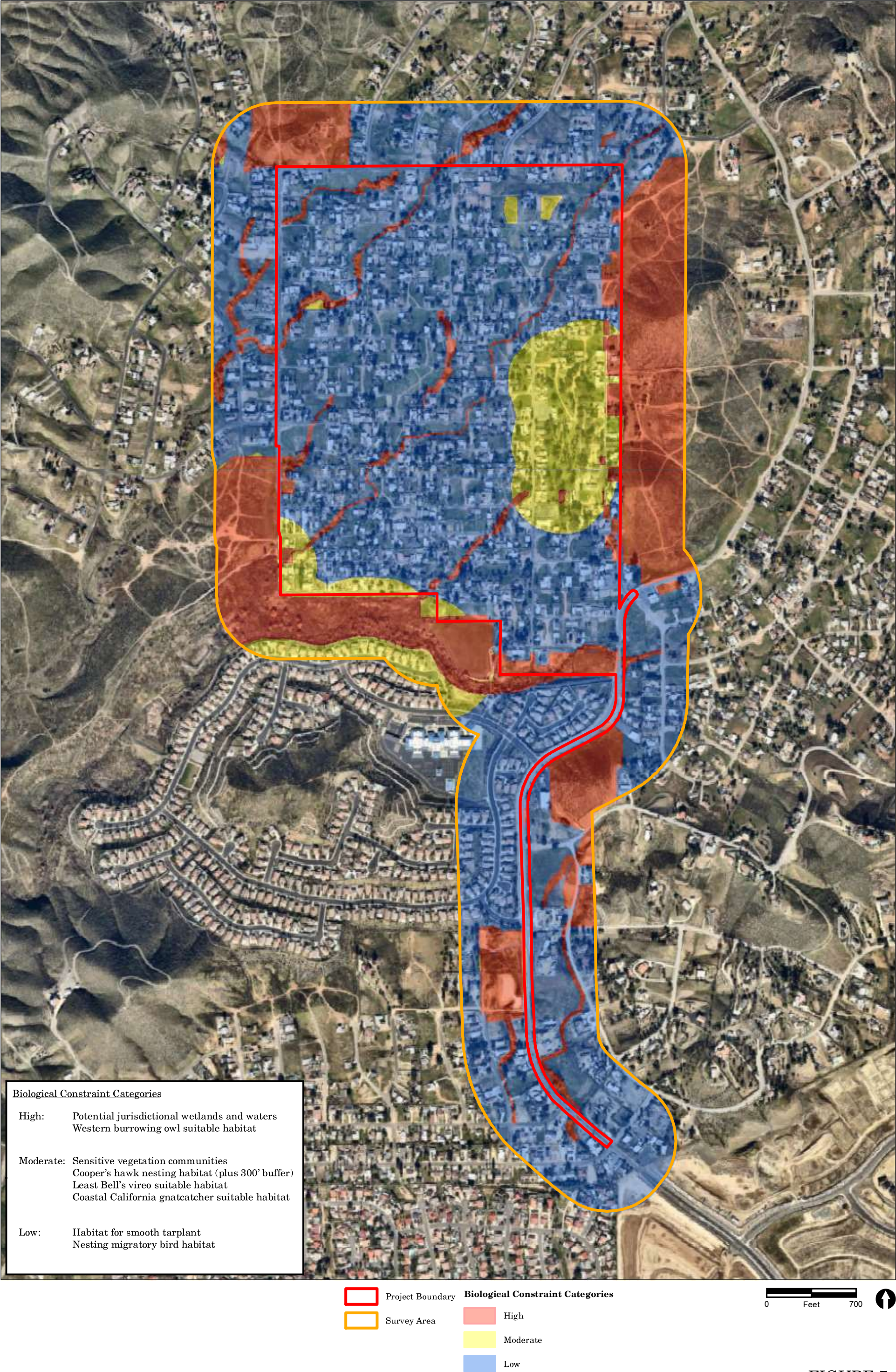


FIGURE 7
Biological Constraints

5.2 Plant Species

One sensitive plant species, smooth tarplant, has moderate potential to occur in disturbed habitat and Riversidean sage scrub on the project site and surrounding 500-foot survey buffer. Any impacts to smooth tarplant are not expected to affect the long-term survival of the species or the local population. Therefore, potential impacts to smooth tarplant would be less than significant. Nonetheless, to reduce potential impacts to this species, topsoil should be stockpiled during construction and replaced on the regraded landscape following construction. The constraint level from smooth tarplant would be considered **low**.

5.3 Wildlife Species

San Diego black-tailed jackrabbit. San Diego black-tailed jackrabbit has moderate potential to occur on the project site and the surrounding 500-foot survey buffer. San Diego black-tailed jackrabbit is highly mobile and is expected to be capable of avoiding construction equipment. Additionally, due to its low sensitivity, any impacts are not expected to affect the long-term survival of the species or the local population. Therefore, this species is not expected to present a constraint on project implementation.

Cooper's hawk and other raptors. The eucalyptus woodland and southern riparian woodland within the survey area may provide suitable nesting habitat for Cooper's hawk and other tree-nesting raptors. As no trees are anticipated to be removed by the project, direct impacts to raptor nesting are not expected occur. However, construction noise and activities have potential to cause indirect impacts on these species. Typically, avoidance and mitigation measures include timing of construction outside the breeding season (February 1 to August 31), establishment, pre-construction nest surveys, establishment of avoidance buffers for any active nests (generally 300 feet), and biological monitoring for any construction adjacent to the avoidance buffer. Based on these avoidance and mitigation requirements, the land within 300 feet of the eucalyptus woodland is given a constraint level of **moderate** (see Figure 7).

Orange throated-whiptail, San Diegan tiger whiptail, and Red-diamond rattlesnake. These species are not expected to occur in the project site, but have potential to occur in the Riversidean sage scrub and riparian habitat in the areas surrounding the project site. Project implementation is not expected to affect the long-term survival of these species or their local populations. Therefore, these species are not expected to present a constraint on project implementation.

Western burrowing owl. Western burrowing owl has potential to occur in Riversidean sage scrub and disturbed habitat in the MSHCP designated burrowing owl survey area along the outer portion of project site and in the 500-foot survey buffer (see Figure 5). Any direct impacts to this species would be significant and require mitigation. Prior to any work within the areas shown as suitable habitat on Figure 5, focused surveys and pre-construction take avoidance surveys may be required per the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (WRCRCA 2006). Biological construction monitoring would likely be required for any work

within or adjacent to suitable habitat. Additional avoidance measures and mitigation (potentially including capture and relocation of owls) may be required if owls are present. Based on these factors, suitable habitat for western burrowing owl is given a constraint level of **high** (see Figure 7).

Least Bell's vireo. Least Bell's vireo is not expected to occur on the project site but has moderate potential to occur in the southern riparian scrub and southern riparian woodland along the east-west stream south of the western portion of Subarea 4. As construction is not expected to occur in the survey buffer, no direct impacts to least Bell's vireo are anticipated. However, if construction occurs during the breeding season (February 1 to August 31), construction noise has potential to cause indirect impacts. These impacts would be considered significant and require mitigation. Protocol surveys may be required to determine presence or absence in the riparian habitat in the survey buffer. Typical measures to prevent noise impacts include installation of noise attenuation walls or other barriers, and noise monitoring during construction. Based on these factors, the suitable riparian habitat south of Subarea 4 is given a constraint level of **moderate** (see Figure 7).

Coastal California gnatcatcher. Coastal California gnatcatcher has no potential to occur on the project site but has moderate potential to occur in the Riversidean sage scrub in the 500-foot survey buffer to the east and northwest of the project site. As construction is not expected to occur in the survey buffer, no direct impacts to coastal California gnatcatcher are expected; however, if construction occurs during the breeding season (February 1 to August 31), construction noise has potential to cause indirect impacts. These impacts would be considered significant and require mitigation. Protocol surveys may be required to determine presence or absence of coastal California gnatcatchers in Riversidean sage scrub adjacent to any construction areas. Typical measures to prevent noise impacts include installation of noise attenuation walls or other barriers, and noise monitoring during construction. Based on these factors, all Riversidean sage scrub suitable for coastal California gnatcatcher is given a constraint level of **moderate** (see Figure 7).

