

# Campo Road Sewer Replacement Project

Biological Technical Report

July 2015

Prepared for:  
**Otay Water District**  
2254 Sweetwater Springs Boulevard  
Spring Valley, CA 91978

Prepared by:  
**HELIX Environmental Planning, Inc.**  
7578 El Cajon Boulevard  
La Mesa, CA 91942

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July 10, 2015

# TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Project Location .....	1
1.2	Project Description.....	1
1.3	Physical Description and Land Use .....	3
<b>2.0</b>	<b>METHODS .....</b>	<b>4</b>
2.1	Literature Review.....	4
2.2	Biological Surveys .....	4
2.2.1	Rare Plant Survey .....	5
2.2.2	Coastal California Gnatcatcher Survey .....	5
2.2.3	Jurisdictional Delineation .....	5
2.3	Nomenclature .....	6
<b>3.0</b>	<b>RESULTS .....</b>	<b>6</b>
3.1	Vegetation Communities/Land Use .....	6
3.2	Jurisdictional Areas.....	10
3.2.1	Federal (USACE) Jurisdiction .....	10
3.2.2	State (CDFW) Jurisdiction .....	11
3.3	Plant Species Observed.....	11
3.4	Animal Species Observed or Detected .....	11
<b>4.0</b>	<b>SENSITIVE RESOURCES.....</b>	<b>11</b>
4.1	Sensitive Vegetation Communities.....	11
4.2	Sensitive Plant Species .....	11
4.2.1	Sensitive Plants Observed .....	11
4.2.2	Sensitive Plants With Potential to Occur.....	13
4.3	Sensitive Animal Species.....	13
4.3.1	Sensitive Animals Observed or Detected .....	13
4.3.2	Sensitive Animals With Potential to Occur .....	15
4.4	Wildlife Corridors .....	15
<b>5.0</b>	<b>REGIONAL AND REGULATORY CONTEXT .....</b>	<b>15</b>
5.1	Regulatory Issues .....	15
5.1.1	Federal Government .....	16
5.1.2	State Of California .....	17
5.1.3	Local .....	18

**TABLE OF CONTENTS (cont.)**

<b><u>Section</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
<b>6.0</b>	<b>PROJECT IMPACTS .....</b>	<b>18</b>
6.1	Direct Impacts .....	19
6.1.1	Vegetation Communities .....	19
6.1.2	Jurisdictional Areas .....	20
6.1.3	Sensitive Plant Species .....	20
6.1.4	Sensitive Animal Species .....	20
6.1.5	Sensitive Plant and Animal Species With Potential to Occur .....	22
6.1.6	Nesting Birds .....	23
6.1.7	Wildlife Corridors.....	23
6.2	Indirect Impacts .....	23
6.2.1	Habitat Insularization.....	23
6.2.2	Drainage/Water Quality.....	24
6.2.3	Lighting .....	25
6.2.4	Noise.....	25
6.2.5	Exotic Plant Species .....	26
6.2.6	Raptor Foraging.....	26
6.2.7	Nuisance Animal Species .....	26
6.3	Cumulative Impacts .....	26
<b>7.0</b>	<b>MITIGATION MEASURES .....</b>	<b>27</b>
7.1	Mitigation for Direct Impacts .....	27
7.2	Mitigation for Indirect Impacts.....	28
<b>8.0</b>	<b>CERTIFICATION/QUALIFICATION .....</b>	<b>29</b>
<b>9.0</b>	<b>REFERENCES .....</b>	<b>30</b>

**APPENDICES**

- A Plant Species Observed
- B Animal Species Observed or Detected
- C Explanation of Status Codes for Plant and Animal Species
- D Sensitive Plant Species with Potential to Occur
- E Sensitive Animal Species with Potential to Occur

**TABLE OF CONTENTS (cont.)**

**LIST OF FIGURES**

<b><u>No.</u></b>	<b><u>Title</u></b>	<b><u>Follows Page</u></b>
1	Regional Location Map.....	2
2	USGS Location Map.....	2
3	Project Location .....	2
4	Proposed Project .....	2
5	Existing Vegetation Communities and Sensitive Species .....	6
6	Existing USACE Jurisdictional Areas .....	10
7	Existing CDFW Jurisdictional Areas.....	12
8	USFWS Critical Habitat .....	12
9	San Diego National Wildlife Refuge .....	16
10	Impacts to Vegetation Communities and Sensitive Species.....	20
11	Impacts to USACE Jurisdictional Areas.....	20
12	Impacts to CDFW Jurisdictional Areas .....	20

**LIST OF TABLES**

<b><u>No.</u></b>	<b><u>Title</u></b>	<b><u>Page</u></b>
1	Survey Information .....	4
2	Existing Vegetation Communities within the Study Area.....	7
3	Existing Jurisdictional Areas within the Study Area .....	10

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## EXECUTIVE SUMMARY

This biological resources study was conducted for the proposed Otay Water District (District) Campo Road Sewer Replacement project (herein referred to as “proposed project” or “project”) to provide the District, resource agencies, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA) and to demonstrate compliance with federal and state regulations. This report describes current biological conditions, vegetation communities, and plant and wildlife species observed or detected during surveys within the project study area, and identifies those resources that are sensitive. It also identifies sensitive species with potential to occur within the study area. In addition, avoided resources are identified, project impacts are assessed, and mitigation is proposed to offset impacts to sensitive biological resources.

The proposed project would consist of construction and operation of a new gravity sewer main and abandonment of an existing sewer line that has exceeded its capacity. To accommodate current and future flows, the District is proposing to install an approximately 8,360-foot-long, 8- to 15-inch gravity sewer main to replace the existing 9,225-foot-long, 10-inch sewer main. The existing pipeline would be abandoned in place, except for a 210-foot-long section of aboveground pipeline and 7 supporting pillars that would be removed. The sewer main pillars would be cut at the ground surface, and the foundation would be abandoned in place to avoid disturbing the existing vegetation. In addition, the manholes of the existing pipeline would be abandoned, which would include removing the manhole and cone, plugging the sewer pipe, and backfilling the manhole with sand. Pipe removal and manhole capping would be completed by hand or with small equipment so as not to impact the surrounding sensitive habitat.

The study area supports 9 vegetation communities: southern riparian forest, southern willow scrub, freshwater marsh, cismontane alkali marsh, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, non-native vegetation, and disturbed habitat. The study area also includes developed land.

U.S. Army Corps of Engineers (USACE) jurisdictional areas total 0.13 acre within the study area. In addition, 3.77 acres of California Department of Fish and Wildlife (CDFW) jurisdictional areas occur within the study area.

One federal- and state-listed threatened or endangered plant species was observed within the study area during surveys: Otay tarplant (*Deinandra conjugens*). In addition, 7 plant species considered sensitive by the California Native Plant Society (CNPS) were observed within the study area and include: Palmer’s goldenbush (*Ericameria palmeri* var. *palmeri*), ashy spike-moss (*Selaginella cinerascens*), San Diego sagewort (*Artemisia palmeri*), San Diego County viguiera (*Bahiopsis laciniata*), graceful tarplant (*Holocarpha virgata* ssp. *elongate*), southern California black walnut (*Juglans californica*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*).

Six animal species considered sensitive by the resource agencies were observed or detected within the study area during surveys and include the federal- and state-listed as endangered least Bell’s vireo, the federal-listed as threatened coastal California gnatcatcher, as well as orange-throated whiptail (*Aspidoscelis hyperythrus beldingi*), yellow warbler (*Dendroica*

*petechia brewsteri*), yellow-breasted chat (*Icteria virens*), and Cooper's hawk (*Accipiter cooperii*).

Construction of the proposed pipeline would be restricted mainly to paved roadways and parking lots; however, construction of this pipeline would result in direct temporary impacts to approximately 0.3 acre of sensitive vegetation (Diegan coastal sage scrub [including disturbed]). Such impacts to sensitive habitat would be significant. With regard to the existing pipeline, pipe removal and manhole capping in sensitive habitat would be completed by hand or with small equipment so as not to impact the habitat.

Although the proposed pipeline alignment would be adjacent to jurisdictional areas, construction of the pipeline would not result in direct impacts to USACE or CDFW jurisdictional areas. With regard to the existing aboveground pipe that would be removed as part of the project, the southern riparian forest habitat in which pillars are located is under the jurisdiction of CDFW. Pipe and pillar removal would be completed by hand or with small equipment so as not to impact the jurisdictional area (i.e., no fill would be placed within jurisdictional areas and no trees would be removed). In addition, the second northernmost pillar which is located directly adjacent to the channel/edge of a USACE jurisdictional area (on the south side of the channel), would be cut above the existing ground level in order to avoid potential impacts to this jurisdictional area. Therefore, no significant impacts would occur to jurisdictional areas.

A total of 460 individuals of Otay tarplant occur along the alignment of the existing pipeline, including near existing manholes to be capped. Due to the relatively high number of Otay tarplant in the project area, some individuals of this species could be inadvertently impacted (e.g., by accidentally stepping or driving over them) during manhole capping. Impacts to this species would be significant. The proposed project would not result in impacts to Otay tarplant critical habitat.

One Palmer's goldenbush and 2 San Diego County viguiera are located adjacent to the existing manholes that would be capped. Capping of the manholes would be completed by hand or with small equipment so as not to impact vegetation. In addition, construction of the proposed pipeline could result in impacts to 2 San Diego County viguiera. If individuals of these species are inadvertently impacted during project construction, such impacts would be adverse but not significant due to the low number affected and the low sensitivity.

The proposed project would not result in impacts to ashy spike-moss, southwestern spiny rush, and southern California black walnut.

The project would not result in direct impacts to coastal California gnatcatcher, least Bell's vireo, yellow warbler, or yellow-breasted, or habitat with potential to support these species. However, indirect impacts could potentially occur to avian species, as stated below.

Two Belding's orange-throated whiptails were observed along an unpaved road to the south of Campo Road along the existing pipeline alignment. Capping of the manholes would be completed by hand or with small equipment so as not to impact habitat; however, if individuals

of this species are inadvertently impacted, such impacts would be adverse but not significant due to the low number affected and the low sensitivity.

The proposed project would not require the removal of trees. Therefore, no direct impacts to raptors (including Cooper's hawk) would occur.

Although not observed within the study area during current biological surveys, Quino checkerspot butterfly and Hermes copper have a moderate to high potential to occur on site, as both species have been previously mapped by others within the vicinity of the study area. Construction of the proposed pipeline is not anticipated to impact either species. In addition, capping of the existing pipeline also is not anticipated to impact Quino checkerspot butterfly or Hermes copper because capping activities would be completed using hand tools and small equipment, no vegetation would be removed and no improvements to the existing dirt paths would occur. Therefore, no impacts to these species or their habitat are expected.

Indirect impacts related to habitat insularization, drainage/water quality, lighting, exotic plant species, raptor foraging, and nuisance animal species would be less than significant. Indirect project-related impacts from noise would occur.

Implementation of mitigation measures would ensure that significant impacts would be reduced to below a level of significance.

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## 1.0 INTRODUCTION

This biological resources study was conducted for the proposed Otay Water District (District) Campo Road Sewer Replacement project (herein referred to as “proposed project” or “project”) to provide the District, resource agencies, and the public with current biological data to satisfy review of the proposed project under the California Environmental Quality Act (CEQA) and to demonstrate compliance with federal and state regulations. This report describes current biological conditions, vegetation communities, and plant and wildlife species observed or detected during surveys within the project study area, and identifies those resources that are sensitive. It also identifies sensitive species with potential to occur within the study area. In addition, avoided resources are identified, project impacts are assessed, and mitigation is proposed to offset impacts to sensitive biological resources.

### 1.1 PROJECT LOCATION

The 58.9-acre study area (encompassing the existing and proposed pipeline alignment and a 100-foot wide buffer) is located within the unincorporated County of San Diego (County) community of Valle de Oro in southwestern San Diego County (Figure 1). The study area is located within the unsectioned land grant Jamacho of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 2).

The proposed pipeline would be primarily located within and along Campo Road (also known as State Route [SR] 94), between Avocado Boulevard and Jamacha Road (Figure 3). The existing pipeline to be abandoned is located to the south of Campo Road in an open space area. Refer to Section 1.2, *Project Description*, for more specific details regarding the project location.

### 1.2 PROJECT DESCRIPTION

The project would consist of construction and operation of a new gravity sewer main and abandonment of an existing sewer line that has exceeded its capacity. To accommodate current and future flows, the District is proposing to install an approximately 8,360-foot-long, 8- to 15-inch gravity sewer main to replace the existing 9,225-foot-long, 10-inch sewer main.

The eastern terminus of the proposed pipeline would be located at the intersection of Avocado Boulevard/Rancho San Diego Village shopping center driveway (Figure 4). The pipeline would traverse southeast through the shopping center parallel to the existing pipe. At the southeastern end of the Rancho San Diego Village shopping center, the proposed alignment would proceed east across Via Mercado. East of Via Mercado, the alignment would continue south and cross under the right-of-way (ROW) of Campo Road via horizontal auger boring. The alignment would then continue along the southern side of Campo Road in a southeasterly direction until the intersection of Campo Road/Jamacha Boulevard. At this intersection, the alignment would cross under this intersection to the northern side of Campo Road via horizontal auger boring. On the northern side, it would continue east along Campo Road to Jamacha Road, and then follow Jamacha Road for approximately 300 feet. The alignment would turn south and cross Jamacha Road into the Rancho San Diego Towne Center, where it would connect to the existing 27-inch sewer main within the shopping center’s parking lot. The 27-inch sewer main connects to

additional pipelines at the intersection of Campo Road/Singer Lane near the Steele Canyon Lift Station. Existing sewer laterals stemming from the existing pipe would be reconnected to the proposed pipeline.

The proposed 15-inch sewer main would be installed by open trench excavation and horizontal auger boring. Horizontal auger boring would be conducted in the locations where the pipeline would cross under Campo Road (at Jamacha Boulevard and near Via Mercado). Open trench excavation would be performed in all other sections. The proposed pipeline would be placed approximately 15 to 29 feet underground. The District anticipates that the proposed pipeline would be located within trenches with shoring approximately 5 to 7 feet wide. Horizontal auger boring would simultaneously 'jack' the steel casing while rotating augers or cutting heads at the face of the tunnel to remove the spoil through the steel casing. The jacking shafts would be approximately 45 feet long by 12 feet wide and the receiving shafts would be approximately 10 feet by 10 feet in area. Following installation of these portions of pipeline, the jacking and receiving pits would be filled in and re-compacted to their existing contours. Spoil material from construction would be hauled to an approved off-site location.

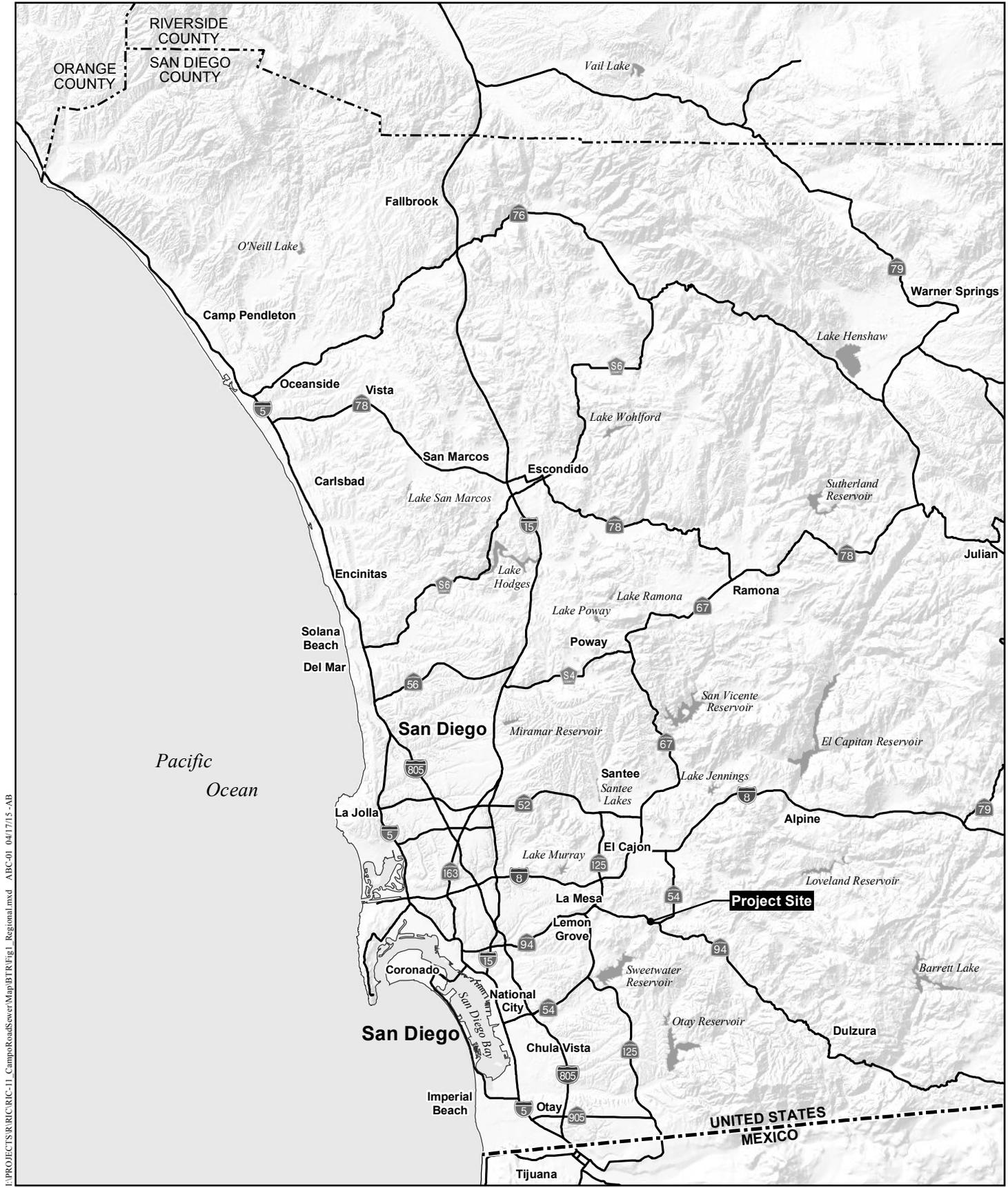
The existing 10-inch sewer pipeline would be abandoned in place, except for a 210-foot-long section of aboveground pipeline and 7 supporting pillars that would be removed. The sewer main pillars would be cut at the ground surface, with the exception of the second northernmost pillar, which would be cut above the existing ground level in order to avoid potential impacts to jurisdictional areas. The foundations of the pillars would be abandoned in place to avoid disturbing the existing vegetation. In locations where the new alignment departs from the 10-inch pipe alignment, the manholes on the existing alignment would be abandoned per the Water Agencies' Standards (WAS) Standard Drawings for Sewer Facilities (Drawing No. SM-08). This would include removing the manhole and cone, plugging the sewer pipe, and backfilling the manhole with sand. Pipe removal and manhole capping would be completed by hand or with small equipment so as not to impact the surrounding sensitive habitat.