California horned lark and southern California rufous-crowned sparrow. California horned lark and southern California rufous-crowned sparrow are not expected to occur on the project site but have potential to occur in the habitat within the surrounding 500 feet. Thus, no direct impacts to these species are anticipated. Indirect noise impacts may occur to these species if they are nesting in the adjacent habitat when construction occurs. However, project implementation is not expected to affect the long-term survival of these species or their local populations. Therefore, these species are not expected to present a constraint on project implementation.

General migratory birds. Migratory birds protected by CFGC Section 3503 have potential to nest throughout the survey area, including in all vegetation communities. Direct impacts to migratory or nesting birds could occur if vegetation removal occurs during the general bird breeding season (February 1 to August 31). Direct impacts to nesting migratory birds would be considered significant and require mitigation. If vegetation clearing would occur during the breeding season, a pre-construction nesting bird survey

may be required. Due to the requirement for pre-construction surveys and construction monitoring, the constraint level from general migratory birds would be considered **low**.

5.4 Potential Jurisdictional Resources

The project area supports a series of drainage and swale features, portions of which contain wetlands (southern riparian scrub, southern riparian woodland, non-native riparian, and disturbed wetland), as discussed above.

Prior to work in these areas, a formal jurisdictional wetland/waters delineation would be required. In addition, any impacts to these areas would likely require a Section 404 permit from the USACE, a Section 401 Water Quality Certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement from the CDFW. The resource agencies are anticipated to require mitigation, including habitat restoration, to meet the “no net loss” requirement for wetlands and waters. In addition, a biological monitor would be required during construction within or adjacent to these areas. Therefore, all areas of potential wetlands and waters are given a constraint level of **high** (see Figure 7).

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ATTACHMENTS

ATTACHMENT 1

Plant Species Observed

Attachment 1 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
GYMNOSPERMS			
PINACEAE	PINE FAMILY		
<i>Pinus canariensis</i>	Canary Island pine	DEV	I
<i>Pinus halepensis</i>	Aleppo pine	DEV	I
ANGIOSPERMS: MONOCOTS			
ARECACEAE	PALM FAMILY		
<i>Phoenix canariensis</i>	Canary Island palm	DW	I
<i>Syagrus romanzoffiana</i>	queen palm	DEV	I
<i>Washingtonia robusta</i>	Mexican fan palm	NNR, SRW, SRS, DW, NNV, DEV, EW	I
CYPERACEAE	SEDGE FAMILY		
<i>Cyperus involucratus</i>	African umbrella plant	DW	I
<i>Eleocharis</i> sp.	spike-rush	DW	N
POACEAE (GRAMINEAE)	GRASS FAMILY		
<i>Arundo donax</i>	giant reed	NNR	I
<i>Avena</i> sp.	oats	DW, DH, EW	I
<i>Bromus diandrus</i>	ripgut grass	DH, EW	I
<i>Bromus rubens</i>	red brome	DH, RSS	I
<i>Cynodon dactylon</i>	Bermuda grass	DW, DH, NNV	I
<i>Distichlis spicata</i>	salt grass	NG, DH	N
<i>Polypogon monspeliensis</i>	annual beard grass	DW	I
<i>Schismus barbatus</i>	Mediterranean schismus	RSS, DH	I
TYPHACEAE	CATTAIL FAMILY		
<i>Typha</i> sp.	cattail	DW	N
ANGIOSPERMS: DICOTS			
AMARANTHACEAE	AMARANTH FAMILY		
<i>Amaranthus albus</i>	tumbleweed	DH, EW	I
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Schinus molle</i>	Peruvian pepper tree	SRW, DEV	I
<i>Schinus terebinthifolius</i>	Brazilian pepper tree	NNV, DEV	I
ASTERACEAE	SUNFLOWER FAMILY		
<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat	SRS	N
<i>Baccharis sarothroides</i>	broom baccharis	RSS	N
<i>Centaurea melitensis</i>	tochalote	RSS, DH	I
<i>Cirsium vulgare</i>	bull thistle	DW, NNV, DH	I
<i>Cotula coronopifolia</i>	brass-buttons	DW	I
<i>Deinandra paniculata</i>	paniculate tarplant	DH	N
<i>Encelia farinosa</i>	brittlebush	DH, RSS	N
<i>Erigeron [=Conyza] canadensis</i>	horseweed	DH	N
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	long-stem golden-yarrow	DH	N
<i>Helianthus annuus</i>	western sunflower	DW, RSS, DH	N
<i>Heterotheca grandiflora</i>	telegraph weed	EW	N
<i>Lactuca serriola</i>	prickly lettuce	DH, DW, EW	I
<i>Oncosiphon piluliferum</i>	stinknet, globe chamomile	DH	I
<i>Sonchus oleraceus</i>	common sow thistle	DH	I
<i>Xanthium strumarium</i>	cocklebur	DW	N

Attachment 1 Plant Species Observed			
Scientific Name	Common Name	Habitat	Origin
BRASSICACEAE (CRUCIFERAE)	MUSTARD FAMILY		
<i>Hirschfeldia incana</i>	short-pod mustard	DH, EW	I
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Salsola tragus</i>	Russian thistle, tumbleweed	DW, RSS, DH, EW	I
EUPHORBIACEAE	SPURGE FAMILY		
<i>Croton [=Eremocarpus] setiger</i>	turkey-mullein, dove weed	DH	N
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY		
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish-clover	DH	N
<i>Parkinsonia</i> sp.	palo verde	SRS, DW, NNR, DH, NNV, DEV	I
GERANIACEAE	GERANIUM FAMILY		
<i>Erodium botrys</i>	long-beak filaree	RSS, DH	I
LAMIACEAE	MINT FAMILY		
<i>Marrubium vulgare</i>	horehound	DH	I
<i>Trichostema lanceolatum</i>	vinegar weed	DH	N
MALVACEAE	MALLOW FAMILY		
<i>Malacothamnus fasciculatus</i>	chaparral mallow	EW	N
<i>Eucalyptus</i> sp.	gum tree	DEV, EW	I
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Eriogonum fasciculatum</i>	California buckwheat	RSS	N
<i>Polygonum</i> sp.	knotweed, smartweed	DH	I
<i>Rumex crispus</i>	curly dock	DW, NNV	I
SALICACEAE	WILLOW FAMILY		
<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood	SRW	N
<i>Salix gooddingii</i>	Goodding's black willow	DEV, SRW	N
<i>Salix laevigata</i>	red willow	SRS, SRW	N
<i>Salix lasiolepis</i>	arroyo willow	SRS, SRW	N
SIMAROUBACEAE	QUASSIA OR SIMAROUBA FAMILY		
<i>Ailanthus altissima</i>	tree of heaven	DEV	I
TAMARICACEAE	TAMARISK FAMILY		
<i>Tamarix</i> sp.	tamarisk	DW, NNR	I
ULMACEAE	ELM FAMILY		
<i>Ulmus parvifolia</i>	Chinese elm, lacebark elm	NNR, DEV	I
URTICACEAE	NETTLE FAMILY		
<i>Urtica urens</i>	dwarf nettle	SRS	I
ZYGOPHYLLACEAE	CALTROP FAMILY		
<i>Tribulus terrestris</i>	puncture vine	DEV	I
HABITATS DEV = Urban/developed DH = Disturbed habitat DW = Disturbed wetland EW = Eucalyptus woodland NG = Native grassland NNR = Non-native riparian NNV = Non-native vegetation RSS = Riversidean sage scrub SRS = Southern riparian scrub SRW = southern riparian woodland			
ORIGIN N = Native to locality I = Introduced species from outside locality			

ATTACHMENT 2

Wildlife Species Observed

Attachment 2 Wildlife Species Observed			
Scientific Name	Common Name	Occupied Habitat	Evidence of Occurrence
INVERTEBRATES			
PIERIDAE	WHITES & SULPHURS		
<i>Pieris rapae</i>	cabbage white (I)	DW, DH	O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES		
<i>Junonia coenia grisea</i>	common buckeye	DW	O
BIRDS			
TYRANNIDAE	TYRANT FLYCATCHERS		
<i>Sayornis nigricans semiatra</i>	black phoebe	DEV, DH	V, O
CORVIDAE	CROWS, JAYS, & MAGPIES		
<i>Corvus brachyrhynchos hesperis</i>	American crow	O	V, O
AEGITHALIDAE	BUSHTIT		
<i>Psaltiriparus minimus melanurus</i>	bushtit	NNV, RSS	V
MIMIDAE	MOCKINGBIRDS & THRASHERS		
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	DH	V
FRINGILLIDAE	FINCHES		
<i>Haemorhous mexicanus frontalis</i>	house finch	DH	V
MAMMALS			
GEOMYIDAE	POCKET GOPHERS		
<i>Thomomys bottae</i>	Botta's pocket gopher	DH	B
(I) = Introduced species HABITATS DEV = Urban/developed DH = Disturbed habitat DW = Disturbed wetland NNV = Non-native vegetation RSS = Riversidean sage scrub EVIDENCE OF OCCURRENCE B = Burrow O = Observed V = Vocalization			