Construction-related equipment and materials storage and worker parking would occur in disturbed and developed areas along the project alignment that are approved by the California Department of Transportation (Caltrans) and the County.

Construction activities are expected to begin in fall 2016 and be completed by early 2018. In order to minimize disruptions to the local community, construction and equipment maintenance are anticipated to be limited to weekdays (excluding holidays) from 7:00 a.m. through 7:00 p.m. (in accordance with the County Noise Ordinance); however, if multiple lanes need to be closed on Campo Road or Jamacha Road for pipeline installation, Caltrans could require that such work occur only at night.

The following design features would be implemented as part of the project to minimize construction-related impacts to biological resources:

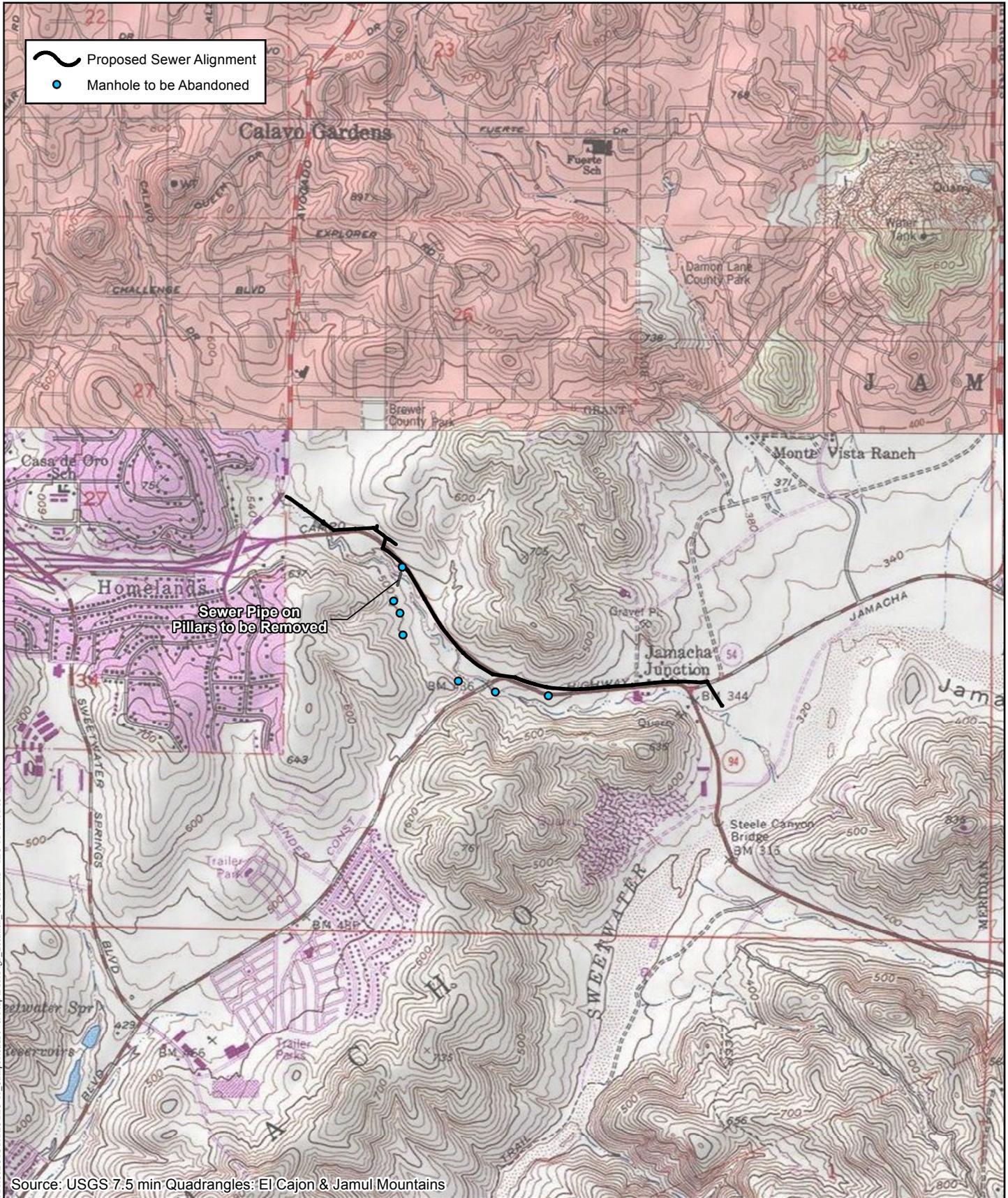
- In areas where construction has the potential to impact adjacent native habitat, temporary orange construction fencing would be used to clearly delineate the edge of the approved limits of work and environmentally sensitive areas beyond. The District would ensure



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## Regional Location Map

CAMPO ROAD SEWER MAIN REPLACEMENT



## USGS Location Map

CAMPO ROAD SEWER MAIN REPLACEMENT



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## Project Location

CAMPO ROAD SEWER MAIN REPLACEMENT



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### Proposed Project

CAMPO ROAD SEWER MAIN REPLACEMENT

that the fencing is properly installed prior to construction and maintained for the duration of construction activity in that area. The fencing would be installed in a manner that does not impact habitats to be avoided. The fencing would be removed upon completion of construction of the project.

- A biological monitor would be present during construction activities occurring within 25 feet of environmentally sensitive areas.
- Restoration or landscaping efforts would involve only appropriate native plant species or non-invasive ornamental plant species. In particular, revegetation of areas currently supporting coastal sage scrub would consist entirely of appropriate native plant species.
- All equipment used in or near drainages within an approved construction zone would be clean and free of leaks and grease. Emergency provisions to contain and clean up unintentional fuel or oil spills would be in place prior to construction.
- Fueling of equipment would occur in designated fueling zones located at least 100 feet from drainages and wetland habitat.
- Construction personnel would park private vehicles outside areas supporting sensitive habitat.
- Drivers of construction-related vehicles on unpaved roads in native habitats would not exceed a speed of 15 miles per hour in order to avoid injury to animals and minimize dust generation.
- Pets of project personnel would not be allowed on the project site.
- Disposal or temporary placement of excess fill, brush, or other debris would not be allowed to enter waters of the U.S. (or their banks) from upstream storm water drainages.
- Night lighting of construction and staging areas would be of the lowest illumination necessary for human safety, selectively placed, shielded, and directed away from adjacent natural habitats.

### **1.3 PHYSICAL DESCRIPTION AND LAND USE**

The proposed sewer main would be primarily located within existing roads. The beginning and end of the project site are within 2 shopping centers: Rancho San Diego Village and Rancho San Diego Towne Center. Open space is located to the south of the project alignment (where the existing sewer main alignment traverses), and a church, open space, and industrial and commercial uses are located to the north of the project alignment. The removal of the 210-foot-long, elevated sewer main and associated pillars and the capping and plugging of abandoned manholes would take place in the open space area to the south of Campo Road.

Elevation within the study area ranges between 340 and 545 feet above mean sea level. Six soil series occurs within the study area: Diablo-Urban land complex (clay), Friant rocky fine sandy loam, Las Posas fine sandy loam, Placentia sandy loam (including thick surface), and Visalia sandy loam (Bowman 1973).

## 2.0 METHODS

### 2.1 LITERATURE REVIEW

Prior to conducting field investigations, HELIX Environmental Planning, Inc. (HELIX) performed a review of existing literature, including a search of the California Department of Fish and Wildlife’s (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2014) for information regarding sensitive species reported within 2 miles of the project study area. Additional sources include U.S. Fish and Wildlife Service (USFWS; 2014). Soils data were obtained from the U.S. Department of Agriculture (USDA) Web Soil Service (USDA 2014).

### 2.2 BIOLOGICAL SURVEYS

HELIX biologists Stacy Nigro and Laura Moreton conducted vegetation mapping and a general biological survey on August 14, 2014 (Table 1). Vegetation communities within the study area were mapped on an aerial photograph (1”=100’ scale) with overlaid topography. A list of all plant and animal species observed or detected within the study area was prepared (refer to Appendices A and B). Plant species were identified in the field or later in the laboratory with the aid of voucher specimens. Animals were identified in the field by direct visual observation with the aid of binoculars or indirectly by detection of calls, tracks, burrows, or scat.

**Table 1  
SURVEY INFORMATION**

<b>Date</b>	<b>Personnel</b>	<b>Survey Type</b>
August 14, 2014	Stacy Nigro, Laura Moreton	Vegetation mapping, general biological survey
April 9, 2015	George Aldridge	Rare plants survey
April 29, 2015	Erica Harris	Coastal California gnatcatcher survey No. 1
May 6, 2015	Erica Harris	Coastal California gnatcatcher survey No. 2
May 18, 2015	Erica Harris	Coastal California gnatcatcher survey No. 3
May 26, 2015	Stacy Nigro, Erica Harris	Jurisdictional delineation
May 27, 2015	Amy Mattson	Rare plants survey
June 1, 2015	Erica Harris	Coastal California gnatcatcher survey No. 4
June 8, 2015	Tara Baxter	Coastal California gnatcatcher survey No. 5
June 17, 2015	Tara Baxter	Coastal California gnatcatcher survey No. 6

### **2.2.1 Rare Plant Survey**

HELIX biologist George Aldridge conducted a spring rare plant survey on April 9, 2015 and HELIX biologist Amy Mattson conducted a summer rare plant survey on May 27, 2015. These surveys were conducted during the flowering period of sensitive plants with potential to occur in areas where the existing and proposed pipelines would cross habitat identified as the rare plant survey area. Developed land was excluded from the survey area. The surveys were conducted by walking transects within potential habitat only where the existing and proposed pipelines occur.

### **2.2.2 Coastal California Gnatcatcher Survey**

HELIX permitted biologists Erica Harris and Tara Baxter (TE 778195-12.2) conducted surveys for coastal California gnatcatcher (*Polioptila californica californica*) within potential coastal California gnatcatcher habitat (Diegan coastal sage scrub) within the study area, pursuant to the USFWS 1997 protocol (USFWS 1997). Appropriate habitat within the study area was surveyed during each visit on foot. Binoculars were used to aid in the identification of birds when necessary. Taped gnatcatcher vocalizations were played at irregular intervals to elicit an aural response in otherwise concealed birds. These vocalizations were played only sparingly to prevent disrupting normal behavior to the maximum extent possible.

### **2.2.3 Jurisdictional Delineation**

Prior to beginning fieldwork, recent aerial photographs (1"=100' scale), USGS topographical maps, and the Soil Survey of the San Diego Area (Bowman 1973) were reviewed to determine the location of potential jurisdictional areas that may be affected by the project. All areas with depressions, drainage channels, or wetland vegetation were evaluated for the presence of Waters of the U.S., including jurisdictional wetlands, on May 26, 2015 by Ms. Nigro.

#### **Federal (USACE) Jurisdictional Areas**

U.S. Army Corps of Engineers (USACE) wetland boundaries were determined using the three criteria (vegetation, hydrology, and soils) established for wetland delineations, as described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement; USACE 2008).

Areas were determined to be non-wetland Waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank) but the vegetation and/or soils criterion was not met. Jurisdictional limits for these areas were defined by the ordinary high water mark (OHWM), which is defined in 33 Code of Federal Regulations Section 329.11 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 the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas.” The USACE has issued further guidance on the

OHW (Riley 2005; Lichvar and McColley 2008), which also has been used for this delineation.

### **State (CDFW) Jurisdictional Areas**

The CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation” (Title 14, Section 1.72). This definition for CDFW jurisdictional habitat allows for a wide variety of habitat types to be jurisdictional, including some that do not include wetland species (e.g., oak woodland and alluvial fan sage scrub). Jurisdictional limits for CDFW streambeds were defined by the top of bank. Vegetated CDFW habitats were mapped at the limits of jurisdictional vegetation.

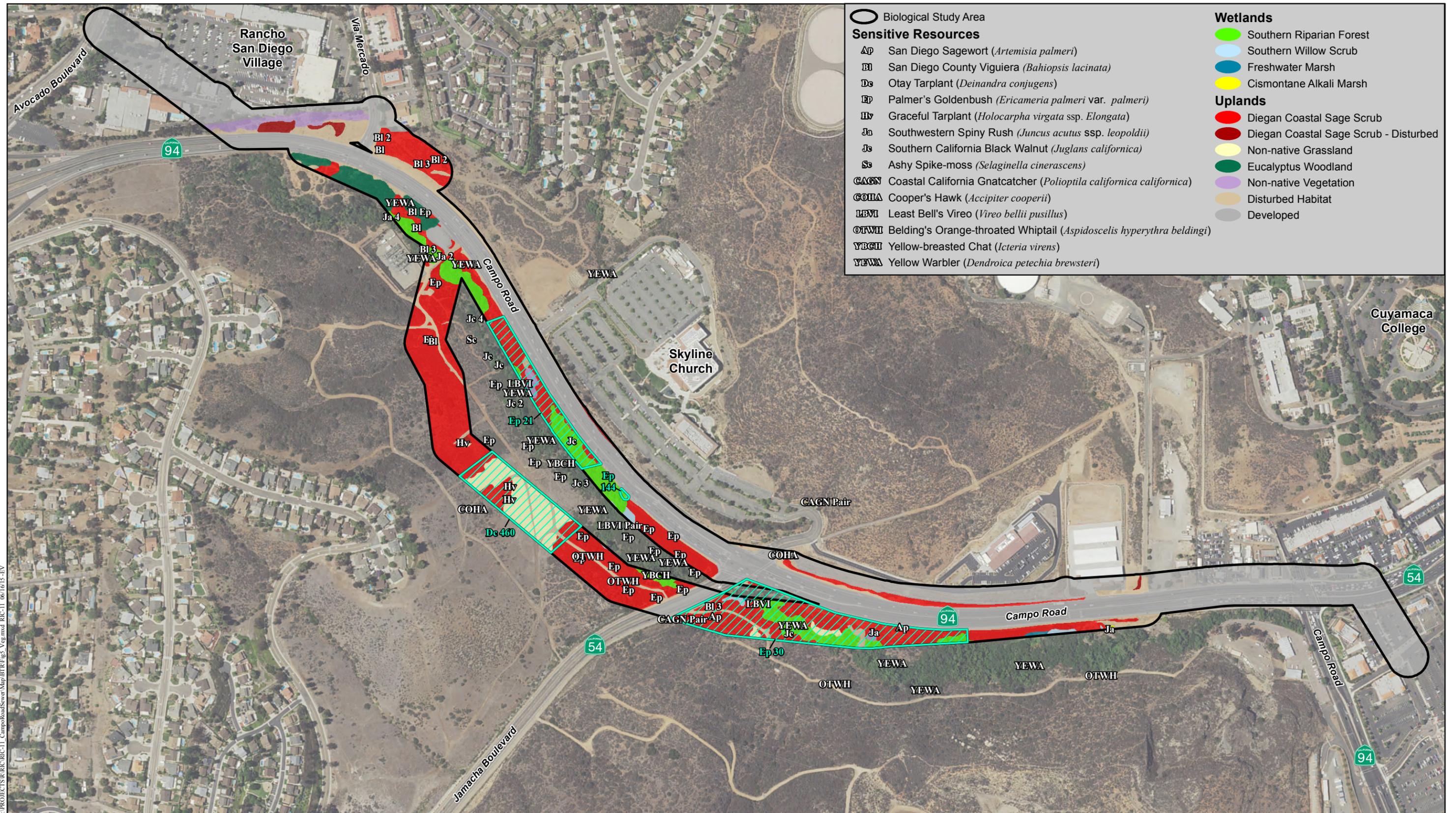
### **2.3 NOMENCLATURE**

Nomenclature for this report is taken from Holland (1986) and Oberbauer (2008) for vegetation communities, and Baldwin et al. (2012) or Rebman and Simpson (2006) for plants. Animal nomenclature is taken from American Ornithologists’ Union (2013) for birds, Baker et al. (2003) for mammals, and Collins and Taggart (2002) for reptiles. Sensitive plant species status follows the California Native Plant Society (CNPS; 2014) and sensitive animal species status follows the CDFW (2013).

## **3.0 RESULTS**

### **3.1 VEGETATION COMMUNITIES/LAND USE**

The study area supports 9 vegetation communities: southern riparian forest, southern willow scrub, freshwater marsh, cismontane alkali marsh, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, non-native vegetation, and disturbed habitat (Figure 5; Table 2). In addition, developed land occurs within the study area. A brief description of each community within the study area is provided below.



**Existing Vegetation Communities and Sensitive Species**

CAMPO ROAD SEWER MAIN REPLACEMENT

<b>Table 2 EXISTING VEGETATION COMMUNITIES WITHIN THE STUDY AREA</b>	
<b>Vegetation Community</b>	<b>Acreage*</b>
Southern riparian forest	3.32
Southern willow scrub	0.25
Freshwater marsh	0.07
Cismontane alkali marsh	0.01
Diegan coastal sage scrub (including disturbed)	16.2
Non-native grassland	2.0
Eucalyptus woodland	1.2
Non-native vegetation	1.0
Disturbed habitat	4.5
Developed	30.3
<b>TOTAL</b>	<b>58.9</b>

\* Wetland acreages are rounded to the nearest 0.01, while upland acreages are rounded to the nearest 0.1; thus, total reflects rounding.

### **Southern Riparian Forest**

Southern riparian woodlands and forests are composed of winter-deciduous trees that require water near the soil surface. Willow (*Salix* sp.), cottonwood (*Populus* sp.), and western sycamore (*Platanus racemosa*) form a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*; Beauchamp 1986). The differences between woodlands and forests are physiognomic rather than compositional. Woodlands have less canopy cover than forests. In forests, the canopies of individual tree species do overlap so that a canopy cover exceeding 100 percent may occur in the upper tree stratum. In woodlands, there may be large canopy gaps within the upper tree stratum.

Southern riparian forest occurs within the central portion of the study area to the south of Campo Road. Dominant species within this vegetation community in the study area include arroyo willow (*Salix lasiolepis*) and red willow (*S. laevigata*). Southern riparian forest covers approximately 3.32 acres of the study area.