ATTACHMENT 3

**Sensitive Plant and Wildlife Species with Potential to
Occur**

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
PLANTS – ANGIOSPERMS: DICOTS					
ASTERACEAE SUNFLOWER FAMILY					
Smooth Tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	CNPS Rank 1B.1	Annual herb; chenopod scrub, meadow and seeps, playas, riparian woodland, valley and foothill grasslands; alkaline soils; blooms April–September; elevation less than 2,100 feet. California endemic. Known from San Diego, Riverside, and San Bernardino counties.	No	Low on project site; moderate in survey buffer	No individuals were detected during the biological survey, which was conducted during this species' blooming period. Habitat on the project site is largely too developed to provide suitable habitat for this species. However, the habitat in the surrounding 500-foot survey buffer is suitable. There is a 2017 record of this species in a vacant lot approximately 2 miles to the southeast (CDFW 2020a).
REPTILES					
TEIIDAE WHIPTAIL LIZARDS					
Orange-throated whiptail <i>Aspidoscelis hyperythra</i>	CSC, MSHCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	Low on project site, moderate in survey buffer	The habitat on the project site is largely too developed to support this species; however, suitable Riversidean sage scrub occurs through much of the surrounding 500-foot survey buffer. There are numerous database records of this species within 2 miles of the project site (CDFW 2020a).

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	CSC MSHCP	Coastal sage scrub, chaparral, woodlands, and streamsid es where plants are sparsely distributed.	No	Low on project site, moderate in survey buffer	The habitat on the project site is largely too developed to support this species; however, suitable Riversidean sage scrub and riparian areas are abundant in the surrounding 500-foot survey buffer. The nearest record of this species is from 2001 at Audie Murphy Ranch in an agricultural field adjacent to riparian habitat 2 miles to the south of the project site (CDFW 2020a).
CROTALIDAE RATTLESNAKES					
Red diamond rattlesnake <i>Crotalus ruber</i>	CSC MSHCP	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields. Often found in association with large rocky outcrops.	No	Low on project site, moderate in survey buffer	The Riversidean sage scrub habitat on the project site lacks rocky outcrops and is largely too disturbed to support this species; however the habitat in the surrounding 500-foot survey buffer could provide suitable habitat. The nearest record of this species is from 2001 at Audie Murphy Ranch, in an agricultural field 2 miles to the south of the project site (CDFW 2020a).

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
BIRDS (Nomenclature from Chesser et al. 2019 and Unitt 2004)					
ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	WL MSHCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	No	Moderate	This species has moderate potential to nest within the patches of eucalyptus woodland on the project site. Patches of southern riparian woodland and southern riparian scrub are only marginally suitable.
STRIGIDAE TYPICAL OWLS					
Western burrowing owl (burrow sites) <i>Athene cunicularia hypugaea</i>	CSC MSHCP	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	No	Low on project site, moderate in survey buffer	No owls, suitable burrows, or owl sign were detected during the biological survey; however focused surveys have not been conducted. The habitat in the project site is largely too disturbed and developed to support this species, but the disturbed habitat and Riversidean sage scrub in the survey buffer is moderately suitable. There are several records of this species within two miles of the project site (CDFW 2020a).

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
VIREONIDAE VIREOS					
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE CE MSHCP	Willow riparian woodlands. Summer resident.	No	Not expected on project site, moderate in survey buffer	The riparian habitat on the project site is too limited and sparse to support this species, but the habitat along the east-west drainage to the south of Subarea 4 is more suitable. There are several records of this species in riparian habitat on the San Jacinto River and at Canyon Lake, within 1 to 2 miles of the project site (CDFW 2020a).
ALAUDIDAE LARKS					
California horned lark <i>Eremophila alpestris actia</i>	WL MSHCP	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub.	No	Low on project site, moderate in survey buffer	The habitat in the project site is largely too developed to support this species; however, the surrounding 500-foot survey buffer may be moderately suitable. The nearest records of this species are from 2000 in non- native grassland 1.25 southeast of the project site and from 2001 in a agricultural area at Audie Murphy Ranch 2 miles to the south of the project site (CDFW 2020a).

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
POLIOPTILIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT CSC MSHCP	Coastal sage scrub, maritime succulent scrub. Resident.	No	Low on project site, moderate in survey buffer	The habitat on the project site is highly disturbed and unsuitable for this species. The Riversidean sage scrub in the surrounding 500-foot survey buffer lacks plant diversity and is dominated by California buckwheat with little to no California sagebrush present. Thus, it is only moderately suitable. There are numerous records of this species in Riversidean sage scrub within two miles of the project site (CDFW 2020a).
PASSERELLIDAE NEW WORLD PASSERINES					
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	WL MSHCP	Coastal sage scrub, chaparral, grassland. Resident.	No	Low on project site, moderate in survey buffer	The habitat on the project site is highly disturbed and unsuitable for this species, but the Riversidean sage scrub in the surrounding 500-foot survey could provide suitable habitat. There are numerous records of this species in Riversidean sage scrub within two miles of the project site (CDFW 2020a).

Attachment 3
Sensitive Plant and Wildlife Species with Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
MAMMALS (Nomenclature from Jones et al. 1997 and Hall 1981)					
LEPORIDAE RABBITS & HARES					
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	CSC MSHCP	Open areas of scrub, grasslands, agricultural fields.	No	Moderate on project site, moderate in survey buffer	Habitat on site is moderately suitable, containing open areas and patches of riparian habitat. The Riversidean sage scrub in the surrounding 500-foot survey buffer is highly suitable for this species. There are several records of this species within 2 miles of the survey area (CDFW 2020a).
<p>STATUS CODES</p> <p>FE = Listed as endangered by the federal government</p> <p>FT = Listed as threatened by the federal government</p> <p>CE = Listed as endangered by the state of California</p> <p><u>Other</u></p> <p>CSC = California Department of Fish and Wildlife species of special concern</p> <p>MSHCP = Multiple Species Habitat Conservation Program</p> <p>WL = California Department of Fish and Wildlife watch list species</p> <p>CRPR 1B.1 = Identified by California Native Plant Society as rare, threatened, or endangered in California and elsewhere (over 80% of occurrences threatened; high degree and immediacy of threat).</p>					

ATTACHMENT 2

Information for Planning and Consultation Database Search Results

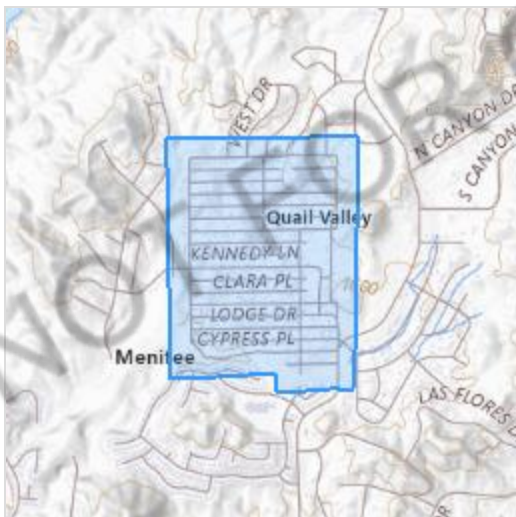
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Riverside County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

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1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat <i>Dipodomys stephensi</i> (incl. <i>D. cascus</i>) Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495	Threatened

Birds

NAME	STATUS
Coastal California Gnatcatcher <i>Polioptila californica californica</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered

Reptiles

NAME	STATUS
Southwestern Pond Turtle <i>Actinemys pallida</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4768	Proposed Threatened

Amphibians

NAME	STATUS
Western Spadefoot <i>Spea hammondi</i> No critical habitat has been designated for this species.	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Quino Checkerspot Butterfly <i>Euphydryas editha quino</i> (=E. e. wrighti) Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5900	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
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California Orcutt Grass *Orcuttia californica* **Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4923>

Munz's Onion *Allium munzii* **Endangered**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/2951>

Nevin's Barberry *Berberis nevinii* **Endangered**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/8025>

San Diego Ambrosia *Ambrosia pumila* **Endangered**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/8287>

San Jacinto Valley Crownscale *Atriplex coronata* var. *notatior* **Endangered**

Wherever found

There is **final** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions or exclusions.