### **Southern Willow Scrub**

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and with scattered emergent cottonwood (*Populus fremontii*) and western sycamores. This vegetation community appears as a single layer; it lacks separate shrub and tree layers and generally appears as a mass of short trees or large shrubs. It occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian

forest, provided the requisite hydrology is present to support the greater water needs of those habitats.

Southern willow scrub occurs within the central and southern portions of the study area to the south of Campo Road. Dominant species within this vegetation community in the study area include arroyo willow and red willow. Southern willow scrub covers approximately 0.25 acre of the study area.

### **Freshwater Marsh**

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Schoenoplectus* spp.), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.), and spike-sedge (*Eleocharis* sp.).

Freshwater marsh occurs in 2 patches within the central and southern portions of the study area. Dominant species within this vegetation community in the study area include cattails. Freshwater marsh covers approximately 0.07 acre of the study area.

### **Cismontane Alkali Marsh**

Cismontane alkali marsh is characterized by wet or inundated areas dominated by emergents, but often with an understory of grasses or sedges. Standing water or saturated soil is present during all or most of the year. High evaporation and low input of fresh water result in high salinity, especially during the summer (Holland 1986). Characteristic species include yerba mansa (*Anemopsis californica*), salt grass (*Distichlis spicata* var. *stricta*), cattails, and rush (*Juncus* sp.).

Cismontane alkali marsh occurs in 2 patches within the central and southern portions of the study area. The dominant species within this vegetation community in the study area is southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). Cismontane alkali marsh covers approximately 0.01 acre of the study area.

### **Diegan Coastal Sage Scrub (including Disturbed)**

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

Diegan coastal sage scrub occurs throughout the study area. Patches of disturbed Diegan coastal sage scrub are located in the northern and southern portions of the study areas to the north of Campo Road. Dominant species within this vegetation community in the study area include broom baccharis (*Baccharis sarothroides*), box springs goldenbush (*Ericameria palmeri* var. *pachylepis*), and California sagebrush. Diegan coastal sage scrub (including disturbed) covers approximately 16.2 acres of the study area.

### **Non-native Grassland**

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* spp.), red brome (*Bromus rubens*), ripgut (*B. diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These 2 factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual-dominated non-native grassland (Jackson 1985).

Non-native grassland occurs along the alignment of the existing pipeline in the central portion of the study area. Dominant species within this vegetation community in the study area include oats, fennel (*Foeniculum vulgare*), ripgut, compact brome (*B. madritensis* ssp. *madritensis*), and cardoon (*Cynara cardunculus*). Non-native grassland covers approximately 2.0 acres of the study area.

### **Eucalyptus Woodland**

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced genus that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic, with the most common species being either the blue gum (*Eucalyptus globulus*) or river red gum (*E. camaldulensis*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, as a wildlife habitat, these woodlands provide excellent nesting sites for a variety of raptors.

Eucalyptus woodland occurs in the northern portion of the study area to the south of Campo Road. Eucalyptus woodland covers approximately 1.2 acres of the study area.

### **Non-native Vegetation**

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* spp.], peppertree [*Schinus* spp.]), many of which are also used in landscaping.

Non-native vegetation occurs in the northern portion of the study area, adjacent to the Rancho San Diego Village shopping center, as well as in small patches in the central portion of the study area to the south of Campo Road. Species within this vegetation community in the study area include Peruvian pepper tree (*Schinus molle*) and olive (*Olea europaea*). Non-native vegetation covers approximately 1.0 acre of the study area.

**Disturbed Habitat**

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Disturbed habitat occurs throughout the study area, consists primarily of dirt roads and trails, and covers approximately 4.5 acres of the study area.

**Developed**

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained.

Developed land within the study area consists primarily of roadways and parking lots, and covers approximately 30.3 acres of the study area.

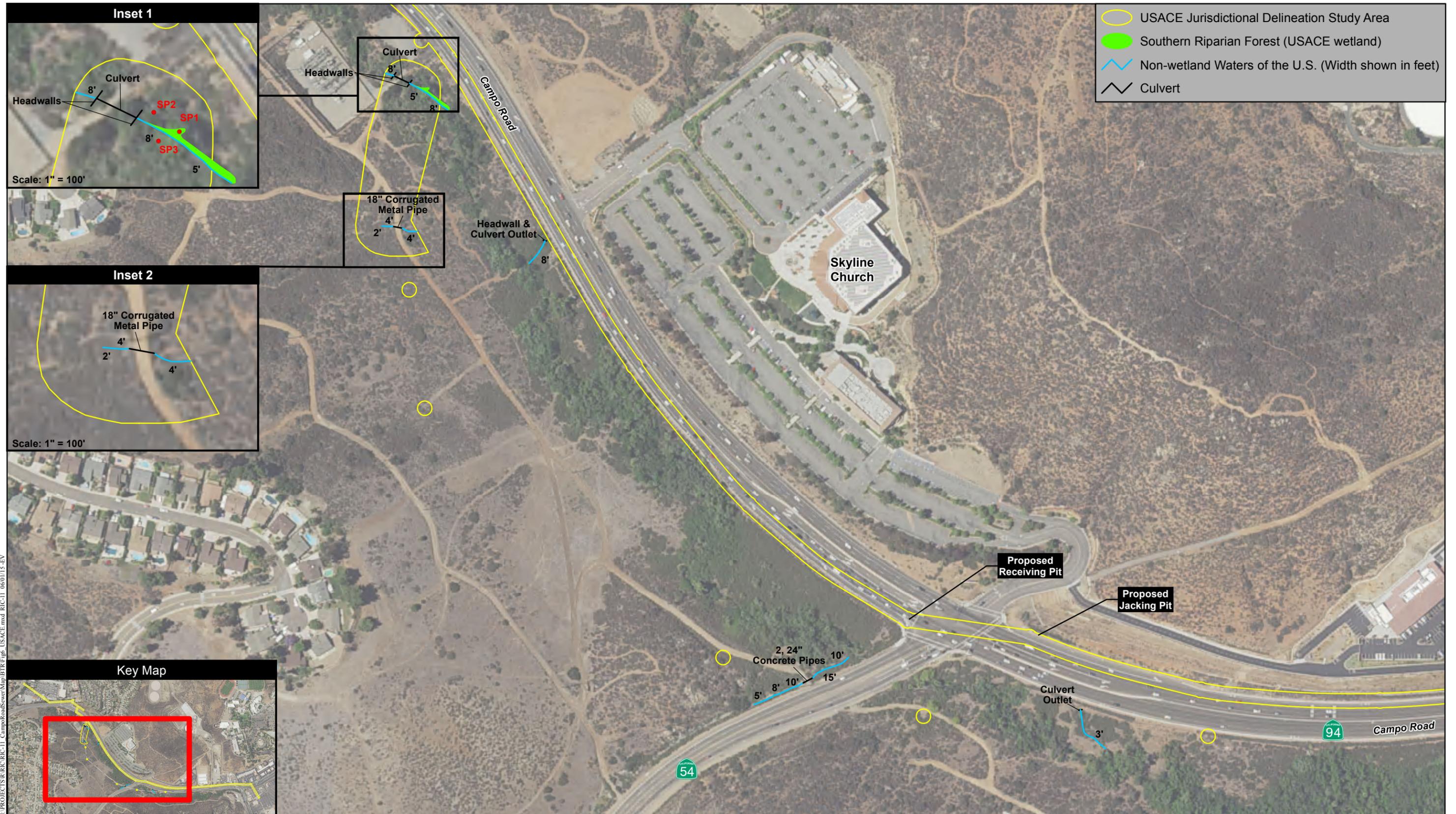
**3.2 JURISDICTIONAL AREAS**

**3.2.1 Federal (USACE) Jurisdiction**

Approximately 0.13 acre of USACE jurisdictional wetlands (southern riparian forest) and non-wetland waters of the U.S. occur within the USACE jurisdictional delineation study area (Figure 6; Table 3).

<b>Table 3 EXISTING JURISDICTIONAL AREAS WITHIN THE STUDY AREA (acre)</b>		
<b>Habitat</b>	<b>USACE</b>	<b>CDFW</b>
<b>Wetlands</b>		
Southern riparian forest	0.02	3.32
Southern willow scrub	--	0.25
Freshwater marsh	--	0.07
Cismontane alkali marsh	--	0.01
<b>Non-wetlands</b>		
Drainage/streambed	0.11	0.12
<b>TOTAL</b>	<b>0.13</b>	<b>3.77</b>

\* Wetland and non-wetland acreages are rounded to the nearest 0.01; thus, totals reflect rounding.



**Existing USACE Jurisdictional Areas**

CAMPO ROAD SEWER MAIN REPLACEMENT

### **3.2.2 State (CDFW) Jurisdiction**

Approximately 3.77 acres of CDFW jurisdictional wetlands (southern riparian forest, southern willow scrub, freshwater marsh, and cismontane alkali marsh) and streambed occur within the CDFW jurisdictional delineation study area (Figure 7; Table 3).

### **3.3 PLANT SPECIES OBSERVED**

A total of 74 plant species were observed within the study area (Appendix A).

### **3.4 ANIMAL SPECIES OBSERVED OR DETECTED**

A total of 58 animal species were observed or detected within the study area, including 8 invertebrate, 3 reptile, 43 bird, and 4 mammal species (Appendix B).

## **4.0 SENSITIVE RESOURCES**

### **4.1 SENSITIVE VEGETATION COMMUNITIES**

Sensitive vegetation communities are those that are considered rare within the region or sensitive by CDFW (Holland 1986). These communities are considered sensitive because they have been historically depleted, are naturally uncommon, or support sensitive species. The study area supports 6 sensitive vegetation communities: southern riparian forest, southern willow scrub, freshwater marsh, cismontane alkali marsh, Diegan coastal sage scrub (including disturbed), and non-native grassland.

### **4.2 SENSITIVE PLANT SPECIES**

#### **4.2.1 Sensitive Plants Observed**

Sensitive plant species may be considered rare, a characteristic that may be based on 3 distributional traits: geographic range, habitat specificity, or population size (Rabinowitz et al. 1986). A species that exhibits a small or restricted geographic range (such as those endemic to the San Diego region) are geographically rare. A species may be more or less abundant but occur only in very specific habitats. Lastly, a species may be widespread but exist naturally in small populations. High-interest plants include those listed by CNPS (2014).

One federal- and state-listed threatened or endangered plant species was observed within the study area during surveys: Otay tarplant (*Deinandra conjugens*). In addition, 7 plant species considered sensitive by the CNPS were observed within the study area and include: Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*), ashy spike-moss (*Selaginella cinerascens*), San Diego sagewort (*Artemisia palmeri*), San Diego County viguiera (*Bahiopsis laciniata*), graceful tarplant (*Holocarpha virgata* ssp. *elongate*), southern California black walnut (*Juglans californica*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). These species are further discussed below and are listed in order of sensitivity. When sensitivity is the same,

species are listed alphabetically by scientific name. An explanation of status codes can be found in Appendix C.

**Otay tarplant (*Deinandra conjugens*)**

**Listing:** FT/SE

**Distribution:** Southern San Diego County and northwestern Baja California, Mexico. In San Diego County, found in scattered localities from the vicinity of Sweetwater Reservoir south to the Mexico border.

**Habitat:** Fractured clay soils in grasslands or lightly vegetated coastal sage scrub

**Status on site:** An area containing 460 Otay tarplant is located in the central portion of the study area along the existing pipeline alignment. In addition, critical habitat for Otay tarplant is designated approximately 200 feet south of the project study area (Figure 8).

**Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)**

**Listing:** --/--; CNPS List 2.2

**Distribution:** Southern San Diego County and Baja California, Mexico below approximately 660 feet in elevation. Known in California from only 6 occurrences.

**Habitat:** This sizeable shrub grows along coastal drainages, in mesic chaparral sites, or rarely in Diegan coastal sage scrub. Occasionally occurs as a hillside element (usually at higher elevations inland on north-facing slopes).

**Status on site:** A total of 214 individuals, mainly found within 3 large stands, were observed in the central portion of the study area to the south of Campo Road.

**Ashy spike-moss (*Selaginella cinerascens*)**

**Listing:** --/--; CNPS List 4.1

**Distribution:** Orange and San Diego counties; northwestern Baja California, Mexico

**Habitat:** Flat mesas in coastal sage scrub and chaparral. A good indicator of site degradation, as it rarely inhabits disturbed soils.

**Status on site:** One individual was observed in the south of Campo Road between the proposed and existing pipeline alignments.

**San Diego sagewort (*Artemisia palmeri*)**

**Listing:** --/--; CNPS List 4.2

**Distribution:** Coastal San Diego County; Baja California, Mexico

**Habitat:** Stream courses, often within coastal sage scrub and southern mixed chaparral

**Status on site:** Two individuals were observed in the central portion of the study area along the existing pipeline alignment.

**San Diego County viguiera (*Bahiopsis laciniata*)**

**Listing:** --/--; CNPS List 4.2

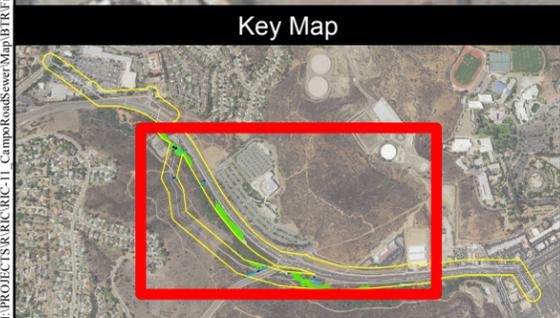
**Distribution:** San Diego and Orange County; Baja California, Mexico

**Habitat:** Diegan coastal sage scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

**Status on site:** Ten individuals were found to the south of Campo Road and 8 individuals were observed to the north of Campo Road within the northern portion of the study area.

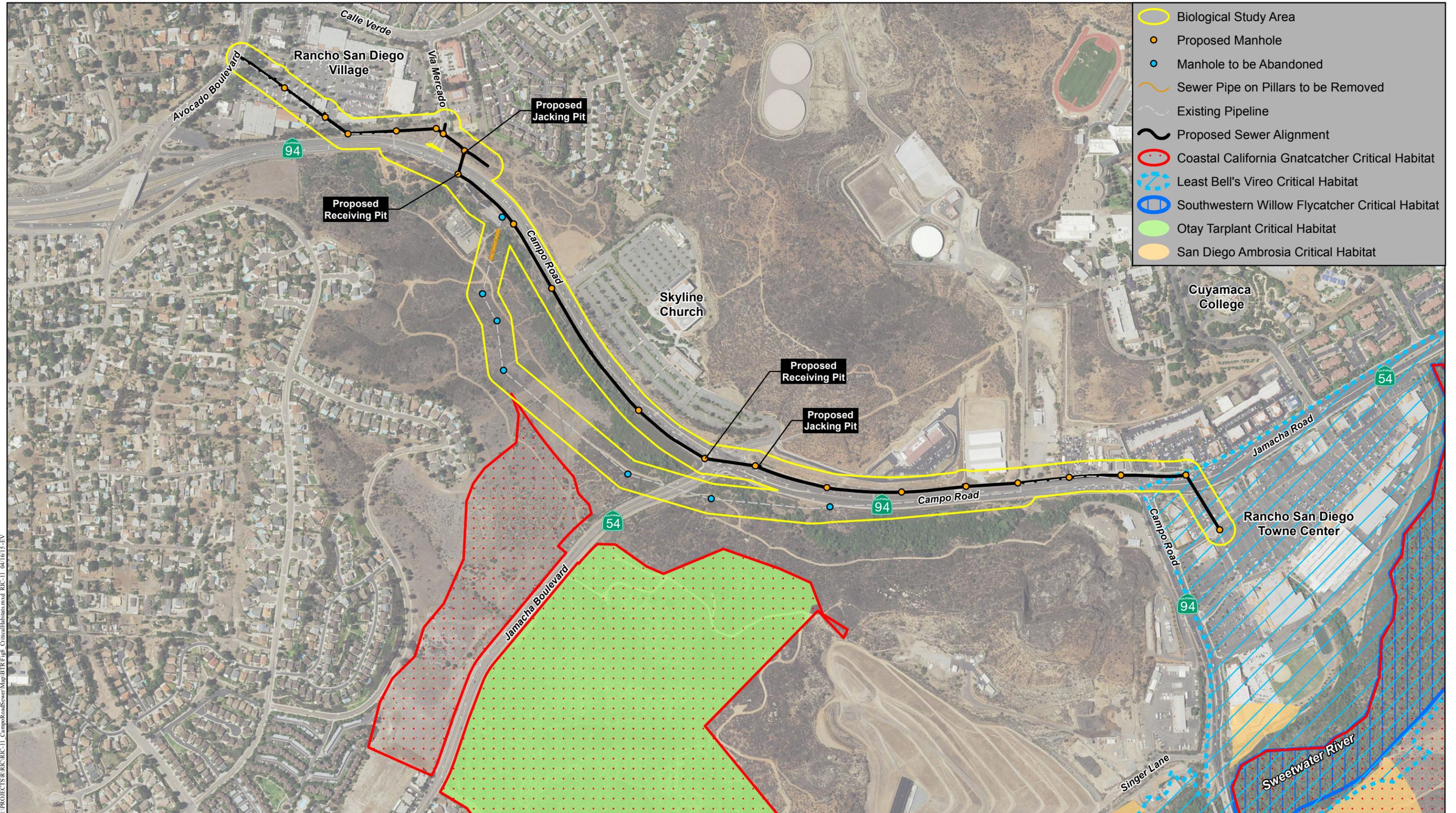


- CDFW Jurisdictional Delineation Study Area
- CDFW Wetlands and Waterways**
- Southern Riparian Forest
- Southern Willow Scrub
- Freshwater Marsh
- Cismontane Alkali Marsh
- CDFW Stream Channel (Width shown in feet)



**Existing CDFW Jurisdictional Areas**

CAMPO ROAD SEWER MAIN REPLACEMENT



- Biological Study Area
- Proposed Manhole
- Manhole to be Abandoned
- ~ Sewer Pipe on Pillars to be Removed
- Existing Pipeline
- ~ Proposed Sewer Alignment
- Coastal California Gnatcatcher Critical Habitat
- Least Bell's Vireo Critical Habitat
- Southwestern Willow Flycatcher Critical Habitat
- Otoy Tarplant Critical Habitat
- San Diego Ambrosia Critical Habitat

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**USFWS Critical Habitat**

CAMPO ROAD SEWER MAIN REPLACEMENT

**Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)**

**Listing:** --/--; CNPS List 4.2; CA Endemic

**Distribution:** San Diego, Orange, and Riverside counties

**Habitat:** Coastal mesas and foothills with grassland habitats

**Status on site:** Three individuals were found within the central portion of the study area along the existing pipeline alignment.