See Federal Register publication for details.

<https://ecos.fws.gov/ecp/species/4353>

Slender-horned Spineflower *Dodecahema leptoceras* **Endangered**

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4007>

Spreading Navarretia *Navarretia fossalis* **Threatened**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/1334>

Thread-leaved Brodiaea *Brodiaea filifolia***Threatened**

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/6087>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

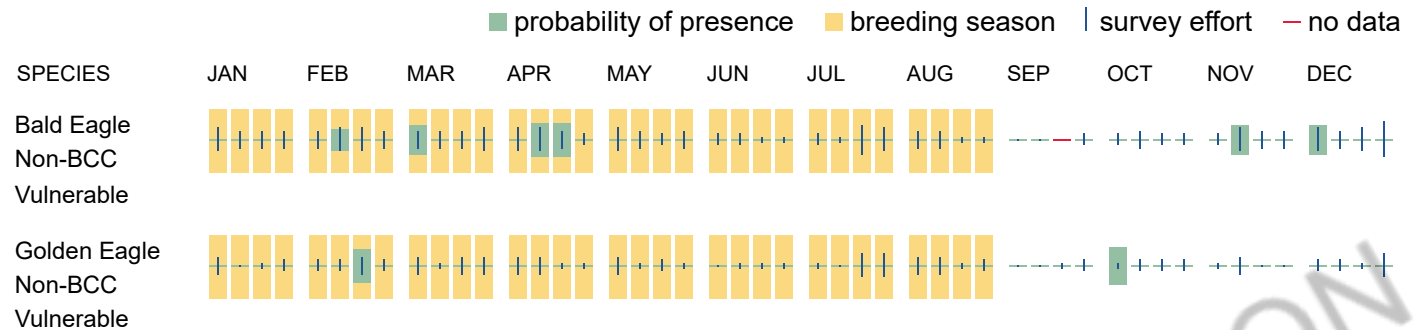
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>

- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC

<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

Belding's Savannah Sparrow <i>Passerculus sandwichensis beldingi</i>	Breeds Apr 1 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	
Black Swift <i>Cypseloides niger</i>	Breeds Jun 15 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	
Black-chinned Sparrow <i>Spizella atrogularis</i>	Breeds Apr 15 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9447	
Bullock's Oriole <i>Icterus bullockii</i>	Breeds Mar 21 to Jul 25
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
California Gull <i>Larus californicus</i>	Breeds Mar 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
California Thrasher <i>Toxostoma redivivum</i>	Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Clark's Grebe <i>Aechmophorus clarkii</i>	Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
Common Yellowthroat <i>Geothlypis trichas sinuosa</i>	Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Lawrence's Goldfinch *Spinus lawrencei*

Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9464>

Marbled Godwit *Limosa fedoa*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

Northern Harrier *Circus hudsonius*

Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/8350>

Nuttall's Woodpecker *Dryobates nuttallii*

Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9410>

Oak Titmouse *Baeolophus inornatus*

Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9656>

Santa Barbara Song Sparrow *Melospiza melodia graminea*

Breeds Mar 1 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/5513>

Short-billed Dowitcher *Limnodromus griseus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Western Grebe *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Western Screech-owl *Megascops kennicottii cardonensis*

Breeds Mar 1 to Jun 30

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wrentit *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the

maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

- The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

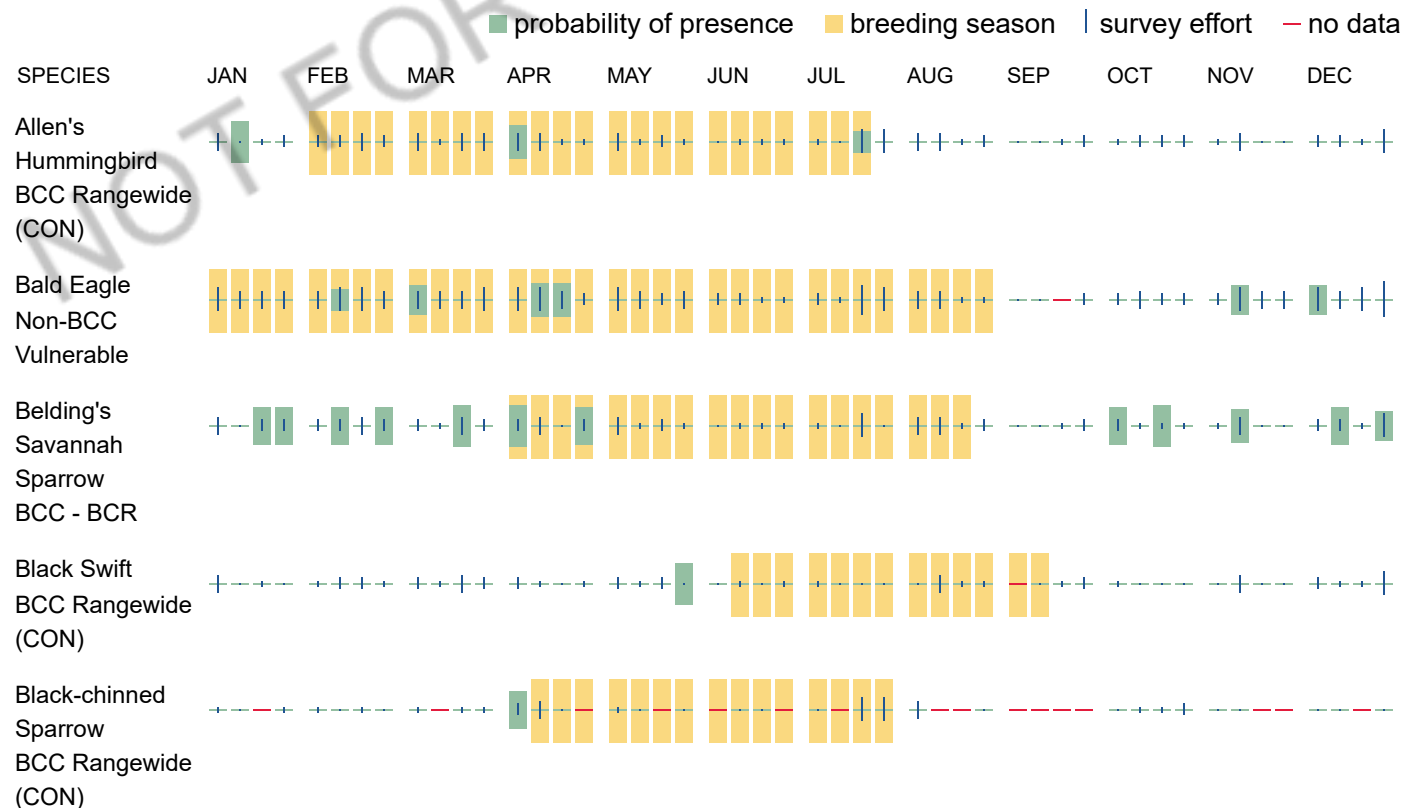
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

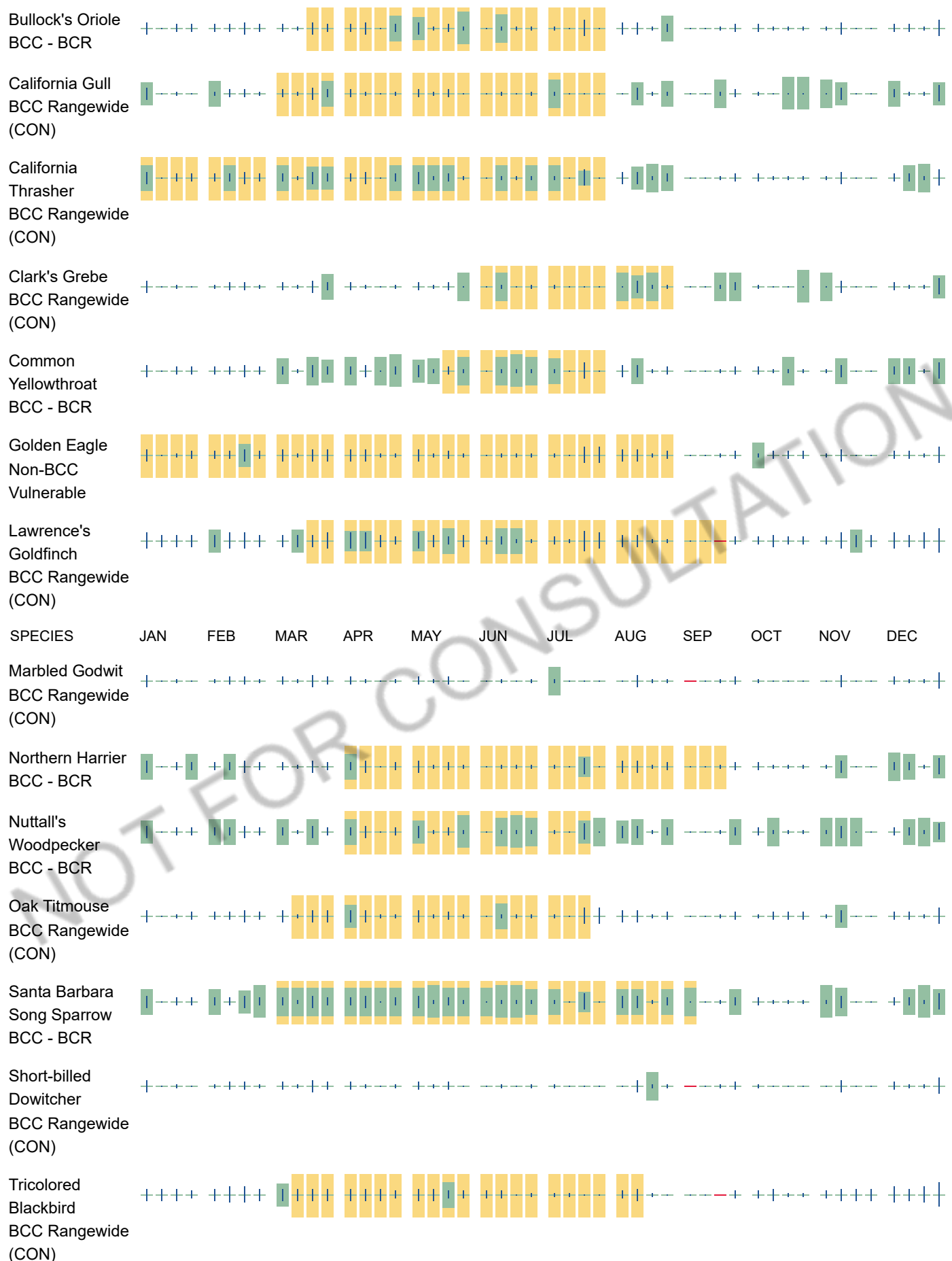
No Data (—)

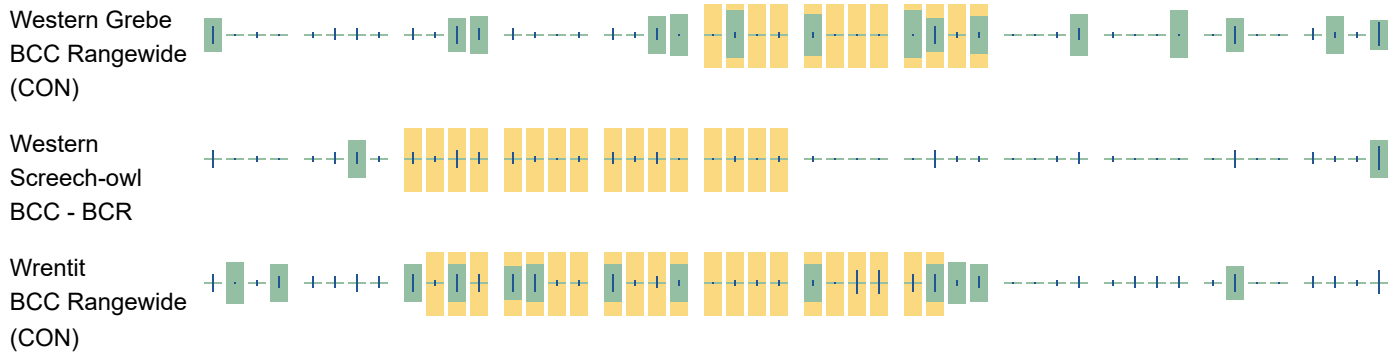
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged

aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

ATTACHMENT 3

Plant Species Observed

Attachment 3 Plant Species Observed				
Major Plant Group	Family	Scientific Name	Common Name	Origin
Conifers	Pinaceae / Pine Family	<i>Pinus canariensis</i>	Canary Island pine	I
		<i>Pinus halepensis</i>	Aleppo pine	I
Angiosperms: Monocots	Arecaceae / Palm Family	<i>Phoenix canariensis</i>	Canary Island palm	I
		<i>Syagrus romanzoffiana</i>	queen palm	I
		<i>Washingtonia robusta</i>	Mexican fan palm	I
	Cyperaceae / Sedge Family	<i>Cyperus eragrostis</i>	tall flatsedge	N
		<i>Cyperus involucratus</i> [=Cyperus alternifolius]	African umbrella plant	I
		<i>Eleocharis</i> sp.	spike-rush	N
	Poaceae (Gramineae) / Grass Family	<i>Arundo donax</i>	giant reed	I
		<i>Avena</i> sp.	oats	I
		<i>Bromus diandrus</i>	ripgut grass	I
		<i>Bromus rubens</i> [=Bromus madritensis ssp. rubens]	red brome	I
		<i>Cynodon dactylon</i>	Bermuda grass	I
		<i>Distichlis spicata</i>	salt grass	N
		<i>Polypogon monspeliensis</i>	annual beard grass, rabbitfoot grass	I
		<i>Schismus barbatus</i>	Mediterranean schismus	I
	Typhaceae / Cattail Family	<i>Typha</i> sp.	cattail	N
Angiosperms: Eudicots	Amaranthaceae / Amaranth Family	<i>Amaranthus albus</i>	tumbleweed	I
	Anacardiaceae / Sumac or Cashew Family	<i>Rhus integrifolia</i>	lemonade berry	N
		<i>Schinus molle</i>	Peruvian pepper tree	I
		<i>Schinus terebinthifolia</i>	Brazilian pepper tree	I
	Asteraceae / Sunflower Family	<i>Ambrosia psilostachya</i>	western ragweed	N
		<i>Baccharis salicifolia</i> ssp. <i>salicifolia</i>	mule fat, seep-willow	N
		<i>Baccharis salicina</i> [=Baccharis emoryi]	Emory's baccharis	N
		<i>Baccharis sarothroides</i>	broom baccharis	N
		<i>Centaurea melitensis</i>	tocalote, Maltese star-thistle	I
		<i>Cirsium vulgare</i>	bull thistle	I
		<i>Cotula coronopifolia</i>	brass-buttons	I
		<i>Deinandra paniculata</i> [=Hemizonia paniculata]	paniculate tarplant	N
		<i>Encelia farinosa</i>	brittlebush, incienso	N/(I)
		<i>Erigeron canadensis</i> [=Conyza canadensis]	horseweed	N