**Southern California black walnut (*Juglans californica*)**

**Listing:** --/--; CNPS List 4.2; CA Endemic

**Distribution:** Los Angeles, Orange, Riverside, Santa Barbara, San Bernardino, San Diego, and Ventura counties

**Habitat:** This tree grows between 20 and 50 feet tall in open savannah, often in habitat best labeled walnut woodland. May be more tolerant of clay soils than most native trees and shrubs. Shows preference for deep alluvial soils with high water-retention capacity and tends to grow in creekbeds, alluvial terraces, and north-facing slopes.

**Status on site:** A total of 13 individuals were observed in the central portion of the study area to the south of Campo Road.

**Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)**

**Listing:** --/--; CNPS List 4.2

**Distribution:** Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja California, Mexico

**Habitat:** Moist, saline, or alkaline soils in coastal salt marshes and riparian marshes

**Status on site:** Eight individuals of this species were observed throughout the study area to the south of Campo Road.

**4.2.2 Sensitive Plants with Potential to Occur**

Sensitive plant species that were not observed but have potential to occur within the rare plant survey area are described in Appendix C.

**4.3 SENSITIVE ANIMAL SPECIES**

**4.3.1 Sensitive Animals Observed or Detected**

Six animal species considered sensitive by the resource agencies were observed or detected within the study area during surveys and include the federal- and state-listed as endangered least Bell's vireo, the federal-listed as threatened coastal California gnatcatcher, as well as orange-throated whiptail (*Aspidoscelis hyperythrus beldingi*), yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), and Cooper's hawk (*Accipiter cooperii*).

A brief description of each sensitive animal species observed or detected within the study area is provided below. An explanation of status codes can be found in Appendix C.

**Least Bell's vireo (*Vireo bellii pusillus*)**

**Status:** FE, BCC/SE

**Distribution:** Observed throughout much of San Diego County in the breeding season but in smaller numbers in foothills and mountains

**Habitat:** Mature riparian woodland

**Status on site:** The least Bell's vireo was detected in a total of 3 locations within the southern riparian forest habitat located south of Campo Road. Observations included 2 singing males and 1 pair. In addition, critical habitat for least Bell's vireo is designated within the southern portion of the project survey area (within Rancho San Diego Towne Center; Figure 8).

**Coastal California gnatcatcher (*Polioptila californica californica*)**

**Status:** FT/SSC

**Distribution:** In San Diego County, occurs throughout coastal lowlands

**Habitat:** Coastal sage scrub

**Status on site:** A coastal California gnatcatcher pair was observed to the south of Campo Road and east of Jamacha Boulevard during the fifth focused species survey. The pair was observed flying between patches of coastal sage scrub at the southern portion of the study area. An additional pair of gnatcatcher was observed approximately 250 feet to the north of the central portion of the study area. In addition, critical habitat for coastal California gnatcatcher is designated immediately south of the central portion of the project survey area (Figure 8).

**Belding's orange-throated whiptail (*Aspidoscelis hyperythrus beldingi*)**

**Status:** --/SSC

**Distribution:** Southern Orange County and southern San Bernardino County, south through Baja California

**Habitat:** Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).

**Status on site:** Two individuals were detected along an unpaved road to the south of the Campo Road along the existing pipeline alignment.

**Yellow warbler (*Dendroica petechia brewsteri*)**

**Status:** --/SSC

**Distribution:** Observed throughout much of San Diego County during the breeding season with rare sightings in winter

**Habitat:** Riparian woodland

**Status on site:** Multiple individuals were detected singing within the southern riparian forest habitat to the south of Campo Road.

**Yellow-breasted chat (*Icteria virens*)**

**Status:** --/SSC

**Distribution:** Occurs throughout San Diego County's coastal lowlands in the breeding season

**Habitat:** Mature riparian woodland

**Status on site:** The yellow-breasted chat was detected singing in 2 locations within the southern riparian forest habitat located to the south of Campo Road.

**Cooper's hawk (*Accipiter cooperii*)**

**Status:** --/WL

**Distribution:** Occurs year-round throughout San Diego County's coastal slope where stands of trees are present

**Habitat(s):** Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests

**Status on site:** An individual was observed flying over the project study area to the north and south of Campo Road.

**4.3.2 Sensitive Animals with Potential to Occur**

Sensitive animal species that were not observed or detected but have potential to occur within the study area are listed in Appendix E. Sensitive animal species with a high potential to occur on site include Coronado skink (*Eumeces skiltonianus interparietalis*), northern red diamond rattlesnake (*Crotalus ruber ruber*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Sensitive animal species with a moderate to high potential to occur on site include Quino checkerspot butterfly (*Euphydryas editha quino*) and Hermes copper (*Lycaena hermes*).

**4.4 WILDLIFE CORRIDORS**

Wildlife corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors, which are often hillsides or tributary drainages, to move between different habitats. Regional corridors provide these functions and link 2 or more large habitat areas. They provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

As previously stated, the Sweetwater River located approximately 0.25 mile south of the project study area acts as a regional wildlife corridor. In addition, the riparian corridor immediately south of Campo Road within the project area acts as a local wildlife movement area.

**5.0 REGIONAL AND REGULATORY CONTEXT**

**5.1 REGULATORY ISSUES**

Laws and regulations that apply include the federal and state Endangered Species Acts (ESA), Clean Water Act, Porter-Cologne Act, CEQA, and Migratory Bird Treaty Act (MBTA). Under CEQA, impacts associated with a proposed project are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the District) and pursuant to CEQA and the State CEQA Guidelines.

### **5.1.1 Federal Government**

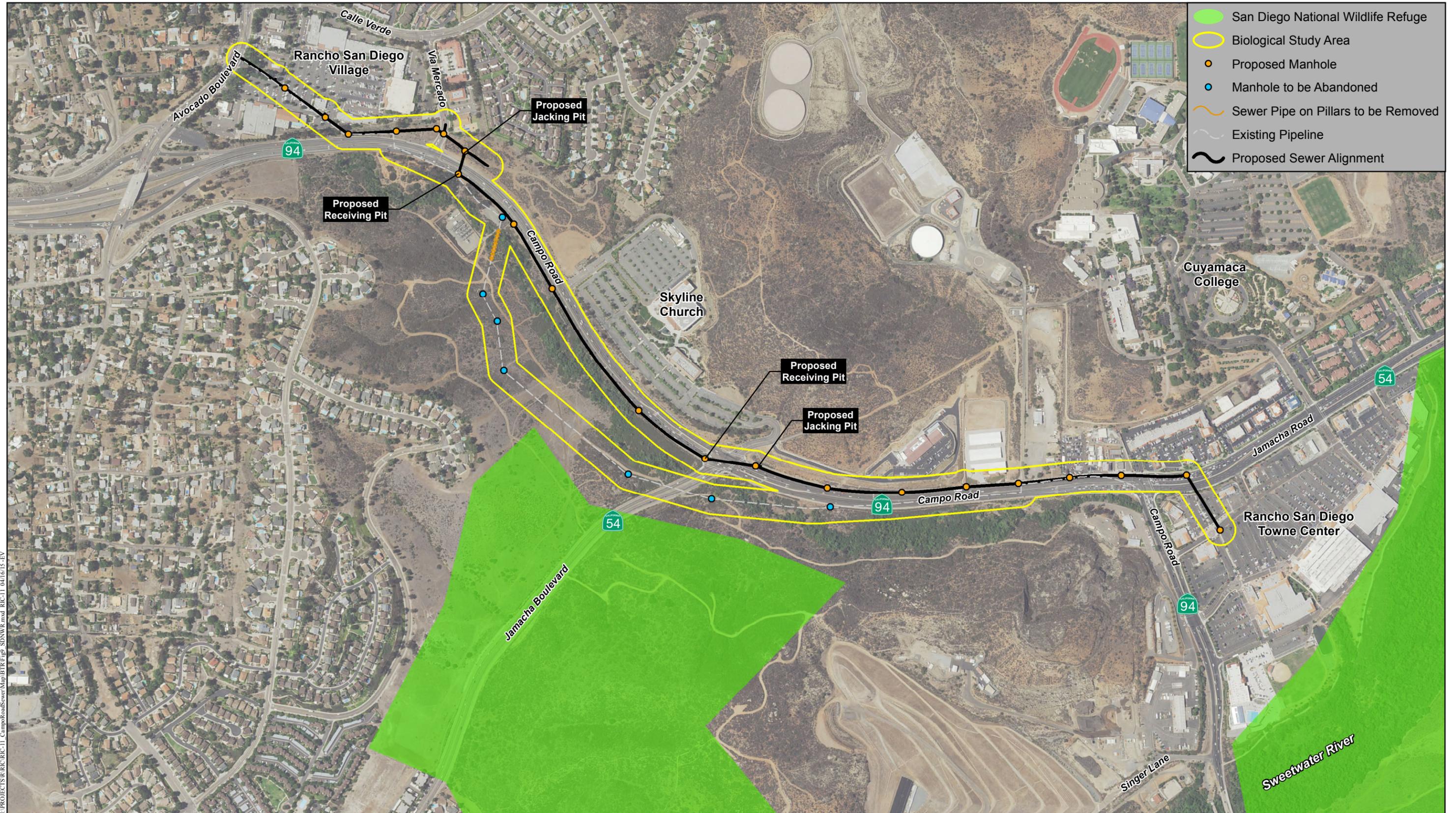
Administered by the USFWS, the federal ESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a ‘take’ under the ESA. Section 9(a) of the ESA defines take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” ‘Harm’ and ‘harass’ are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species’ behavioral patterns.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take is authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species’ (in this case, the coastal California gnatcatcher and least Bell’s vireo) use of the site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a habitat conservation plan (HCP). The term “incidental” applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species’ survival must be submitted for issuance of Section 10(a) permits.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. The project study area is adjacent to critical habitat for the coastal California gnatcatcher and Otay tarplant (Figure 8); however, the project would not impact these areas. Although critical habitat for least Bell’s vireo occurs within the proposed pipeline alignment, this area is currently developed with the Rancho San Diego Towne Center. Because the shopping center does not provide primary constituent elements for the least Bell’s vireo (as described in 59 Federal Register 4845-4867), impacts associated with construction of an underground pipeline to this portion of designated critical habitat would not require Section 7 consultation with the USFWS.

The project study area is also adjacent to the San Diego National Wildlife Refuge (Figure 9); however, the proposed project would not result in impacts to the refuge.

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA. The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to



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**San Diego National Wildlife Refuge**

CAMPO ROAD SEWER MAIN REPLACEMENT

July 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. Permitting for projects filling Waters of the U.S. (including wetlands) is overseen by the USACE under Section 404 of the Clean Water Act. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than 6 months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions. However, it is assumed that a Section 404 Permit would not be required for the proposed project because no impacts to USACE jurisdictional areas are anticipated.

### **5.1.2 State of California**

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), requiring that projects with potential adverse effects or impacts on the environment undergo environmental review. Adverse impacts to the environment are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

The California ESA is similar to the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The California ESA followed the NPPA and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

Under Section 401 of the Clean Water Act, an applicant for a Section 404 permit must obtain a certificate from the Regional Water Quality Control Board (RWQCB) prior to issuance of the Section 404 permit pursuant to the Porter-Cologne Water Quality Control Act. However, because the proposed project would not require a Section 404 permit, no Section 401 water quality certification would be required for the project.

The California Fish and Game Code (Sections 1600 through 1603) requires a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Streambed Alteration Agreement. It is assumed that the proposed project would not require a 1602 Agreement from the CDFW because the project would not impact CDFW jurisdictional areas.

Raptors (birds of prey) and owls and their active nests are protected by California Fish and Game Code 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by CDFW.

### **5.1.3 Local**

#### **County of San Diego Multiple Species Conservation Plan (MSCP)**

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub dependent species.

The County's MSCP Subarea Plan (County 1997) has been prepared to meet the requirements of the California NCCP, federal ESA, and California ESA. It is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The County's MSCP Subarea Plan implements the MSCP within the unincorporated areas under County jurisdiction. The County of San Diego considers construction noise effects significant if construction noise levels exceed a 60 decibel (dB) hourly average or ambient noise adjacent to nesting during the breeding season of coastal California gnatcatcher (March 1 to August 15), least Bell's vireo (March 15 to September 15), raptors (January 15 to July 15), and/or migratory birds (February 1 to September 15).

The existing pipeline alignment is immediately adjacent to County conserved lands in the southern portion of the study area. No direct impacts to conserved land would occur as a result of the proposed project. Potential indirect noise impacts are described in Section 6.2.4, *Noise*, and subject to mitigation as described in Section 7.2. In addition, land identified as Minor Amendment Area occurs within the existing pipeline alignment, including where 2 existing manholes occur. The proposed project would include removing the manhole and backfilling it with sand; however, manhole capping would be completed by hand or with small equipment so as not to impact the surrounding sensitive habitat. Therefore, the project would not conflict with Habitat Conservation Plans (HCPs), NCCP, or other approved local, regional, or state habitat conservation plan.

## **6.0 PROJECT IMPACTS**

This section presents an impact analysis for the proposed project. Impacts are either direct or indirect. An impact is direct when the primary effect is removal of existing habitat, often replacing it with developed area. An indirect impact consists of secondary effects of a project (such as noise) that leads to habitat degradation. The magnitude of an indirect impact may be the same as a direct impact; however, the effect usually takes a longer time to become apparent.

## **CRITERIA FOR DETERMINING IMPACT SIGNIFICANCE**

The criteria listed below were used to determine if the proposed project would result in significant impacts to biological resources pursuant to CEQA (Environmental Checklist Form, Appendix G of the State CEQA Guidelines). Will the proposed project:

1. 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 the CDFW or USFWS?
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
4. 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?
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
6. Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?

### **6.1 DIRECT IMPACTS**

#### **6.1.1 Vegetation Communities**

Construction of the proposed pipeline would result in direct temporary impacts to approximately 0.3 acre of sensitive vegetation (Diegan coastal sage scrub [including disturbed]), as well as 0.1 acre of disturbed habitat and 1.1 acres of developed land (Figure 10). Such impacts to sensitive habitat would be significant. With regard to the existing pipeline, pipe removal and manhole capping in sensitive habitat would be completed by hand or with small equipment so as not to impact the habitat.

The proposed project would not conflict with any tree preservation ordinance or other local policies as the District does not have an established tree preservation policy. The proposed project would occur primarily within existing roadways. A portion of the existing aboveground section of pipe to be removed is adjacent to trees; however, the project would not include removal of those trees. As such, the project would not conflict with any tree preservation ordinance or other local policies.

## **6.1.2 Jurisdictional Areas**

### **Federal (USACE) Jurisdiction**

Although the proposed pipeline alignment would be adjacent to jurisdictional areas, construction of the pipeline would not result in direct impacts to USACE jurisdictional areas (Figure 11). Impacts associated with construction of the proposed pipeline would be restricted mainly to paved roadways and parking lots, as well as limited amounts (0.3 acre) of Diegan coastal sage scrub.

With regard to the existing aboveground pipe that would be removed as part of the project, all of its pillars within southern riparian forest habitat are located outside of areas under USACE jurisdiction. All but one of the pillars are sufficiently situated away from the creek channel so that removal would not affect USACE jurisdictional areas; however, the second northernmost pillar is located directly adjacent to the channel/edge of a USACE jurisdictional area (on the south side of the channel). Therefore, this pillar would be cut above the existing ground level in order to avoid potential impacts to this jurisdictional area. Pipe and pillar removal would be completed by hand or with small equipment so as not to impact the jurisdictional area (i.e., no fill would be placed within jurisdictional areas and no trees would be removed).

Similarly, manhole capping of the existing pipeline within sensitive habitat would be completed by hand or with small equipment and so as not to impact USACE jurisdictional areas.

### **State (CDFW) Jurisdiction**

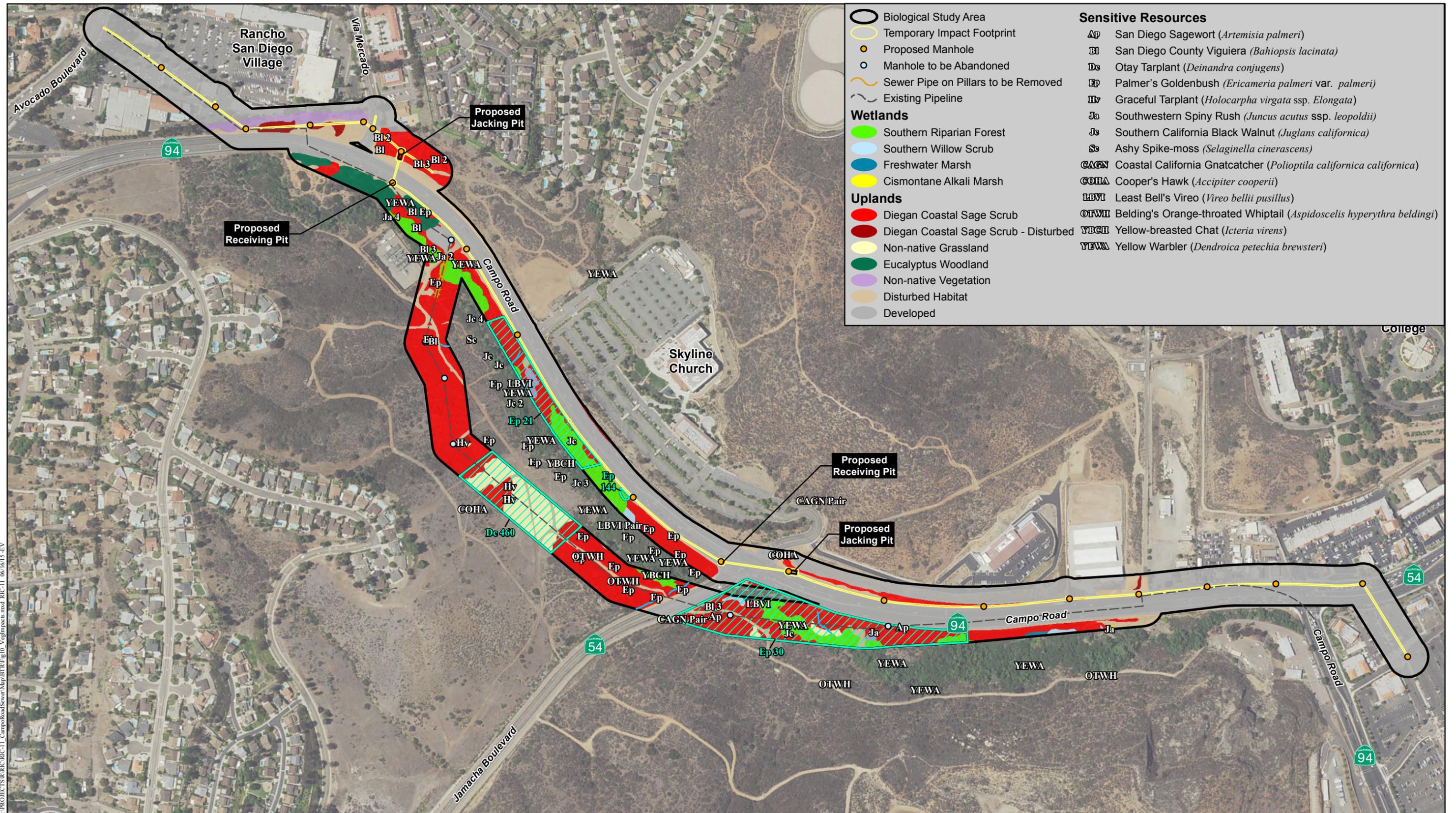
Although the proposed pipeline alignment would be adjacent to jurisdictional areas, construction of the pipeline would not result in direct impacts to CDFW jurisdictional areas (Figure 12); as stated above, impacts associated with construction of the proposed pipeline would be restricted mainly to paved roadways and parking lots, as well as limited amounts (0.3 acre) of Diegan coastal sage scrub.