Attachment 3 Plant Species Observed				
Major Plant Group	Family	Scientific Name	Common Name	Origin
Angiosperms: Eudicots (cont.)	Asteraceae / Sunflower Family (cont.)	<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	long-stem golden-yarrow	N
		<i>Helianthus annuus</i>	western sunflower	N
		<i>Heterotheca grandiflora</i>	telegraph weed	N
		<i>Lactuca serriola</i>	prickly lettuce	I
		<i>Oncosiphon piluliferum</i>	stinknet, globe chamomile	I
		<i>Pluchea sericea</i>	arrow-weed	N
		<i>Pulicaria paludosa</i>	Spanish false fleabane	I
		<i>Xanthium orientale</i> [= <i>Xanthium strumarium</i>]	cocklebur	N
	Brassicaceae (Cruciferae) / Mustard Family	<i>Hirschfeldia incana</i>	short-pod mustard	I
	Chenopodiaceae / Goosefoot Family	<i>Atriplex semibaccata</i>	Australian saltbush	I
		<i>Salsola tragus</i>	Russian thistle, tumbleweed	I
	Cucurbitaceae / Gourd Family	<i>Cucurbita foetidissima</i>	buffalo gourd, calabazilla	N
	Euphorbiaceae / Spurge Family	<i>Croton setiger</i> [= <i>Eremocarpus setiger</i>]	turkey-mullein, dove weed	N
	Fabaceae (Leguminosae) / Legume Family	<i>Acmispon americanus</i> var. <i>americanus</i> [= <i>Lotus purshianus</i> var. <i>purshianus</i>]	Spanish-clover	N
		<i>Parkinsonia aculeata</i>	Mexican palo verde	I
	Fagaceae / Oak Family	<i>Quercus agrifolia</i>	coast live oak, encina	N
	Geraniaceae / Geranium Family	<i>Erodium botrys</i>	long-beak filaree	I
	Heliotropiaceae / Heliotrope Family	<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	seaside heliotrope, alkali heliotrope	N
	Lamiaceae / Mint Family	<i>Marrubium vulgare</i>	horehound	I
	Myrtaceae / Myrtle Family	<i>Eucalyptus</i> sp.	gum tree	I
	Plantaginaceae / Plantain Family	<i>Veronica anagallis-aquatica</i>	water speedwell	I
	Platanaceae / Plane Tree or Sycamore Family	<i>Platanus racemosa</i>	western sycamore	N
	Polygonaceae / Buckwheat Family	<i>Eriogonum fasciculatum</i>	California buckwheat	N
		<i>Polygonum</i> sp.	knotweed, smartweed	N/I
		<i>Rumex crispus</i>	curly dock	I
	Salicaceae / Willow Family	<i>Populus fremontii</i> ssp. <i>fremontii</i>	Fremont cottonwood, alamo	N
		<i>Salix gooddingii</i>	Goodding's black willow	N
		<i>Salix laevigata</i>	red willow	N
		<i>Salix lasiolepis</i>	arroyo willow	N
	Simaroubaceae / Quassia or Simarouba Family	<i>Ailanthus altissima</i>	tree of heaven	I

Attachment 3 Plant Species Observed				
Major Plant Group	Family	Scientific Name	Common Name	Origin
Angiosperms: Eudicots (cont.)	Solanaceae / Nightshade Family	<i>Nicotiana glauca</i>	tree tobacco	I
	Tamaricaceae / Tamarisk Family	<i>Tamarix</i> sp.	tamarisk	I
	Ulmaceae / Elm Family	<i>Ulmus parvifolia</i>	Chinese elm, lacebark elm	I
	Urticaceae / Nettle Family	<i>Urtica dioica</i>	stinging nettle	N
		<i>Urtica urens</i>	dwarf nettle	I
	Zygophyllaceae / Caltrop Family	<i>Tribulus terrestris</i>	puncture vine	I
<p>NOTE: Scientific and common names were primarily derived from Jepson eFlora (Jepson Flora Project 2025). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014). Additional common names were obtained from the USDA maintained database (USDA 2024) or the <i>Sunset Western Garden Book</i> (Brenzel 2001).</p> <p>ORIGIN N =Native to locality I = Introduced species from outside locality (I) = Introduced species to the ecoregion in which the survey occurred; however, native to other ecoregions within San Diego County</p>				

ATTACHMENT 4

Photographs



PHOTOGRAPH 1

View of buckwheat scrub—disturbed at the southwestern corner of the project site, facing south.



PHOTOGRAPH 2

Non-native grassland: broadleaf-dominated stands at the southwestern corner of the survey area (foreground) and buckwheat scrub—disturbed (background), facing north.



PHOTOGRAPH 3

Non-native grassland: broadleaf-dominated stand at the northwestern corner of the survey area (foreground) and Riverside sage scrub—disturbed (background), facing north.



PHOTOGRAPH 4

Representative view of residential neighborhood with disturbed wetland in the foreground and untrimmed palms, which could support bat species, in the background. Facing south.



PHOTOGRAPH 5

Mule fat scrub—disturbed (right) and tamarisk scrub (left) photograph taken from the fence line along Newport Road, facing south.



PHOTOGRAPH 6

Southern willow scrub—disturbed, west of Connecticut Drive at the western edge of the survey area, facing west.



PHOTOGRAPH 7

Riversidian sage scrub (background) and non-native woodland (middle-ground) dominated by Peruvian pepper tree (*Schinus molle*) along the eastern edge of the survey area, facing east.



PHOTOGRAPH 8

Representative view of residential parcels with disturbed habitat. Photograph taken at the northeast corner of the project site, facing west.

ATTACHMENT 5

Sensitive Plant Species Evaluated for Potential to Occur

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Monocots	Poaceae (Gramineae) / Grass Family	<i>Orcuttia californica</i>	California Orcutt grass	FE	SE	1B.1	NE, MSHCP, 6.1.3	Annual herb; vernal pools; blooms April–August; elevation 50–2,200 feet.	Unexpected	Vernal pool habitat was not observed within the subdivision or within the adjacent natural areas.
Angiosperms: Monocots	Alliaceae / Onion Family	<i>Allium munzii</i>	Munz's onion	FE	ST	1B.1	NE, MSHCP, 6.1.3	Perennial herb (bulbiferous) wet clay soils within grassland and sage scrub habitats and occasionally in chaparral, cismontane woodland, and pinyon and juniper woodland; blooms March–May; elevation 975–3,500 feet.	Moderate	This species has a moderate potential to occur within open scrub habitats directly adjacent to the subdivision, particularly within areas proposed for the project lift station. Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species.
Angiosperms: Monocots	Themidaceae / Brodiaea Family	<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT	SE	1B.1	MSHCP, 6.3.2	Perennial herb (bulbiferous); cismontane woodland, coastal sage scrub, playas, valley and foothill grassland, vernal pools; often clay soils; blooms March–June; elevation 80–3,675 feet. California endemic. Known from San Diego, Riverside, Orange, Los Angeles, and San Bernardino counties.	Low	Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species. This species is very rare, and most occurrences are well-documented.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Asteraceae / Sunflower Family	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields			1B.1	MSHCP, 6.3.2	Annual herb; coastal salt marsh, vernal pools, playas; blooms February–June; elevation less than 4,000 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. Although no mapped clay soils occur onsite, some soils have clay content that could be suitable for this species. The highest potential for this species to occur is within areas proposed for the project lift station.
Angiosperms: Eudicots	Ranunculaceae / Buttercup Family	<i>Myosurus minimus</i> [= <i>Myosurus minimus</i> ssp. <i>apus</i>]	little mousetail			3.1	MSHCP, 6.3.2	Annual herb; vernal pools, perennial grasslands; blooms March–June; elevation 70–2,100 feet.	Unexpected	No vernal pool habitat was observed on-site or in the adjacent survey area. Vernal pools are unlikely to occur within vacant lots in the project area based on soils mapping.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Asteraceae / Sunflower Family	<i>Ambrosia pumila</i>	San Diego ambrosia	FE		1B.1	NE, MSHCP, 6.1.3	Perennial herb (rhizomatous); chaparral, coastal sage scrub, valley and foothill grasslands, creek beds, vernal pools, often in disturbed areas; blooms April–October; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	Low	This species has a low potential to occur within the survey area potentially along the unnamed tributary along the southern edge of the survey area. This species is unexpected to occur within the project site due to lack of habitat and disturbed/ developed conditions.
Angiosperms: Eudicots	Polygonaceae / Buckwheat Family	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower			1B.2	MSHCP	Annual herb; clay soils; openings in chaparral, coastal sage scrub, near vernal pools and montane meadows, April–July; elevation 100–5,000 feet.	High	Suitable habitat is present on the project site and in adjacent natural areas. Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species. The highest potential for this species to occur is within areas proposed for the project lift station.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Boraginaceae / Borage Family	<i>Harpagonella palmeri</i>	Palmer's grapplinghook			4.2	MSHCP	Annual herb; chaparral, coastal sage scrub, valley and foothill grasslands; clay soils; blooms March–May; elevation less than 3,200 feet. Inconspicuous and easily overlooked.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species. The highest potential for this species to occur is within areas proposed for the project lift station.
Angiosperms: Eudicots	Asteraceae / Sunflower Family	<i>Deinandra paniculata</i> [=Hemizonia paniculata]	paniculate tarplant			4.2		Annual herb; coastal scrub, valley and foothill grassland, vernal pools; blooms (March)April–November; elevation 80–3,100 feet.	Observed	This species was observed in two locations within natural areas directly adjacent to the subdivision.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Berberidaceae / Barberry Family	<i>Berberis nevinii</i> [= <i>Mahonia nevinii</i>]	Nevin's barberry	FE	SE	1B.1	MSHCP, 6.3.2	Perennial evergreen shrub; chaparral, cismontane woodland, coastal sage scrub, riparian scrub; sandy or gravelly soils; blooms February–June; elevation 900–2,700 feet. California endemic. Known from San Diego, Riverside, Los Angeles, and San Bernardino counties.	Unexpected	This species is extremely limited and most populations are well documented. This species is also conspicuous and would have been observed if present on-site.
Angiosperms: Eudicots	Polygonaceae / Buckwheat Family	<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower			1B.1	MSHCP	Annual herb; chaparral, cismontane woodland, coastal scrub, valley, and foothill grassland; openings, rocky (sometimes), sandy (sometimes); blooms April–June; elevation 900–4,000 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. The highest potential for this species to occur is within areas proposed for the project lift station.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Brassicaceae (Cruciferae) / Mustard Family	<i>Caulanthus simulans</i>	Payson's jewelflower			4.2	MSHCP	Annual herb; chaparral, coastal sage scrub; sandy, granitic substrate; blooms February–June; elevation 300–7,300 feet. California endemic. Known from San Diego and Riverside counties.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas.
Angiosperms: Eudicots	Polygonaceae / Buckwheat Family	<i>Chorizanthe leptotheca</i>	peninsular spineflower			4.2	MSHCP	Annual herb; chaparral, coastal sage scrub, lower montane coniferous forest; alluvial fan or granitic substrate; blooms May–August; elevation 1,000–6,300 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. The highest potential for this species to occur is within areas proposed for the project lift station.
Angiosperms: Eudicots	Chenopodiaceae / Goosefoot Family	<i>Atriplex coronata</i> var. <i>notatior</i>	San Jacinto Valley crownscale	FE		1B.1	MSHCP, 6.3.2	Annual herb; playas, valley and foothill grassland (mesic), vernal pools; alkaline; blooms April–August; elevation 450–1,650 feet.	Unexpected	Lack of suitable habitat present on-site. Although grasslands were observed, they would not be classified as mesic grasslands.
Angiosperms: Eudicots	Brassicaceae (Cruciferae) / Mustard Family	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's peppergrass			4.3		Annual herb; coastal sage scrub, chaparral; blooms January–July; elevation less than 2,900 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Asteraceae / Sunflower Family	<i>Microseris douglasii</i> ssp. <i>platycarpa</i>	small-flowered microseris			4.2	MSHCP	Annual herb; clay lenses on perennial grasslands, vernal pools, openings in coastal sage scrub; blooms March–May; elevation 50–3,500 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species. The highest potential for this species to occur is within areas proposed for the project lift station.
Angiosperms: Eudicots	Convolvulaceae / Morning-Glory Family	<i>Convolvulus simulans</i>	small-flowered morning-glory			4.2	MSHCP	Annual herb; openings in chaparral, coastal sage scrub, valley and foothill grasslands; clay substrate; blooms March–July; elevation less than 2,300 feet.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas. Although no mapped clay soils occur on-site, some soils have clay content that could be suitable for this species. The highest potential for this species to occur is within areas proposed for the project lift station.