With regard to the existing aboveground pipe that would be removed as part of the project, the southern riparian forest habitat in which pillars are located is under the jurisdiction of CDFW. Pipe and pillar removal would be completed by hand or with small equipment, however, so as not to impact the jurisdictional area (i.e., no fill would be placed within jurisdictional areas and no trees would be removed). Therefore, potential impacts to CDFW jurisdictional areas would be avoided.

Similarly, manhole capping of the existing pipeline within sensitive habitat would be completed by hand or with small equipment so as not to impact CDFW jurisdictional areas.

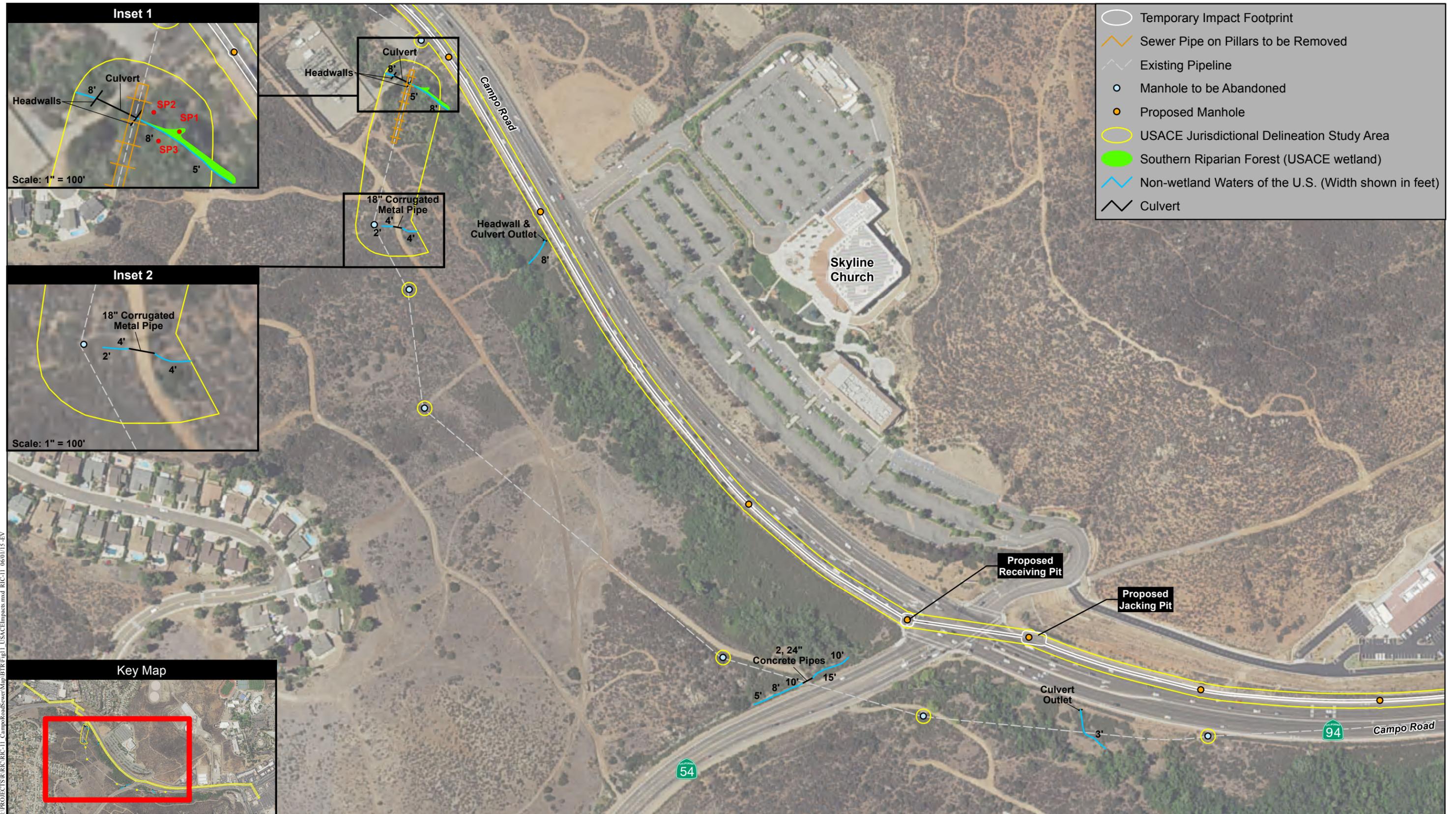
## **6.1.3 Sensitive Plant Species**

As stated above, 8 sensitive plant species (Otay tarplant, Palmer's goldenbush, ashy spike-moss, San Diego sagewort, San Diego County viguiera, graceful tarplant, southern California black walnut, and southwestern spiny rush) occur within the rare plant survey area. A number of Otay



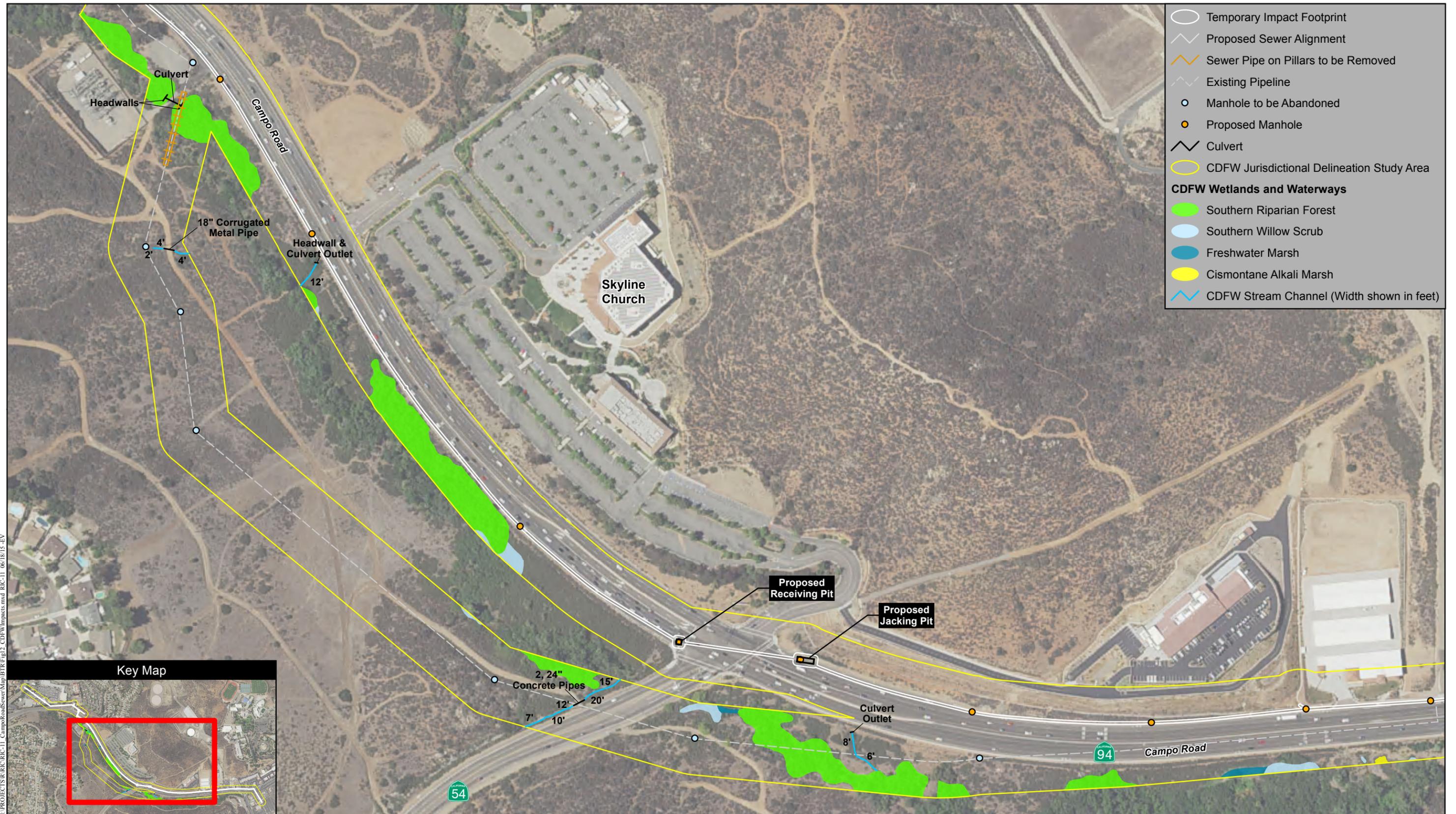
Impacts to Vegetation Communities and Sensitive Species

CAMPO ROAD SEWER MAIN REPLACEMENT



**Impacts to USACE Jurisdictional Areas**

CAMPO ROAD SEWER MAIN REPLACEMENT



- Temporary Impact Footprint
- Proposed Sewer Alignment
- Sewer Pipe on Pillars to be Removed
- Existing Pipeline
- Manhole to be Abandoned
- Proposed Manhole
- Culvert
- CDFW Jurisdictional Delineation Study Area
- CDFW Wetlands and Waterways**
- Southern Riparian Forest
- Southern Willow Scrub
- Freshwater Marsh
- Cismontane Alkali Marsh
- CDFW Stream Channel (Width shown in feet)

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### Impacts to CDFW Jurisdictional Areas

CAMPO ROAD SEWER MAIN REPLACEMENT

tarplant occur along the alignment of the existing pipeline, including near existing manholes to be capped. Due to the relatively high number of Otay tarplant (460 individuals) in the project study area, some individuals of this species could be inadvertently impacted (e.g., by accidentally stepping or driving over them) during manhole capping. Impacts to this species would be significant.

The proposed project would not result in impacts to Otay tarplant critical habitat as such habitat is not located within the impact area (Figure 8).

One Palmer's goldenbush (a CNPS List 2.2) is located immediately adjacent to an existing manhole that would be capped. Capping of the manholes would be completed by hand or with small equipment so as not to impact habitat; however, if individuals of this species are inadvertently impacted, such impacts would be adverse but not significant due to the fact that only one could be affected and the species' low sensitivity.

Construction of the proposed pipeline could result in impacts to 2 San Diego County viguiera (a CNPS List 4.2 species). Two San Diego County viguiera are also located near the existing manholes and could be inadvertently impacted. One graceful tarplant and 2 San Diego sagewort (both CNPS List 4.2 species) could be inadvertently impacted by the capping of existing manholes. Given the low number affected and the low sensitivity, impacts to these individuals would be adverse but not significant.

The proposed project would not result in impacts to ashy spike-moss, southwestern spiny rush, and southern California black walnut.

#### **6.1.4 Sensitive Animal Species**

As stated above, 6 sensitive animal species (least Bell's vireo, coastal California gnatcatcher, Belding's orange-throated whiptail, yellow warbler, yellow-breasted chat, and Cooper's hawk) were observed or detected within the study area. The proposed project would avoid direct impacts to the locations at which sensitive animal species were observed. In addition, the project impact footprint is located within and immediately adjacent to an existing roadway and areas disturbed by existing dirt paths and adjacent development. Therefore, the project would not result in direct impacts to habitat with potential to support the coastal California gnatcatcher, least Bell's vireo, yellow warbler, and yellow-breasted chat. Indirect impacts to sensitive avian species could potentially occur, as further discussed below in Section 6.2.4, *Noise*.

The proposed project would not result in impacts to coastal California gnatcatcher critical habitat as such habitat is not located within the impact area (Figure 8). Although critical habitat for least Bell's vireo occurs within the proposed pipeline alignment, this area is currently developed with the Rancho San Diego Towne Center. Because the shopping center does not provide primary constituent elements for least Bell's vireo habitat, impacts associated with construction of an underground pipeline to this portion of designated critical habitat would be less than significant.

Two Belding's orange-throated whiptails (a state species of special concern) were observed along an unpaved road to the south of the Campo Road along the existing pipeline alignment.

Capping of the manholes would be completed by hand or with small equipment so as not to impact habitat; however, if individuals of this species are inadvertently impacted, such impacts would be adverse but not significant due to the low number affected and the low sensitivity.

Eucalyptus trees are located immediately south of Campo Road in the northern portion of the study area, and could potentially provide nesting sites for raptors. The proposed project would not require the removal of trees. Therefore, no direct impacts to raptors (including Cooper's hawk) would occur.

### **6.1.5 Sensitive Plant and Animal Species with Potential to Occur**

As shown in Appendix D, the potential for additional sensitive plant species (that were not discussed in Section 6.1.3, above) to occur within the study area is none to moderate based on field surveys and existing habitat. Therefore, no impact is anticipated to occur to other sensitive plant species within the study area.

As shown in Appendix E, sensitive animal species with a high potential to occur on site include Coronado skink, northern red diamond rattlesnake, San Diego horned lizard, San Diego black-tailed jackrabbit, and San Diego desert woodrat (all of which are state species of special concern). Suitable habitats for these species occur within and adjacent to the study area. Construction of the proposed pipeline within Diegan coastal sage scrub located in the northern portion of the study area to the north of Campo Road could result in inadvertent impacts to these species, if present within the proposed trenching corridor. Capping of the manholes would be completed by hand or with small equipment so as not to impact sensitive biological resources; however, individuals of these species could be inadvertently impacted. Impacts to these species would be adverse but not significant, however, because due to their low sensitivity and the fact that these animals can move away from potential impact areas.

Sensitive animal species with a moderate to high potential to occur on site include Quino checkerspot butterfly and Hermes copper. Both species have been previously mapped by others within the vicinity of the study area. Approximately 35 individuals of spiny redberry (*Rhamnus crocea*; the host plant for Hermes copper) are located under the eucalyptus trees in the northern portion of the study area immediately adjacent and south of Campo Road. There are also spiny redberry scattered throughout the Diegan coastal sage scrub, located along the existing pipeline alignment to the north and south of Jamacha Boulevard. No host plants for the Quino checkerspot butterfly were observed in the project study area during any of the surveys conducted in 2014 and 2015.

Due to the proximity of Quino checkerspot butterfly and Hermes copper sightings and the presence of spiny redberry, these two sensitive butterfly species would be expected to occur near the existing pipeline alignment, to the south of drainage located immediately south of Campo Road. Quino checkerspot butterfly and Hermes copper would not be expected to occur along the proposed pipeline alignment because of the proximity to Campo Road.

Construction of the proposed pipeline would occur mainly within existing developed areas and would impact a relatively small area (0.3 acre) of Diegan coastal sage scrub that is immediately

adjacent to Campo Road. No host plants for Quino checkerspot butterfly or Hermes copper are present in the project footprint. In addition, host plants located under the eucalyptus trees in the northern portion of the study area immediately south of Campo Road are outside of the impact corridor for the proposed pipeline. Therefore, construction of the proposed pipeline is not anticipated to impact either sensitive butterfly species.

Capping of the existing pipeline also is not anticipated to impact Quino checkerspot butterfly or Hermes copper because capping activities would be completed using hand tools and small equipment, no vegetation would be removed and no improvements to the existing dirt paths would occur. Therefore, no impacts to these species or their habitat are expected.

### **6.1.6 Nesting Birds**

Clearing of vegetation during the breeding season of MBTA-covered species (migratory birds that are native to the United States or its territories) could affect nesting birds (or birds displaying breeding or nesting behavior). Such direct impacts would be considered significant.

### **6.1.7 Wildlife Corridors**

As previously stated, the Sweetwater River located approximately 0.25 mile south of the project study area acts as a regional wildlife corridor. In addition, the riparian corridor immediately south of Campo Road within the project area acts as a local wildlife movement area. The proposed project would consist of construction and operation of an underground pipeline within or adjacent to existing paved roadways and parking lots. The new sewer line would be located outside of the Sweetwater River and the riparian corridor used for wildlife movement.

With regard to the abandonment of the existing pipeline, removal of the existing aboveground pipe and capping of the existing manholes would be completed by hand or with small equipment so as not to impact the habitat. Nonetheless, such work could cause short-term disruption as wildlife may avoid the area during work. Due to the short duration of disruption, pipeline abandonment activities would not affect the Sweetwater River or the riparian corridor immediately south of Campo Road. Therefore, impacts to wildlife movement would be less than significant.

## **6.2 INDIRECT IMPACTS**

Potential indirect project impacts consist of secondary effects of the project, including habitat insularization, drainage/water quality, lighting, noise, exotic plant species, raptor foraging, and nuisance animal species.

### **6.2.1 Habitat Insularization**

Habitat insularization is the fragmentation of large habitat areas into smaller “islands” effectively isolated from one another. Such fragmentation presents barriers to wildlife movement and breeding, splits animal and plant populations, and increases edge effects. Often, habitat insularization is associated with local species extinctions, since smaller habitat areas support

relatively fewer species than larger ones. The study area primarily consists of developed land with some areas of native vegetation. The proposed pipeline would primarily occur within existing roadways and paved parking lots. Impacts to sensitive vegetation communities would occur; however, these impacts are linear and minimal. No habitat insularization is anticipated. As such, the project would not isolate any habitat areas, and no impacts would occur.