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Angiosperms: Eudicots	Asteraceae / Sunflower Family	<i>Centromadia pungens</i> ssp. <i>laevis</i> [= <i>Hemizonia pungens</i> ssp. <i>laevis</i>]	smooth tarplant			1B.1	MSHCP, 6.3.2	Annual herb; chenopod scrub, meadow and seeps, playas, riparian woodland, valley and foothill grasslands; alkaline soils; blooms April–September; elevation less than 2,100 feet. California endemic. Known from San Diego, Riverside, and San Bernardino counties.	Moderate	Suitable habitat is present on the project site and in adjacent natural areas.
Angiosperms: Eudicots	Juglandaceae / Walnut Family	<i>Juglans californica</i> [= <i>Juglans californica</i> var. <i>californica</i>]	southern California black walnut, California black walnut*			4.2	MSHCP	Perennial deciduous tree; chaparral, cismontane woodland, coastal sage scrub; blooms March–August; elevation less than 3,000 feet. California endemic. Known from San Diego, Riverside, Los Angeles, Orange, Santa Barbara, San Bernardino, and Ventura counties.	High	Suitable habitat is present on the project site and in adjacent natural areas. The highest potential for this species to occur is within the riparian woodlands associated with the many drainages traversing the project site, and within the larger drainage located south of the subdivision.
Angiosperms: Eudicots	Polemoniaceae / Phlox Family	<i>Navarretia fossalis</i>	spreading navarretia	FT		1B.1	NE, MSHCP, 6.1.3	Annual herb; vernal pools, marshes and swamps, chenopod scrub; blooms April–	Unexpected	No vernal pool habitat was observed on-site or in the adjacent survey area. Vernal pools are unlikely to occur within

Attachment 5

Sensitive Plant Species Observed or with the Potential to Occur

Major Plant Group	Family	Scientific Name	Common Name	Federal Status	State Status	CNPS Rare Plant Rank	Western Riverside	Habitat Preference/ Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
								June; elevation 100–4,300 feet.		vacant lots in the project area based on soils mapping.
Angiosperms: Eudicots	Polygonaceae / Buckwheat Family	<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE	SE	1B.1	NE, MSHCP, 6.1.3	Annual herb; chaparral, cismontane woodland, coastal sage scrub, alluvial fans, and sandy areas; blooms April–June; elevation 600–2,500 feet.	Low	Alluvial fans and sandy soil conditions were not observed. Although scrub communities are present on-site, these are extremely disturbed and exhibit low species diversity.

NOTE: Scientific and common names were primarily derived from Jepson eFlora (Jepson Flora Project 2025). In instances where common names were not provided in this resource, common names were obtained from Rebman and Simpson (2014). Additional common names were obtained from the USDA maintained database (USDA 2023) or the *Sunset Western Garden Book* (Brenzel 2001). Federal and state listing status is based on California Department of Fish and Wildlife, Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2025b).

Attachment 5
Sensitive Plant Species Observed or with the Potential to Occur

STATUS CODES

Federal Status

FE = Listed as endangered by the federal government

FT = Listed as threatened by the federal government

State Status

SE = Listed as endangered by the state of California

ST = Listed as threatened by the state of California

California Native Plant Society (CNPS): California Rare Plant Ranks (CRPR)

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.

3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.

4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

0.1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat).

0.2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat).

0.3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known).

Western Riverside

MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan covered species.

6.1.3 = Species subject to survey requirements and avoidance measures in Section 6.1.3, Protection of Narrow Endemic Plant Species.

6.3.2 = Species subject to survey requirements and avoidance measures in Section 6.3.2, Additional Survey Needs and Procedures of the MSHCP.

NE = Plant species that are highly restricted by their habitat affinities, edaphic requirements or other ecological factors, and for which specific conservation measures have been identified in Section 6.1.3 of the MSHCP.

ATTACHMENT 6

Sensitive Wildlife Species Evaluated for Potential to Occur

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Invertebrates	Branchinectidae / Fairy Shrimp	<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT		MSHCP, 6.1.2	Vernal pools.	Low	Heavy clay soils with ephemerally ponded areas were not observed within the survey area or project site. No mapped clay soils occur within the survey area. The species' range in Western Riverside County is primarily south of the survey area.
Invertebrates	Streptocephalidae / Fairy Shrimp	<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE		MSHCP, 6.1.2	Vernal pools.	Low	Heavy clay soils with ephemerally ponded areas were not observed within the survey area or project site. No mapped clay soils occur within the survey area. The species' range in Western Riverside County is south of survey area.
Invertebrates	Apidae / Honey Bees, Bumble Bees, and Allies	<i>Bombus crotchii</i>	Crotch's bumble bee		SCE		Coastal areas, open grasslands, shrub habitats.	Moderate	Suitable habitat occurs on the project site and surrounding survey area.
Invertebrates	Nymphalidae / Brush-footed Butterflies	<i>Danaus plexippus</i> pop. 1	monarch	FC			Wide variety of habitats, including urban areas. Host plant is milkweed (<i>Asclepias</i> sp.).	Low	Milkweed species were not observed during surveys. Very few floral resources needed by this species were observed in the study area. No mapped overwintering sites occur within 30 miles of the project. No California Natural Diversity Database (CNDDB) records occur within 1 mile.