### **6.2.2 Drainage/Water Quality**

Water quality could be adversely affected during construction by potential surface runoff, including sedimentation, fertilizers, and car petroleum products. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources.

Implementation of the proposed project would require conformance with the National Pollution Discharge Elimination System (NPDES) General Construction Activity Permit. Such conformance would entail implementation of a Storm Water Pollution Prevention Plan (SWPPP) to address the discharge of contaminants (including construction-related hazardous materials) and minimize runoff through appropriate best management practices (BMPs). Specific BMPs would be determined by the project contractor and engineer based on site-specific conditions. Such BMPs may include the following:

- Revegetation or repaving of disturbed areas as soon as feasible after completion of grading;
- Covering stockpiled excavated and/or fill materials to reduce potential off-site sediment transport;
- Use of erosion control devices, such as straw wattles, mulch, mats, and/or geotextiles;
- Use of sediment catchment structures such as hay bales, gravel or sand bags, silt fencing, fiber rolls, matting, berms, or similar devices along grading boundaries and drainage courses to prevent off-site sediment transport;
- Daily backfill, compaction, and/or covering of excavated trenches to minimize erosion potential; and/or
- Regular inspection and maintenance of all erosion control and sediment catchment facilities to ensure proper function and effectiveness.

The project design would also comply with the Standard Urban Stormwater Management Plan and Municipal Stormwater Permit criteria of the State Water Resources Control Board. Therefore, indirect impacts resulting from drainage or impaired water quality would be less than significant.

### 6.2.3 Lighting

Night lighting that extends from a developed area onto adjacent wildlife habitat can discourage nocturnal wildlife in habitat and can provide nocturnal predators with an unnatural advantage over their prey. The proposed project would entail the installation of underground pipelines. Project construction would be conducted during daylight hours; however, if multiple lanes need to be closed on Campo Road or Jamacha Road for pipeline installation, Caltrans could require that such work occur only at night. During such an event, artificial lighting could be required. Project design features discussed in Section 1.2, *Project Description*, would require that night lighting of construction and staging areas would be of the lowest illumination necessary for human safety, selectively placed, shielded, and directed away from adjacent natural habitats. Therefore, indirect impacts resulting from night lighting with implementation of the proposed project would be less than significant.

### 6.2.4 Noise

Construction-related noise from sources such as clearing and grading would be a temporary impact to wildlife. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from construction activities, which could lead to reduced reproductive success and increased mortality. Noise-related impacts would be considered significant if sensitive species such as coastal California gnatcatchers, least Bell's vireo, and raptors were displaced from their nests or territories and failed to breed. The District does not have a Natural Communities Conservation Plan (NCCP) in place. As such, noise guidelines from the County of San Diego are applied as a guideline for identifying potential impacts. As stated above, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to July 31). For purposes of this project, given that the District is not an NCCP participating entity, the most conservative dates compiled from the County and MBTA are used in the discussion below.

Construction of the proposed project may create some elevated short-term construction noise impacts, particularly from trenching, as well as tunneling. Although some construction activity would likely result in noise levels above 75 dB, pipeline construction noise would be temporary given that construction would occur in different locations along the corridor and no area supporting sensitive avian species would be exposed to elevated noise levels for the entire construction period. Therefore, associated noise exposure to any given sensitive avian species is generally estimated to last about 5 days.

Project construction would be restricted during the coastal California gnatcatcher breeding season (February 15 to August 15) in the central portion of the proposed pipeline alignment (south of the intersection of Campo Road/Jamacha Boulevard) to avoid indirect noise-related impacts to coastal California gnatcatcher. Project construction could potentially be restricted in the northern portion of the proposed pipeline alignment (northeast of the intersection of Campo Road/Via Mercado) to avoid indirect noise-related impacts to coastal California gnatcatcher during the coastal California gnatcatcher breeding season. If construction cannot be avoided in this area during the coastal California gnatcatcher breeding season, pre-construction surveys and (if gnatcatchers are present) noise control would be required.

In the central portion of the proposed pipeline alignment where least Bell's vireo and other sensitive avian species were recorded, construction could potentially be restricted to avoid indirect noise related impacts to least Bell's vireo during the breeding season (March 15 to September 15). If construction cannot be avoided during the least Bell's vireo breeding season, pre-construction surveys and (if vireo are present) noise control would be required.

#### **6.2.5 Exotic Plant Species**

Non-native plants could colonize in areas disturbed by construction and potentially spread into adjacent areas. Such invasions could (1) displace native plant species, (2) reduce diversity, (3) increase flammability and fire frequency, (4) change ground and surface water levels, and (5) adversely affect the native wildlife that are dependent on native vegetation. Non-native plants species occur within the study area; however, the temporary impact area to vegetated areas (to the north of Campo Road by the Rancho San Diego Village shopping center) would be reseeded with native plant species. As such, impacts from an increase in invasive species would be less than significant.

#### **6.2.6 Raptor Foraging**

A Cooper's hawk was observed flying overhead during biological surveys. The project would not result in a loss of raptor foraging habitat given that impacts would only affect 0.3 acre of vegetation communities and no grasslands would be impacted by the project. Therefore, no impact to raptor foraging would occur.

#### **6.2.7 Nuisance Animal Species**

The project has little potential for domestic animals (cats and dogs) to impact native wildlife given that the proposed project consists of installation of a pipeline. In addition, as part of the project design features, pets of project personnel would not be allowed on the project site. As such, no impact would occur as a result of nuisance animals.

### **6.3 CUMULATIVE IMPACTS**

Although impacts to sensitive biological resources may not be significant when considered independently, when multiple impacts such as from several development projects within an area are combined, they may be cumulatively significant. In particular, sensitive species are designated as such because of their scarcity throughout their habitat ranges. The baseline cumulative impact, therefore, is significant. Implementation of the proposed project would incrementally add to cumulative impacts to sensitive biological resources in the project vicinity. However, as a result of mitigation described in Section 7.0, the proposed project would not result in a cumulatively considerable contribution.

## 7.0 MITIGATION MEASURES

### 7.1 MITIGATION FOR DIRECT IMPACTS

#### **Vegetation Communities**

Impacts to Diegan coastal sage scrub (including disturbed) shall be mitigated at a 1:1 ratio. Therefore, required mitigation would be 0.3 acre. The District shall debit credits from its San Miguel Habitat Management Area.

In addition, in order to avoid impacts to adjacent sensitive habitat during construction, such habitat interfaces shall require temporary orange construction fencing that clearly delineates the edge of the approved limits of work and environmentally sensitive areas beyond. A biologist shall ensure that the fencing is properly installed prior to construction, and maintained for the duration of construction activity. The fencing shall be installed in a manner that does not impact habitats to be avoided. A biological monitor shall be present during construction activities adjacent to sensitive habitat. The fencing shall be removed upon completion of construction of the project.

#### **Otay Tarplant**

Temporary orange construction fencing shall be installed adjacent to the access road where Otay tarplant occurs and the contractors shall be informed regarding no-entry areas. The temporary construction fencing and contractor education shall occur prior to grubbing, clearing, and/or grading. A qualified biologist shall verify the location of the temporary fencing prior to construction activities within areas containing Otay tarplant. In addition, a biological monitor shall be present during construction activities within 25 feet of areas containing Otay tarplant to ensure that this species is not impacted. The fencing shall be removed upon completion of construction of the project.

#### **Nesting Birds**

To ensure compliance with the MBTA, clearing of vegetation shall occur outside of the breeding season of most avian species (February 1 through September 15). Clearing during the breeding season of MBTA-covered species (migratory birds that are native to the United States or its territories) could occur if it is determined that no nesting birds (or birds displaying breeding or nesting behavior) are present within 3 days prior to clearing. A pre-construction survey shall be conducted to determine if breeding or nesting avian species occurs within areas directly affected by vegetation removal or indirectly affected by noise. If any of these birds are observed nesting or displaying breeding/nesting behavior within the area, construction in the area shall be postponed until (1) the nest is abandoned or the young have fledged or (2) after September 15. The no-work buffer zone placed around the nest shall be determined by a qualified biologist at the time of discovery, and will vary based on site conditions and the type of work to be conducted. A qualified biologist shall monitor vegetation removal if conducted during the breeding season.

## 7.2 MITIGATION FOR INDIRECT IMPACTS

### Coastal California Gnatcatcher/Raptors

No grubbing, clearing, or grading shall occur during the gnatcatcher breeding season (February 15 through August 15) within 500 feet of occupied Diegan coastal sage scrub in the central portion of the proposed pipeline alignment (south of the intersection of Campo Road/Jamacha Boulevard). As such, all project plans shall state the same.

If project construction would occur during the gnatcatcher breeding season in the central portion of the alignment and/or raptor breeding season, pre-construction surveys shall be conducted within 3 days prior to construction activities to determine if these species occur within the areas indirectly impacted by noise. If there are no gnatcatchers or raptors nesting (includes nest building or other breeding/nesting behavior) within this area, construction shall be allowed to proceed. However, if any gnatcatcher or raptors are observed nesting or displaying breeding/nesting behavior within the area, construction shall be postponed until (1) all nesting (or breeding/nesting behavior) has ceased or until after August 15; or (2) a temporary noise barrier or berm shall be constructed at the edge of the impact footprint to reduce noise levels below 60 dB  $L_{EQ}$  or ambient (if ambient is greater than 60 dB  $L_{EQ}$ ). Alternatively, construction equipment could be modified and/or the duration of construction equipment operation could be controlled to keep noise levels below 60 dB  $L_{EQ}$  or ambient in lieu of or in concert with a wall or other sound attenuation barrier.

### Least Bell's Vireo/Other Sensitive Avian Species

No clearing, grubbing, grading, or other construction activities shall occur within 300 feet of occupied least Bell's vireo habitat between March 15 to September 15, the breeding season of the least Bell's vireo. If construction activities must occur during the least Bell's vireo breeding season, nest surveys shall be conducted within 300 feet of all proposed activities. If active nests are encountered and construction activities must occur during the least Bell's vireo breeding season, noise levels from human activities at the nest shall be restricted to less than 60 dB  $L_{EQ}$  or the ambient noise level plus 3 decibels (perceptible change threshold), whichever is greater. Noise levels shall be monitored, and monitoring reports shall be provided to the District to be included in the annual reports.

## 8.0 CERTIFICATION/QUALIFICATION

The following individuals contributed to the fieldwork and/or preparation of this report.

George Aldridge	Ph.D., Biology, University of California, Irvine, 2005 B.S., Botany, Humboldt State University, 1998 B.A., Political Science, University of California, Santa Barbara, 1985
Tara Baxter	B.A., Ecology and Evolutionary Biology, University of Colorado, Boulder, 2009
Erica Harris	B.S., Biology with an emphasis in Zoology, San Diego State University, 2009
Shelby Howard	M.S., Biology, San Diego State University, 2004 B.S., Biology, University of Texas, El Paso, 1999
Amy Mattson	M.S., Marine Biology, Scripps Institution of Oceanography, 1999 B.S., Biology, with a Marine Biology concentration, University of California, Los Angeles, 1994
Laura Moreton	M.S., Biodiversity Survey, University of Sussex, England 2007 B.S., Biology, San Diego State University, CA 2006
Stacy Nigro	B.S., Forest Resources and Conservation (emphasis Wildlife Ecology) University of Florida-Gainesville, 1994
Aleksandra Richards	M.A., International Relations, University of San Diego, 2010 B.A., Communications with an emphasis in Print Journalism, California State University Fullerton, 2008
Elizabeth Venz	M.B.A., Business, Geographic Information Systems, University of Redlands, 2006 B.A., Geography, Methods of Analysis, San Diego State University, 2000
Melissa Whittemore*	B.S., Biology with an emphasis in Ecology, San Diego State University, 2001 Graduate Certificate in National Environmental Policy Act, Utah State University, 2003

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\*Primary report author

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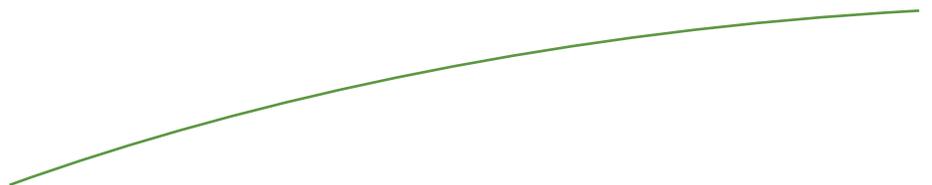
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# Appendix A

## PLANT SPECIES OBSERVED



**Appendix A**  
**PLANT SPECIES OBSERVED**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<u>FAMILY</u>	<u>SPECIES NAME</u>	<u>COMMON NAME</u>
Adoxaceae	<i>Sambucus nigra</i> ssp. <i>caerulea</i>	black elderberry
Aizoaceae	<i>Mesembryanthemum nodiflorum</i> *	slender-leaved iceplant
Anacardiaceae	<i>Malosma laurina</i>	laurel sumac
	<i>Rhus integrifolia</i>	lemonadeberry
	<i>Rhus ovata</i>	sugar bush
	<i>Schinus molle</i>	Peruvian pepper tree
	<i>Schinus terebinthifolius</i>	Brazilian pepper tree
	<i>Toxicodendron diversilobum</i>	poison oak
Apiaceae	<i>Foeniculum vulgare</i> *	fennel
Apocynaceae	<i>Funastrum cynanchoides</i> var. <i>hartwegii</i>	Hartweg's milkvine
Arecaceae	<i>Phoenix canariensis</i> *	Canary Island date palm
Asteraceae	<i>Artemisia californica</i>	California sagebrush
	<i>Artemisia dracunculus</i>	tarragon
	<i>Baccharis salicifolia</i>	mule fat
	<i>Baccharis sarothroides</i>	broom baccharis
	<i>Bahiopsis laciniata</i> †	San Diego County viguiera
	<i>Centaurea melitensis</i> *	star thistle
	<i>Corethrogyne filaginifolia</i>	California-aster
	<i>Cynara cardunculus</i> *	cardoon
	<i>Deinandra conjugens</i> †	Otay tarplant
	<i>Encelia farinosa</i>	brittlebush
	<i>Ericameria palmeri</i> var. <i>palmeri</i> †	Palmer's goldenbush
	<i>Erigeron canadensis</i>	horseweed
	<i>Gutierrezia sarothrae</i>	San Joaquin matchweed
	<i>Helminthotheca echioides</i> *	bristly ox-tongue
	<i>Heterotheca grandiflora</i>	telegraph weed
<i>Isocoma menziesii</i>	goldenbush	
<i>Xanthium strumarium</i>	cocklebur	
Boraginaceae	<i>Heliotropium curassavicum</i> var. <i>occulatum</i>	salt heliotrope
Brassicaceae	<i>Brassica nigra</i> *	black mustard
	<i>Hirschfeldia incana</i> *	perennial mustard
Cactaceae	<i>Cylindropuntia prolifera</i>	coastal cholla
	<i>Opuntia littoralis</i>	coastal prickly pear
Chenopodiaceae	<i>Salsola tragus</i> *	Russian thistle
Convolvulaceae	<i>Cuscuta californica</i>	dodder

**Appendix A (cont.)  
PLANT SPECIES OBSERVED  
OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b><u>FAMILY</u></b>	<b><u>SPECIES NAME</u></b>	<b><u>COMMON NAME</u></b>
Cyperaceae	<i>Carex spissa</i>	San Diego sedge
Dipsacaceae	<i>Dipsacus sativus</i> *	Fuller's teasel
Euphorbiaceae	<i>Ricinus communis</i> *	castor-bean
Fabaceae	<i>Acacia cyclops</i> *	coastal wattle
	<i>Acmispon glaber</i>	deerweed
	<i>Gleditsia triacanthos</i> *	honeylocust
	<i>Parkinsonia aculeate</i> *	Mexican palo verde
Fagaceae	<i>Quercus agrifolia</i>	coast live oak
Juglandaceae	<i>Juglans californica</i> †	southern California black walnut
Juncaceae	<i>Juncus acutus</i> ssp. <i>leopoldii</i> †	southwestern spiny rush
Lamiaceae	<i>Salvia apiana</i>	white sage
	<i>Salvia mellifera</i>	black sage
Moraceae	<i>Ficus carica</i> *	edible fig
Myrsinaceae	<i>Anagallis arvensis</i> *	scarlet pimpernel
Oleaceae	<i>Fraxinus uhdei</i> *	shamel ash
Phrymaceae	<i>Mimulus aurantiacus</i>	monkey-flower
Platanaceae	<i>Platanus racemosa</i>	western sycamore
Poaceae	<i>Arundo donax</i> *	giant reed
	<i>Avena</i> sp.*	wild oat
	<i>Bromus diandrus</i> *	common ripgut grass
	<i>Bromus madritensis</i> *	foxtail chess
	<i>Cortaderia selloana</i> *	pampas grass
	<i>Cynodon dactylon</i> *	Bermuda grass
	<i>Stipa</i> sp.	needlegrass
Polygonaceae	<i>Eriogonum fasciculatum</i>	buckwheat
	<i>Rumex crispus</i> *	curly dock
Rhamnaceae	<i>Rhamnus crocea</i>	spiny redberry
Rosaceae	<i>Heteromeles arbutifolia</i>	toyon
	<i>Rosa californica</i>	California rose
Salicaceae	<i>Salix gooddingii</i>	Goodding's black willow
	<i>Salix laevigata</i>	red willow
	<i>Salix lasiolepis</i>	arroyo willow
Saururaceae	<i>Anemopsis californica</i>	yerba mansa
Selaginellaceae	<i>Selaginella cinerascens</i> †	ashy spike-moss

**Appendix A (cont.)  
 PLANT SPECIES OBSERVED  
 OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b><u>FAMILY</u></b>	<b><u>SPECIES NAME</u></b>	<b><u>COMMON NAME</u></b>
Solanaceae	<i>Datura wrightii</i>	jimson weed
	<i>Nicotiana glauca</i> *	tree tobacco
Tamaricaceae	<i>Tamarix ramosissima</i> *	French tamarisk
Typhaceae	<i>Typha latifolia</i>	broad-leaved cattail
Vitaceae	<i>Vitis girdiana</i>	desert wild grape

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\* non-native species

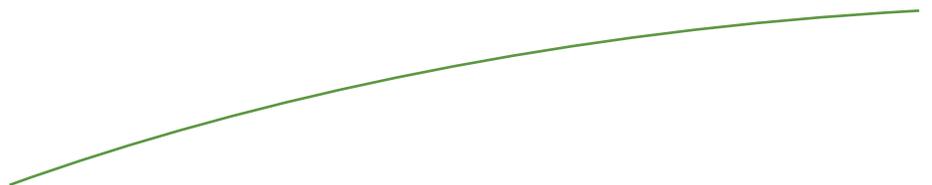
† sensitive species

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## Appendix B

# ANIMAL SPECIES OBSERVED OR DETECTED



**Appendix B**  
**ANIMAL SPECIES OBSERVED OR DETECTED**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<u>TAXON</u>		<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>INVERTEBRATES</b>			
<u>Order</u>	<u>Family</u>		
Hymenoptera	Pompilidae	<i>Pepsis</i> sp.	tarantula hawk
Lepidoptera	Lycaenidae	<i>Strymon melinus pudica</i>	gray hairstreak
	Nymphalidae	<i>Danaus plexippus</i>	monarch
<i>Limenitis lorquini</i>		Lorquin's admiral	
<i>Nymphalis antiopa</i>		mourning cloak	
Pieridae		<i>Colias</i> sp.	unidentified sulphur
		<i>Pontia protodice</i>	checkered white
	Riodinidae	<i>Apodemia mormo virgulti</i>	Behr's metalmark

**VERTEBRATES**

**Reptiles**

<u>Order</u>	<u>Family</u>		
Squamata	Phrynosomatidae	<i>Sceloporus occidentalis</i>	western fence lizard
		<i>Uta stansburiana</i>	common side-blotched lizard
	Teiidae	<i>Aspidoscelis hyperythrus beldingi</i> †	Belding's orange-throated whiptail

**Birds**

<u>Order</u>	<u>Family</u>		
Accipitriformes	Accipitridae	<i>Accipiter cooperii</i> †	Cooper's hawk
		<i>Buteo jamaicensis</i>	red-tailed hawk
		<i>Buteo lineatus</i>	red-shouldered hawk
Apodiformes	Apodidae	<i>Aeronautes saxatalis</i>	white-throated swift
	Trochilidae	<i>Calypte anna</i>	Anna's hummingbird
		<i>Calypte costae</i>	Costa's hummingbird
Columbiformes	Columbidae	<i>Zenaida macroura</i>	mourning dove

**Appendix B (cont.)**  
**ANIMAL SPECIES OBSERVED OR DETECTED**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<u>TAXON</u>		<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>Birds (cont.)</b>			
Galliformes	Odontophoridae	<i>Callipepla californica</i>	California quail
Passeriformes	Aegithalidae	<i>Psaltriparus minimus</i>	bushtit
	Bombycillidae	<i>Bombycilla cedrorum</i>	cedar waxwing
	Cardinalidae	<i>Passerina caerulea</i>	blue grosbeak
		<i>Pheucticus melanocephalus</i>	black-headed grosbeak
	Corvidae	<i>Aphelocoma californica</i>	western scrub-jay
		<i>Corvus brachyrhynchos</i>	American crow
	Emberizidae	<i>Melospiza melodia</i>	song sparrow
		<i>Melospiza crissalis</i>	California towhee
		<i>Pipilo maculatus</i>	spotted towhee
	Fringillidae	<i>Haemorhous mexicanus</i>	house finch
		<i>Spinus psaltria</i>	lesser goldfinch
	Hirundinidae	<i>Petrochelidon pyrrhonota</i>	cliff swallow
		<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
	Icteridae	<i>Icterus cucullatus</i>	hooded oriole
	Mimidae	<i>Mimus polyglottos</i>	northern mockingbird
		<i>Toxostoma redivivum</i>	California thrasher
	Parulidae	<i>Cardellina pusilla</i>	Wilson's warbler
		<i>Geothlypis trichas</i>	common yellowthroat
		<i>Icteria virens</i> †	yellow-breasted chat
		<i>Oreothlypis celata</i>	orange-crowned warbler
		<i>Setophaga petechia</i> †	yellow warbler
	Poliioptilidae	<i>Poliioptila californica</i>	coastal California
		<i>californica</i> †	gnatcatcher
	Sturnidae	<i>Sturnus vulgaris</i>	European starling
	Sylviidae	<i>Chamaea fasciata</i>	wrentit
	Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's wren
		<i>Troglodytes aedon</i>	house wren
	Turdidae	<i>Sialia mexicana</i>	western Bluebird

**Appendix B (cont.)**  
**ANIMAL SPECIES OBSERVED OR DETECTED**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<u>TAXON</u>		<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
<b>Birds (cont.)</b>			
Passeriformes	Tyrannidae	<i>Contopus sordidulus</i>	western wood-pewee
		<i>Empidonax difficilis</i>	Pacific-slope flycatcher
		<i>Myiarchus cinerascens</i>	ash-throated flycatcher
		<i>Sayornis nigricans</i>	black phoebe
		<i>Sayornis saya</i>	Say's phoebe
		<i>Tyrannus vociferans</i>	Cassin's kingbird
Piciformes	Vireonidae	<i>Vireo bellii pusillus</i> †	least Bell's vireo
	Picidae	<i>Picoides nuttallii</i>	Nuttall's woodpecker
<b><u>Mammals</u></b>			
<u>Order</u>	<u>Family</u>		
Carnivora	Canidae	<i>Canis latrans</i>	coyote
Lagomorpha	Leporidae	<i>Sylvilagus audubonii</i>	desert cottontail
Rodentia	Muridae	<i>Neotoma</i> sp.	woodrat
	Sciuridae	<i>Spermophilus beecheyi</i>	California ground squirrel

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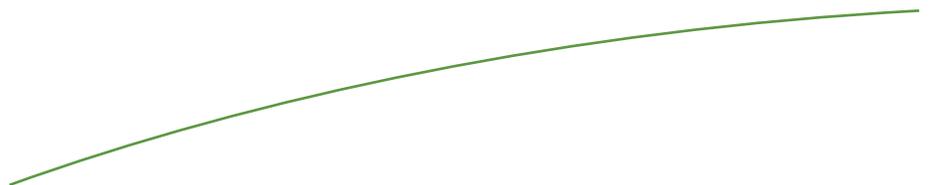
† sensitive species

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## Appendix C

# EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES



**Appendix C**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**FEDERAL AND STATE CODES**

**U.S. Fish and Wildlife Service (USFWS)**

FE	Federally listed endangered
FT	Federally listed threatened
FC	Federal candidate species
BCC	Birds of Conservation Concern (discussed in more detail, below)
BGEPA	Bald and Golden Eagle Protection Act (discussed in more detail below)

**California Department of Fish and Wildlife (CDFW)**

SE	State listed endangered
SR	State listed rare
ST	State listed threatened
SSC	State species of special concern
WL	Watch List
Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

**OTHER CODES AND ABBREVIATIONS**

**USFWS Bald and Golden Eagle Protection Act (BGEPA)**

In 1782, Continental Congress adopted the bald eagle as a national symbol. During the next one and a half centuries, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle “at any time or in any manner.”

In 1962, Congress amended the Eagle Act to cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. The golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. Another 1962 amendment authorizes the Secretary of the Interior to grant permits to Native Americans for traditional religious use of eagles and eagle parts and feathers.

**Appendix C (cont.)**  
**EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES**

**OTHER CODES AND ABBREVIATIONS (cont.)**

**USFWS Birds of Conservation Concern (BCC)**

This report from 2002 aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities and draw attention to species in need of conservation action. USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. The report is available online at <http://migratorybirds.fws.gov/reports/bcc2002.pdf>.

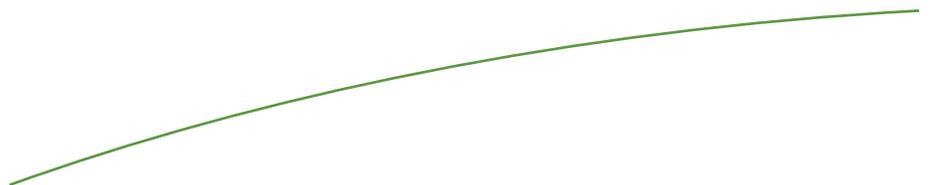
**California Native Plant Society (CNPS) Ranks**

<b>Ranks</b>	<b>Threat Ranks</b>
1A Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere	0.1 Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
1B Plants Rare, Threatened, or Endangered in California and Elsewhere	0.2 Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat)
2A Plants Presumed Extirpated in California, But Common Elsewhere	0.3 Not very threatened in California (less than 20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)
2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere	A "CA Endemic" entry corresponds to those taxa that only occur in California.
3 Plants About Which More Information is Needed	All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.
4 Plants of Limited Distribution	



Appendix D

SENSITIVE PLANT SPECIES WITH  
POTENTIAL TO OCCUR



**Appendix D**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
San Diego thorn-mint	<i>Acanthomintha ilicifolia</i>	FT/SE CNPS List 1B.1	Annual herb. Occurs on clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral. Elevation range 0-914 meters. Flowering period Apr - Jun.	<b>None.</b> Clay soils do not occur on site. Vernal pools do not occur within the study area.
California adolphia	<i>Adolphia californica</i>	--/-- CNPS List 2B.1	Shrub. Occurs in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4-5 feet. Elevation range 45-740 meters. Flowering period Dec. - Apr.	<b>Low.</b> Suitable sage scrub habitat occurs within the study area. However, species was not observed during rare plant surveys conducted in 2015, and would likely have been observed if present.
San Diego bur-sage	<i>Ambrosia chenopodiifolia</i>	--/-- CNPS List 2B.1	Shrub. Occurs in low-growing, fairly open Diegan coastal sage scrub. Elevation range 55-155 meters. Flowering period Apr. - Jun.	<b>Moderate.</b> Suitable sage scrub habitat occurs within the study area.
Singlewhorl burrobrush	<i>Ambrosia monogyra</i>	--/-- CNPS List 2B.2	Shrub. Occurs in arid, low-growing, fairly open Diegan coastal sage scrub. Olivenhain cobbly loam is the soil type mapped for the San Ysidro population. Elevation 10 – 500 meters. Flowering period August - November.	<b>Moderate.</b> Suitable sage scrub habitat occurs within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
San Diego ambrosia	<i>Ambrosia pumila</i>	FE/-- CNPS List 1B.1	Perennial herb. Occurs in grasslands, valley bottoms and dry drainages, also can occur on slopes, disturbed places, and in coastal sage scrub. Elevation 20-415 meters. Flowering period Apr. – Oct.	<b>Low.</b> Soils and habitat within the study area are suitable; however, this species was not observed during 2015 biological surveys and is very rare, known from fewer than 20 locations.
Aphanisma	<i>Aphanisma blitoides</i>	--/-- CNPS List 1B.2	Annual herb. Occurs in coastal bluffs near the ocean and beach dunes. Elevation 1-305 meters. Flowering period Mar. – Jun.	<b>None.</b> Study area is not on a coastal bluff. Species may be extirpated in San Diego County.
San Diego sagewort	<i>Artemisia palmeri</i>	--/-- CNPS List 4.2	Shrub. Typically occurs along streams with riparian habitat, and may be found in sage scrub or mesic chaparral adjacent to these areas. Elevation 15-915 meters. Flowering period May – Sep.	<b>Present.</b> Observed during 2015 biological surveys in the central portion of the study area along the existing pipeline alignment.
Western spleenwort	<i>Asplenium vespertinum</i>	--/-- CNPS List 4.2	Herb. Found at the shaded base of overhanging boulders. Preferred habitats are chaparral, woodland, coastal sage scrub, and rocky areas with semi-shaded but seasonally arid conditions. Elevation 180-1,000 meters. Flowering period February – June.	<b>Low.</b> Suitable sage scrub habitat present within the study area; however, the study area is outside the known elevation range.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Dean's milk-vetch	<i>Astragalus deanei</i>	--/-- CNPS List 1B.1	Perennial herb. Occurs on dry hillsides in open coastal sage scrub, chaparral, or southern oak woodland. Elevation 75-695 meters. Flowering period Feb. - May.	<b>Low.</b> Open coastal sage scrub occurs on site. Known from fewer than 15 occurrences.
Coulter's saltbush	<i>Atriplex coulteri</i>	--/-- CNPS List 1B.2	Perennial herb. Preferred habitat is coastal bluff scrub. Elevation 3-460 meters. Flowering period Mar. – Oct.	<b>Low.</b> Preferred habitat does not occur within the study area.
South coast saltscale	<i>Atriplex pacifica</i>	--/-- CNPS List 1B.2	Annual herb. Occurs in xeric, often mildly disturbed locales of coastal bluff scrub. Usually the surrounding habitat is an open Diegan coastal sage scrub, although it is found on alkaline flats in areas devoid of taller shrubs. Elevation 0-140 meters. Flowering period Mar. – Oct.	<b>None.</b> Coastal bluff scrub does not occur within the study area.
Encinitas baccharis	<i>Baccharis vanessae</i>	FT/SE CNPS List 1B.1	Perennial herb. Occurs in mature but relatively low-growing chaparral, southern maritime and southern mixed chaparrals. Elevation 50-465 meters. Flowering period Aug. – Nov.	<b>None.</b> Chaparral does not occur within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
San Diego County viguiera	<i>Bahiopsis laciniata</i>	--/-- CNPS List 4.2	Medium shrub. Occurs in coastal sage scrub, often at high density. Elevation range 0-3,000 ft. Flowering period Feb – Aug, but identifiable year-round by leaves.	<b>Present.</b> Species found within the northern portion of the study area.
San Diego goldenstar	<i>Bloomeria clevelandii</i>	--/-- CNPS List 1B.1	Perennial herb. Occurs on clay soils in grasslands and coastal sage scrub. Elevation range 0-2,000 ft. Flowering period Apr – May.	<b>None.</b> Clay soils do not occur within the study area.
Orcutt’s brodiaea	<i>Brodiaea orcuttii</i>	--/-- CNPS List 1B.1	Perennial herb. Occurs in vernal moist grasslands, mima mound topography, and vernal pool periphery. Elevation 30-1,692 meters. Flowering period May - Jul.	<b>None.</b> Vernal pools and moist grasslands do not occur within the study area.
Brewer’s calandrinia	<i>Calandrinia breweri</i>	--/-- CNPS List 4.2	Annual herb. Occurs in chaparral and coastal scrub; burned areas. Elevation 10-1,220 meters. Flowering period Mar. – Jun.	<b>Low.</b> Potentially suitable sage scrub habitat occurs within the study area; however, this species is a fire-following annual, and the site has not recently burned.
Round-leaved filaree	<i>California macrophylla</i>	--/-- CNPS List 1B.1	Annual herb. Occurs in clay soils in open areas of grassland or sage scrub in coastal valleys. Elevation 15-1,200 meters. Flowering period Mar. – May.	<b>None.</b> Clay soils do not occur within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Dunn's mariposa lily	<i>Calochortus dunnii</i>	--/CR CNPS List 1B.2	Perennial herb. Occurs in dry, stony ridges and fire breaks in chaparral or grassland/chaparral exotone. Elevation 185-1,830 meters. Flowering period Feb. - Jun.	<b>None.</b> Chaparral does not occur within the study area.
Lewis' evening-primrose	<i>Camissoniopsis lewisii</i>	--/-- CNPS List 3	Annual herb. Occurs in very sandy substrates near the beach, typically on beach bluffs. Elevation 0-300 meters. Flowering period Mar. - Jun.	<b>None.</b> Study area is not near the beach and does not support very sandy substrates.
Payson's jewel-flower	<i>Caulanthus simulans</i>	--/-- CNPS List 4.2	Annual herb. Occurs in chaparral or pinyon-juniper woodland. Elevation 90-2,200 meters. Flowering period Feb. - Jun.	<b>None.</b> Chaparral and pinyon-juniper woodland do not occur within the study area.
Smooth tarplant	<i>Centromadia pungens</i> ssp. <i>laevis</i>	--/-- CNPS List 1B.1	Annual herb. Occurs in valley and foothill grasslands, particularly near alkaline locales. Elevation 0-640 meters. Flowering period Apr. - Sep.	<b>Low.</b> The study area supports very little grassland, and does not have alkaline soils.
Long-spined spineflower	<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	--/-- CNPS List 1B.2	Annual herb. Occurs in lenses largely devoid of shrubs, occasionally seen on vernal pool and montane meadows peripheries near vernal seeps. Elevation 30-1,530 meters. Flowering period Apr. - Jul.	<b>None.</b> Vernal pools do not occur on site.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
San Miguel savory	<i>Clinipodium chandleri</i>	--/-- CNPS List 1B.2	Shrub. Occurs on gabbro and metavolcanic soils in interior foothills, chaparral, and oak woodland. Elevation 120-1,075 meters. Flowering period Mar. - Jul.	<b>Low.</b> Site does not support oak woodland or chaparral habitats.
Summer holly	<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	--/-- CNPS List 1B.2	Shrub. Occurs on mesic north-facing slopes in southern mixed chaparral. Rugged steep drainages seem to be a preferred location for isolated shrubs. Elevation 30-790 meters. Flowering period April - June.	<b>Low.</b> Chaparral is not present within the study area.
Small-flowered morning-glory	<i>Convolvulus simulans</i>	--/-- CNPS List 4.2	Annual herb. Occurs in coastal clay areas in openings of chaparral, sage scrub, and grasslands. Elevation 30-700 meters. Flowering period Mar. - July.	<b>None.</b> Clay soils do not occur within the study area.
Snake cholla	<i>Cylindropuntia californica</i> var. <i>californica</i>	--/-- CNPS 1B.1	Stem succulent. Occurs in Diegan coastal sage scrub on xeric hillsides. Elevation 30-150 meters. Flowering period Apr. – May.	<b>Moderate.</b> Suitable sage scrub habitat occurs on site. Species was not detected during the 2015 biological surveys and would have most likely been detected if present within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Otay tarplant	<i>Deinandra conjugens</i>	FT/CE CNPS List 1B.1	Annual herb. Occurs in fractured clay soils in grasslands or lightly vegetated coastal sage scrub. Elevation 25-300 meters. Flowering period May – Jun.	<b>Present.</b> Species observed throughout central portion of the study area.
Paniculate tarplant	<i>Deinandra paniculata</i>	--/-- CNPS List 4.2	Annual herb. Occurs in sparsely vegetated grasslands or open sage scrub in arid cismontane regions, grows on hard packed soils. Elevation 25-940 meters. Flowering period Apr. – Nov.	<b>Moderate.</b> Suitable sage scrub occurs within the study area. Species not documented in the project vicinity and most records are from northern San Diego County and Riverside County.
Western dichondra	<i>Dichondra occidentalis</i>	--/-- CNPS List 4.2	Mat-forming herb. Occurs on sandy banks in coastal sage scrub, chaparral, and oak woodland, often after fire. Elevation range 0-2000 ft. Flowering period Mar. - Jul.	<b>Moderate.</b> Suitable sage scrub habitat occurs within the study area, with some exposed sandy loam soils. Not observed during 2015 rare plant surveys.
Variegated dudleya	<i>Dudleya variegata</i>	--/-- CNPS List 1B.2	Perennial herb. Occurs on clay soils near vernal pools, and on metavolcanic rocky soils in open coastal sage scrub, chaparral, and grasslands. Elevation 3-580 meters. Flowering period Apr. - Jun.	<b>None.</b> No vernal pool habitat or clay soils occur within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Palmer's goldenbush	<i>Ericameria palmeri</i> var. <i>palmeri</i>	--/-- CNPS List 1B.1	Shrub. Occurs in coastal drainages, in mesic chaparral sites, or rarely in Diegan coastal sage scrub. Occasionally occurs as a hillside element (usually at higher elevations inland on north-facing slopes). Elevation 30-600 meters. Flowering period Jul. – Nov.	<b>Present.</b> Species found in large stands within the central portion of the study area south of Campo Road.
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	FE/CE CNPS List 1B.1	Annual/perennial herb. Occurs in vernal pools or mima mound areas with vernal moist conditions. Elevation 20-620 meters. Flowering period Apr. – Jun.	<b>None.</b> Vernal pools do not occur within the study area.
San Diego barrel cactus	<i>Ferocactus viridescens</i>	--/-- CNPS List 2B.1	Stem succulent. Occurs in Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Occasionally found on vernal pool periphery and mima mound topography. Elevation 3-450 meters. Flowering period May – Jun.	<b>Low.</b> Suitable sage scrub habitat occurs within the study area. Species would likely have been observed during rare plant surveys if present.
Palmer's grapplinghook	<i>Harpagonella palmeri</i>	--/-- CNPS List 4.2	Annual herb. Occurs on clay soils in annual grasslands and coastal sage scrub. Elevation 20-955 meters. Flowering period Mar. - May.	<b>None.</b> Clay soils do not occur within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Graceful tarplant	<i>Holocarpha virgata</i> <i>ssp. elongata</i>	--/-- CNPS List 4.2 CA Endemic	Annual herb. Occurs on coastal mesas and foothills with grassland habitats. Elevation 60-1,100 meters. Flowering period Jul. - Nov.	<b>Present.</b> Observed during 2015 rare plant surveys in the central portion of the study area along the existing pipeline alignment.
Decumbent goldenbush	<i>Isocoma menziessi</i> var. <i>decumbens</i>	--/-- CNPS List 1B.2	Shrub. Presumed to utilize coastal sage scrub habitat intermixed with grassland. More partial to clay soils than other closely related varieties. Elevation 10 – 135 meters. Flowering period April - November.	<b>Moderate.</b> Suitable habitat is present within the study area. This species was not observed during 2015 rare plant surveys.
San Diego marsh-elder	<i>Iva hayesiana</i>	--/-- CNPS List 2B.2	Herb. Occurs in creeks of intermittent streambeds. Typically found in open riparian canopies. Sandy alluvial embankments with cobbles are frequently utilized. Elevation 10 – 500 meters. Flowering period April – October.	<b>Moderate.</b> Low quality riparian habitat present within the study area. Species was not observed during the 2015 rare plant surveys.
Southern California black walnut	<i>Juglans californica</i>	--/-- CNPS List 4.2 CA Endemic	Tree. Found in open savannah. May be more tolerant of clay soils than most native trees and shrubs. Shows preference for deep alluvial soils with high water-retention capacity and tends to grow in creekbeds, alluvial terraces, and north-facing slopes. Elevation 50 - 900 meters. Flowering period March – August.	<b>Present.</b> Species found within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Southwestern spiny rush	<i>Juncus acutus</i> ssp. <i>leopoldii</i>	--/-- CNPS List 4.2	Herb. Occurs within moist, saline, or alkaline soils in coastal salt marshes and riparian marshes. Elevation 3-900 meters. Flowering period March – June.	<b>Present.</b> Species observed throughout the study area to the south of Campo Road.
Robinson's pepper-grass	<i>Lepidium virginicum</i> var. <i>robinsonii</i>	--/-- CNPS List 4.3	Annual herb. Occurs in openings in chaparral and sage scrub at the coastal and foothill elevations. Elevation 1-885 meters. Flowering period Jan. – Jul.	<b>Low.</b> Soils and habitat within the study area are suitable. This species was not observed during 2015 rare plant surveys.
California box-thorn	<i>Lycium californicum</i>	--/-- CNPS List 4.2	Shrub. Occurs in coastal bluffs and coastal sage scrub. Elevation 5-150 meters. Flowering period Dec. – Aug.	<b>Low.</b> Suitable coastal sage scrub is present within the study area are suitable. This species was not observed during 2015 rare plant surveys.
Small-flowered microseris	<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	--/-- CNPS List 4.2	Annual herb. Occurs in clay soils in perennial grasslands, on vernal pools periphery, or in broad openings in sage scrub. Elevation 15-1,070 meters.	<b>None.</b> Clay soils do not occur within the study area.
Willowy monardella	<i>Monardella viminea</i>	FE/CE CNPS List 1B.1	Perennial herb. Occurs in riparian scrub, usually at sandy locales in seasonally dry washes. Elevation 50-225 meters. Flowering period Jun. – Aug.	<b>Low.</b> Low quality riparian habitat present within the study area.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Dehesa nolina	<i>Nolina interrata</i>	--/SE CNPS List 1B.1	Perennial herb. Occurs in association with gabbro or peridotite soils, open southern mixed chaparral and chamise chaparral. Elevation 200 – 700 meters. Flowering period June - July.	<b>None.</b> Chaparral does not occur within the study area.
Golden-rayed pentachaeta	<i>Pentachaeta aurea ssp. aurea</i>	--/-- CNPS List 4.2	Annual herb. Occurs in mesic montane grasslands and sage scrub. Elevation 80-1,850 meters. Flowering period Mar – Jun.	<b>Moderate.</b> Habitat within the study area is suitable. This species was not observed during 2015 rare plant surveys.
Nuttall's scrub oak	<i>Quercus dumosa</i>	--/-- CNPS List 1B.1	Shrub. Occurs in chaparral with a relatively open canopy cover, on north-facing slopes, may grow in dense monotypic stands, sandy or clay loam soils. Elevation 15-400 meters. Flowering period Feb. - Apr.	<b>None.</b> Chaparral does not occur on site. This species would have been observed during rare plant surveys if present within the study area.
Coulter's matilija poppy	<i>Romneya coulteri</i>	--/-- CNPS List 4.2	Perennial herb. Occurs in dry washes and canyons in chaparral and coastal sage scrub communities, often areas that have been burned, open or mildly disturbed terrain, and mature chaparral or sage scrub. Elevation 20-1,200 meters. Flowering period Mar. – Jul.	<b>Moderate.</b> Suitable coastal sage scrub habitat occurs within the study area. This species was not observed during 2015 rare plant surveys.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Munz's sage	<i>Salvia munzii</i>	--/-- CNPS List 2B.2	Shrub. Occurs in chaparral and Diegan coastal sage scrub. Elevation 120-1,065 meters. Flowering period Feb. – Apr.	<b>Low.</b> Although suitable sage scrub habitat is present within the study area, this species is known primarily from areas south of the site around Lower Otay Lake and the Jamul Mountains. Species was not observed during rare plant surveys and would likely have been observed if present.
Ashy spike-moss	<i>Selaginella cinerascens</i>	--/-- CNPS List 4.1	Perennial herb. Occurs in flat mesas in coastal sage scrub and chaparral. Elevation 20-640 meters. No flowering period, as it is not a flowering plant. Above-ground all year.	<b>Present.</b> Species observed in the south of Campo Road between the proposed and existing pipeline alignments.
San Diego County needle grass	<i>Stipa diegoensis</i>	--/-- CNPS List 4.2	Perennial herb/tall bunchgrass. Occurs in chaparral and sage scrub ecotone, closely associated with metavolcanic soils and can be found in fine sandy loam and rocky silt loams. Peaks and upper ridgelines of mountains appear the preferred microhabitat. Elevation 10-800 meters. Flowering period Feb. – Jun.	<b>Low.</b> Soils and habitats within the study area are marginally suitable. The study area does not contain ridgelines or mountains. Not observed during rare plant surveys.