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Invertebrates	Nymphalidae / Brush-footed Butterflies	<i>Euphydryas editha quino</i>	Quino checkerspot	FE		MSHCP	Open, dry areas in foothills, mesas, lake margins. Larval host plant <i>Plantago erecta</i> . Adult emergence mid-January through April.	Low	Suitable habitat is present within the survey area but is extremely degraded and no host plants were observed during either the 2020 or 2025 biological surveys. No CNDDDB records occur within 1 mile of the project site. Distribution of this species in Riverside County is generally south of State Route 74 and east of State Route 79.
Amphibians	Scaphiopodidae / Spadefoots	<i>Spea hammondi</i>	western spadefoot	FPT	SSC	MSHCP	Vernal pools, floodplains, and other temporary ponds or washes are required for breeding. Uses open areas within upland vegetation including mixed woodlands, grasslands, coastal sage scrub, and chaparral for foraging/burrowing.	Unexpected	Heavy clay soils with ephemerally ponded areas were not observed within the survey area or project site. No mapped clay soils occur within the survey area.
Reptiles	Emydidae / Box & Water Turtles	<i>Actinemys pallida</i> [= <i>Clemmys marmorata pallida</i>]	southwestern pond turtle	FPT	SSC	MSHCP	Ponds, small lakes, marshes, slow-moving, sometimes brackish water.	Unexpected	No suitable habitat is present within survey area or project site. An unnamed tributary to Canyon Lake, located at the southern edge of the survey area, likely does not support ponded water sufficient to support this species.

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Reptiles	Teiidae / Whiptail Lizards	<i>Aspidoscelis hyperythra beldingi</i> [= <i>Cnemidophorus hyperythrus</i>]	Belding's orange-throated whiptail		WL	MSHCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	Moderate	Suitable habitat is present on the project site and surrounding survey area but much of the scrub habitat on-site is disturbed and/or exhibits very low species diversity.
Reptiles	Teiidae / Whiptail Lizards	<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail (=coastal whiptail)		SSC		Coastal sage scrub, chaparral, woodlands, and streamsides where plants are sparsely distributed.	Moderate	Suitable habitat is present on the project site and surrounding survey area but much of the scrub habitat on-site is disturbed and/or exhibits very low species diversity.
Reptiles	Colubridae / Colubrid Snakes	<i>Arizona elegans occidentalis</i>	California glossy snake		SSC		Scrub and grassland habitats, often with loose or sandy soils.	High	Suitable habitat is present on the project site and surrounding survey area.
Reptiles	Crotalidae / Rattlesnakes	<i>Crotalus ruber</i>	red diamond rattlesnake		SSC	MSHCP	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	High	Suitable habitat is present on the project site and surrounding survey area.
Birds	Strigidae / Typical Owls	<i>Athene cunicularia</i>	burrowing owl		SCE	MSHCP, 6.3.2	Grassland, agricultural land, coastal dunes. Require rodent burrows. Declining resident.	Moderate	Suitable habitat is present on the project site and surrounding survey area. This species is increasingly uncommon in Riverside County and no burrowing owl burrows or sign were noted during either the 2020 or 2025 biological surveys.

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Birds	Vireonidae / Vireos	<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE	MSHCP, 6.1.2	Willow riparian woodlands. Summer resident.	High (survey area) / Moderate (project site)	This species has a high potential to occur within the survey area due to the presence of potential breeding and foraging habitat along the unnamed tributary along southern edge of the survey area. This species has a moderate potential to occur on the project site due to lower-quality, isolated, and limited breeding habitat.
Birds	Alaudidae / Larks	<i>Eremophila alpestris actia</i>	California horned lark		WL	MSHCP	Sandy shores, mesas, disturbed areas, grasslands, agricultural lands, sparse creosote bush scrub.	High	Suitable habitat is present on the project site and surrounding survey area.
Birds	Poliophtilidae / Gnatcatchers	<i>Poliophtila californica californica</i>	coastal California gnatcatcher	FT	SSC	MSHCP	Coastal sage scrub, maritime succulent scrub. Resident.	Moderate	Suitable habitat is present on the project site and surrounding survey area but much of the scrub habitat on-site is disturbed and/or exhibits very low species diversity.
Birds	Passerellidae / New World Passerines	<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow		WL	MSHCP	Coastal sage scrub, chaparral, grassland. Resident.	High	Suitable habitat is present on the project site and surrounding survey area.
Birds	Passerellidae / New World Passerines	<i>Artemisiospiza</i> [= <i>Amphispiza</i>] <i>belli belli</i>	Bell's sage sparrow		WL	MSHCP	Chaparral, coastal sage scrub. Localized resident.	High	Suitable habitat is present on the project site and surrounding survey area. Two observations occurred within 1 mile. Much of the

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
									scrub habitat on-site is disturbed and/or exhibits very low species diversity.
Mammals	Molossidae / Free-tailed Bats	<i>Eumops perotis</i>	western bonneted [=mastiff] bat		SSC		Roosts mainly in cliff crevices at least 10 feet above ground. Occurs in coastal and desert scrub, riparian woodland, and pine forests. Forages on large moths and other flying insects (Tremor et al. 2017).	High	Suitable habitat is present on the project site and surrounding survey area.
Mammals	Leporidae / Rabbits & Hares	<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit			MSHCP	Open areas of scrub, grasslands, agricultural fields.	High	Suitable habitat is present on the project site and surrounding survey area. Two observations occurred within 1 mile.
Mammals	Heteromyidae / Pocket Mice & Kangaroo Rats	<i>Dipodomys merriami parvus</i>	San Bernardino Merriam's kangaroo rat, San Bernardino kangaroo rat	FE	SE, SSC	MSHCP, 6.3.2	Inhabits scattered, isolated patches of alluvial sage-scrub in sandy loam substrates of alluvial fans and floodplains. Those include the historical floodplain along the upper Santa Ana River wash, Lytle and Cajon washes and the San Jacinto River.	Low	Alluvial scrub habitat is not present within the survey area or project site. The species was not observed within 1 mile of project based on CNDDDB records. The species is well documented from only certain washes in southern California, and it is unlikely this species occurs outside of those known areas.

Attachment 6
Sensitive Wildlife Species Observed or with the Potential to Occur

Major Wildlife Group	Family	Scientific Name	Common Name	Federal Status	State Status	Western Riverside	Habitat Preference / Requirements	Potential to Occur On-Site	Basis for Determination of Occurrence Potential
Mammals	Heteromyidae / Pocket Mice & Kangaroo Rats	<i>Dipodomys stephensi</i>	Stephens' kangaroo rat	FT	ST	MSHCP, SKRHCP	Open grassland areas and sparse sage scrub habitats; can be excluded from areas with dense shrub or grass cover. Strongly associated with areas consisting of filaree (<i>Erodium</i> spp.) and other annual forbs growing on penetrable soils and flat to fairly steep sloping topography. Occurs only in western Riverside County, northern San Diego County, and extreme southern San Bernardino County, below 915 meters (3,000 feet) in elevation. In northwestern Riverside County, known only from east of Interstate 15. Reaches its northwest limit in south Norco, southeastern Riverside, and in the Reche Canyon area of Riverside and extreme southern San Bernardino Counties.	High	Suitable habitat and burrows were detected within the survey area, specifically on the southwestern portion where rodent burrows observed in high numbers. The most likely location on the project site is in the southwestern corner, within proposed lift station LS-1 areas (Options 1 and 2). Three observations occurred within 1 mile.

Attachment 6

Sensitive Wildlife Species Observed or with the Potential to Occur

NOTE: Zoological nomenclature for invertebrates is in accordance with the NatureServe 2024 and Evans 2008; for reptiles and amphibians with Crother et. al (2017); for birds with Chesser et al. 2024; for mammals with Bradley et al. (2014) and American Society of Mammalogists 2021. Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon known ranges and habitat preferences for species follows Evans 2008, Page et al. 2013, Jennings and Hayes 1994, Unitt 2004, Tremor et. al. 2017, and Western Bat Working Group 2017. Federal and state listing status is based on California Department of Fish and Wildlife, Special Animals List (CDFW 2025c).

STATUS CODES

Federal Status

FE = Listed as endangered by the federal government

FPT = Federally proposed threatened

FT = Listed as threatened by the federal government

FC = Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)

State Status

SE = Listed as endangered by the state of California

ST = Listed as threatened by the state of California

SCE = State candidate for listing as Endangered

SSC = California Department of Fish and Wildlife species of special concern

WL = California Department of Fish and Wildlife watch list species

Western Riverside

MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan covered species

6.1.2 = Species subject to survey requirements and avoidance and minimization measures in Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools of the MSHCP

6.3.2 = Species subject to survey requirements and avoidance measures in Section 6.3.2, Additional Survey Needs and Procedures of the MSHCP

SKR HCP = Stephens' Kangaroo Rate Habitat Conservation Program covered species