**Appendix D (cont.)**  
**SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

<b>COMMON NAME</b>	<b>SPECIES NAME</b>	<b>STATUS*</b>	<b>HABITAT ASSOCIATIONS</b>	<b>POTENTIAL TO OCCUR</b>
Parry's tetracoccus	<i>Tetracoccus dioicus</i>	--/-- CNPS List 1B.2	Shrub. Occurs on gabbro soils in low growing chamise chaparral. Elevation 165-1,000 meters. Flowering period Apr. – May.	<b>None.</b> Chaparral does not occur within the study area.

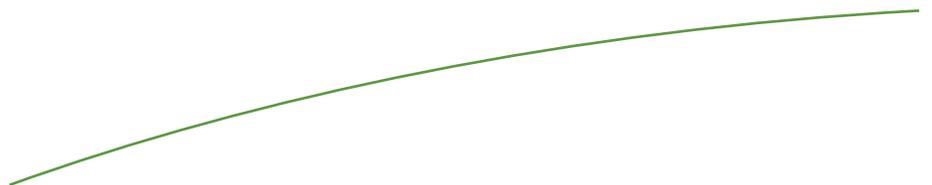
\* Status codes are as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare  
 CNPS = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either rare or extinct elsewhere; 1B – rare, threatened, or endangered in California and elsewhere; 2A – presumed extirpated in California but common elsewhere; 2B – rare, threatened, or endangered in California but more common elsewhere; 3 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously threatened in California; .2 – moderately endangered in California; .3 – not very endangered in California.

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Appendix E

SENSITIVE ANIMAL SPECIES WITH  
POTENTIAL TO OCCUR



**Appendix E**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Insects</b>				
Hermes copper	<i>Lycaena hermes</i>	FC/--	Southern mixed chaparral and coastal sage scrub at western edge of Laguna mountains. Requires host plant <i>Rhamnus crocea</i> in close proximity to <i>Eriogonum fasciculatum</i> or other nectar sources.	<b>Moderate to high.</b> Suitable host plant associations occur on the site, and the site is within the species' range.
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	FE/--	Sunny openings within chaparral and coastal sage shrublands. Host plants include <i>Plantago erecta</i> , <i>Cordylanthus rigidus</i> , <i>Collinsia</i> spp., <i>Plantago patagonica</i> , <i>Antirrhinum coulterianum</i> , and <i>Castilleja exserta</i> .	<b>Moderate to high.</b> Although much of the sage scrub on site is considered too dense to support this species, some suitable habitat occurs within the study area.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Reptiles and Amphibians</b>				
Coast patch-nosed snake	<i>Salvadora hexalepis virgulata</i>	--/SSC	Semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	<b>Moderate.</b> Suitable brushy habitat occurs within the study area, with a few rock outcrops.
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	--/SSC	Found in most terrestrial habitats except the desert. Often in more open habitats under rocks, logs, and debris. Habitats include grassland, sage scrub, chaparral, pinyon-juniper woodland, and pine-oak forests.	<b>High.</b> Suitable sage scrub habitat occurs on site.
Northern red diamond rattlesnake	<i>Crotalus ruber ruber</i>	--/SSC	Chaparral, coastal sage scrub, along creek banks, particularly among rock outcrops or piles of debris with a supply of burrowing rodents for prey.	<b>High.</b> Suitable habitat and prey resources occur on the site.
Orange-throated whiptail	<i>Cnemidophorus hyperythrus</i>	--/SSC	Coastal scrub, chaparral, and valley and foothill hardwood habitats. Prefers washes and sandy areas with patches of brush and rocks. Perennial plants required to support its primary prey termites.	<b>Present.</b> Species observed to the south of Campo Road along the existing pipeline alignment in the central portion of the study area.
San Diego horned lizard	<i>Phrynosoma coronatum blainvillei</i>	--/SSC	Coastal sage scrub and chaparral in arid and semiarid climate conditions.	<b>High.</b> Suitable coastal sage scrub habitat occurs within the study area.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Reptiles and Amphibians (cont.)</b>				
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	--/SSC	Areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, sage scrub, and pinyon-juniper woodland. Some reports have occurred in desert flats, as well as dunes and beaches under sparse vegetation.	<b>Moderate.</b> Suitable sage scrub habitat and sandy loam soils occur on site.
Two-striped garter snake	<i>Thamnophis hammondi</i>	--/SSC	Occurs along permanent and intermittent streams bordered by dense riparian vegetation, but occasionally associated with vernal pools or stock ponds.	<b>Low.</b> Low quality habitat occurs within the study area.
Western spadefoot	<i>Scaphiopus hammondi</i>	--/SSC	Burrows in loose soils 1 meter in depth. Requires temporary rainpools and vernal pools (for breeding) lasting three weeks with cool to warm temperatures and absence of predators (crayfish, bullfrogs, etc.).	<b>None.</b> No vernal pools or basins are present within the study area.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Birds</b>				
Bell's sage sparrow	<i>Amphispiza belli belli</i>	BCC/WL	Chaparral and sage scrub with modest leaf litter on the ground (e.g., after a fire or in gabbro-based soil areas).	<b>Low.</b> Coastal sage scrub habitat occurs on the site, but there is no recent history of fire, and soils within the study area are not gabbroic.
Burrowing owl	<i>Athene cunicularia</i>	BCC/SSC	Grassland or open scrub habitats with sufficient small mammal prey and mammal burrows.	<b>Low.</b> Very little grassland habitat and open scrub habitat present within the study area.
Coastal cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	BCC/SSC	Habitat consists of cactus thickets in coastal lowlands of San Diego County.	<b>Low.</b> Cactus thickets occur within the study area. Species would have been observed during surveys if present.
Coastal California gnatcatcher	<i>Polioptila californica californica</i>	FT/SSC	Coastal sage scrub below 2500 ft in southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	<b>Present.</b> One pair of California gnatcatchers were documented within the study area.
Cooper's hawk	<i>Accipiter cooperi</i>	--/SSC	(Nesting) Open, uninterrupted, or marginal woodland. Nest sites mainly found in riparian growths of deciduous trees, live oaks.	<b>Present.</b> Species has been documented flying overhead on site.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Birds (cont.)</b>				
Golden eagle	<i>Aquila chrysaetos</i>	--/FP	(Nesting and Wintering) Rolling foothills and mountain areas, juniper-sage flats, and deserts. Primarily associated with cliff-walled canyons and large trees in open habitats for nesting.	<b>None.</b> No suitable nesting habitat occurs on the site. The site does not contain mountain areas or large trees for nesting. The site is adjacent to dense development, which is typically avoided by this species.
California horned lark	<i>Eremophila alpestris actis</i>	--/WL	Coastal strand, arid grasslands, and sandy desert floors.	<b>Low.</b> Grassland habitat is limited within the study area.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE, BCC/SE	Riparian woodland, typically with a dense understory.	<b>Present.</b> Species detected in several locations within the study area.
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC/SSC	Grassland, open sage scrub, chaparral, and desert scrub.	<b>Moderate.</b> Some open sage scrub occurs within the study area.
Northern harrier	<i>Circus cyaneus hudsonius</i>	--/SSC	Coastal salt and freshwater marsh. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	<b>Low.</b> No marsh habitat or extensive grasslands occur within the study area.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Birds (cont.)</b>				
Sharp-shinned hawk	<i>Accipiter striatus</i>	--/WL	Winter visitor to San Diego County. Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats.	<b>Moderate.</b> Suitable foraging habitat present within the study area.
White-tailed kite	<i>Elanus leucurus</i>	--/FP	Riparian woodlands and oak or sycamore groves adjacent to grassland.	<b>Moderate.</b> Low quality habitat present within the study area.
Yellow-breasted chat	<i>Ictera virens</i>	--/SSC	Mature riparian woodland.	<b>Present.</b> Species detected within the study area
Yellow warbler	<i>Dendroica petechial brewsteri</i>	--/SSC	Found in riparian woodlands.	<b>Present.</b> Multiple individuals detected within the study area.
<b>Mammals</b>				
American badger	<i>Taxidea taxus</i>	--/SSC	Open plains and prairies, farmland, and sometimes edges of woods.	<b>None.</b> Suitable habitat not present within the study area.
Big free-tailed bat	<i>Nyctinomops macrotis</i>	--/SSC	Rocky areas, in day they roost in rocky cliffs, sometimes caves, buildings, or tree holes.	<b>Low.</b> Suitable cliff habitat for roosting does not occur within the study area.
Dulzura pocket mouse	<i>Chaetodipus californicus femoralis</i>	--/SSC	Variety of habitats including coastal scrub, chaparral, and grasslands in San Diego County. Associated with grass-chaparral edges.	<b>Moderate.</b> Suitable grassland and coastal sage scrub habitat occurs on the site.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
<b>Mammals (cont.)</b>				
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>	--/SSC	Arid scrub, mixed forest, and canyons in mountain ranges rising from the desert. By day, usually in caves and mines, but sometimes in buildings.	<b>None.</b> No arid scrub, mixed forest, or mountain canyons occur within the study area.
Northwestern San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	--/SSC	Open areas of coastal sage scrub and weedy growth, often on sandy substrates.	<b>Moderate.</b> Suitable coastal sage scrub and weedy habitats occur on site.
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	--/SSC	Semiarid desert lands. Day-roosts in caves, crevices in cliffs, and under the roof tiles of buildings. Uses a variety of arid habitats in southern California: pine-juniper woodlands, desert scrub, palm oases, desert wash, desert riparian, etc. Prefers rocky areas with high cliffs.	<b>None.</b> Suitable desert habitats do not occur on the site.
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	--/SSC	Primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.	<b>High.</b> Suitable coastal sage scrub and grassland habitats occur within the study area.

**Appendix E (cont.)**  
**SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR**  
**OTAY WATER DISTRICT CAMPO ROAD SEWER REPLACEMENT PROJECT**

COMMON NAME	SPECIES NAME	STATUS*	HABITAT ASSOCIATIONS	POTENTIAL TO OCCUR
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	--/SSC	Open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	<b>High.</b> Suitable coastal sage scrub habitat with some rock outcrops occurs within the study area.
<b>Mammals (cont.)</b>				
Western red bat	<i>Lasiurus blossevillii</i>	--/SSC	Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. Possible association with intact riparian habitat (particularly willows, cottonwoods, oaks, walnuts, and sycamores).	<b>Moderate.</b> Low quality habitat present within the study area.

\* Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Watch List; SSC = State of California Species of Special Concern.