



**Biological Technical Report for the
College Area Sewer and AC Water
Project
San Diego, California
WBS #B-16025.02.02**

Prepared for
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A handwritten signature in black ink that reads "Kayo Valenti". The signature is fluid and cursive, with the first name "Kayo" and last name "Valenti" clearly distinguishable.

Kayo Valenti, Biologist

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Acronyms and Abbreviations

AC	asbestos cement
ADD	Administrator Deputy Director
AMSL	above mean sea level
BCME	Biological Construction Monitoring Exhibit
BMP	best management practice
CDFW	California Department of Fish and Wildlife
CFGF	California Fish and Game Code
City	City of San Diego
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
ESL	Environmentally Sensitive Lands
GPS	global positioning system
MHPA	Multi-Habitat Planning Area
MMC	Mitigation Monitoring Coordination
MSCP	Multiple Species Conservation Program
OHWM	Ordinary High Water Mark
project	College Area Sewer and AC Water Project
PUD	Public Utilities Department
RECON	RECON Environmental, Inc.
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SDNHM	San Diego Natural History Museum
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VC	vittrified clay

Management Summary

The City of San Diego (City) Public Works Department is proposing the College Area Sewer and AC Water Project (project), which comprises replacement and abandonment of sewer mains and water mains and construction of new mains via open trench and trenchless methods, as well as construction of nine launching/receiving pits, nine new manholes, and three new vault structures. The project is located along an unnamed tributary to Alvarado Creek, bounded by Collwood Boulevard, Montezuma Road, Adams Avenue, and College Avenue in the city of San Diego, California. Half of the project occurs within developed areas, with the other half occurs within an undeveloped canyon.

The following nine vegetation communities or land cover types were mapped in the 25.061-acre vegetation survey area (i.e., project area and surrounding 100-foot radius): non-native riparian, disturbed wetland (including unvegetated channel, vegetated channel, and artificial hydrology), maritime succulent scrub, Diegan coastal sage scrub, disturbed coastal sage scrub, eucalyptus woodland, disturbed land (i.e., disturbed habitat), ornamental plantings, and urban/developed land. According to design plans provided by the City of San Diego on February 1, 2019, the project would result in a total of 0.253 acre of impacts to sensitive vegetation communities. The project would cause permanent impacts to 0.006 acre of sensitive wetland communities and 0.108 acre of Tier I and II sensitive vegetation communities, as well as temporary impacts to 0.102 acre of sensitive wetland communities and 0.037 acre of Tier I and II sensitive vegetation communities. Mitigation for direct impacts (temporary and permanent) to sensitive vegetation communities is proposed through 0.361 acre of preservation at an existing Public Utilities Department (PUD) mitigation site. In addition to off-site mitigation, on-site revegetation would occur for temporarily impacted areas.

Impacts due to construction of an existing access path have been previously impacted and mitigated for, as documented in the biological resources report from Dudek & Associates, Inc. (Dudek; 2002), and are not included in this report.

Three sensitive plant species—Nuttall’s scrub oak (*Quercus dumosa*), California adolphia (*Adolphia californica*), and San Diego viguiera (*Bahiopsis* [= *Viguiera*] *laciniata*)—were observed within the survey area. The project would result in direct impacts to 10 individual Nuttall’s scrub oak, 10 individual California adolphia, and 3 individual San Diego viguiera. However, these impacts are not expected to threaten the local or regional long-term survival of these species. Therefore, the proposed impacts would be considered less than significant and require no mitigation. However, it is recommended that Nuttall’s scrub oak be included within the revegetation plant palette for the temporary impact area.

No sensitive wildlife species were observed within the wildlife survey area (i.e., project area and surrounding 300-foot radius) during the biological survey. However, two sensitive wildlife species—Belding’s orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) and Cooper’s hawk (*Accipiter cooperii*)—have a moderate to high potential to occur. Additionally, nesting avian species protected by California Fish and Game Code

Section 3503 have high potential to nest in the survey area. Direct and/or indirect impacts to Cooper's hawk and direct impacts to other nesting avian species could occur as a result of project activities within the undeveloped canyon if work is conducted during the combined breeding season for raptors and upland bird species (February 1 to September 15). Pre-construction nest surveys are recommended to avoid and/or minimize direct and/or indirect impacts to Cooper's hawk and other nesting avian species. Potential impacts to Belding's orange-throated whiptail would be considered less than significant and require no mitigation. Suitable habitat within the impact area comprises a small fraction of the available habitat for any local whiptail populations, and potential impacts are not expected to reduce the population of this species to below a self-sustaining level.

The project is located outside of the City's Multi-Habitat Planning Area (MHPA), although the western project impact area lies approximately 125 feet north and downslope from the edge of the MHPA. No direct or indirect impacts within the MHPA are anticipated. However, adherence to general measures (i.e., best management practices and a revegetation plan) is anticipated to avoid and/or minimize potential indirect impacts from project activities to habitat within the MHPA.

The habitat within the project area and surrounding canyons does not function as a wildlife movement corridor. Therefore, the project would not hinder wildlife movement through the area.

An unnamed tributary to Alvarado Creek and associated wetland habitat occur within the project impact area. The tributary and associated wetland habitat are likely under the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB). The wetland habitat is likely considered City wetland. USACE/RWQCB/CDFW non-wetland waters and streambed entirely overlap. RWQCB/CDFW wetland waters entirely overlap. USACE wetland waters fall within RWQCB/CDFW wetland waters. City wetlands entirely overlap with RWQCB/CDFW wetland waters and include the vegetated portions of USACE/RWQCB/CDFW non-wetland waters. There is a patch of disturbed wetland north of Maisel Way and east of Chaparral Way that is supported by runoff released from a private property via a plastic pipe. This feature would likely not be considered jurisdictional because it has artificial hydrology.

Portions of USACE/RWQCB/CDFW non-wetland waters that occur within an unvegetated concrete-lined channel will not be impacted as steel plates will be used for vehicle access over the top of the channel. Project impacts to jurisdictional wetlands and waters are as follows:

- 0.007 acre (130 linear feet) of temporary impacts to non-wetland waters of the U.S., 0.004 acre of permanent impacts to wetland waters of the U.S., and 0.094 acre of temporary impacts to wetland waters of the U.S.
- 0.007 acre (130 linear feet) of temporary impacts to non-wetland waters of the state, 0.006 acre of permanent impacts to wetland waters of the state, and 0.095 acre of temporary impacts to wetland waters of the state.
- 0.006 acre of permanent impacts and 0.102 acre of temporary impacts to City wetlands.

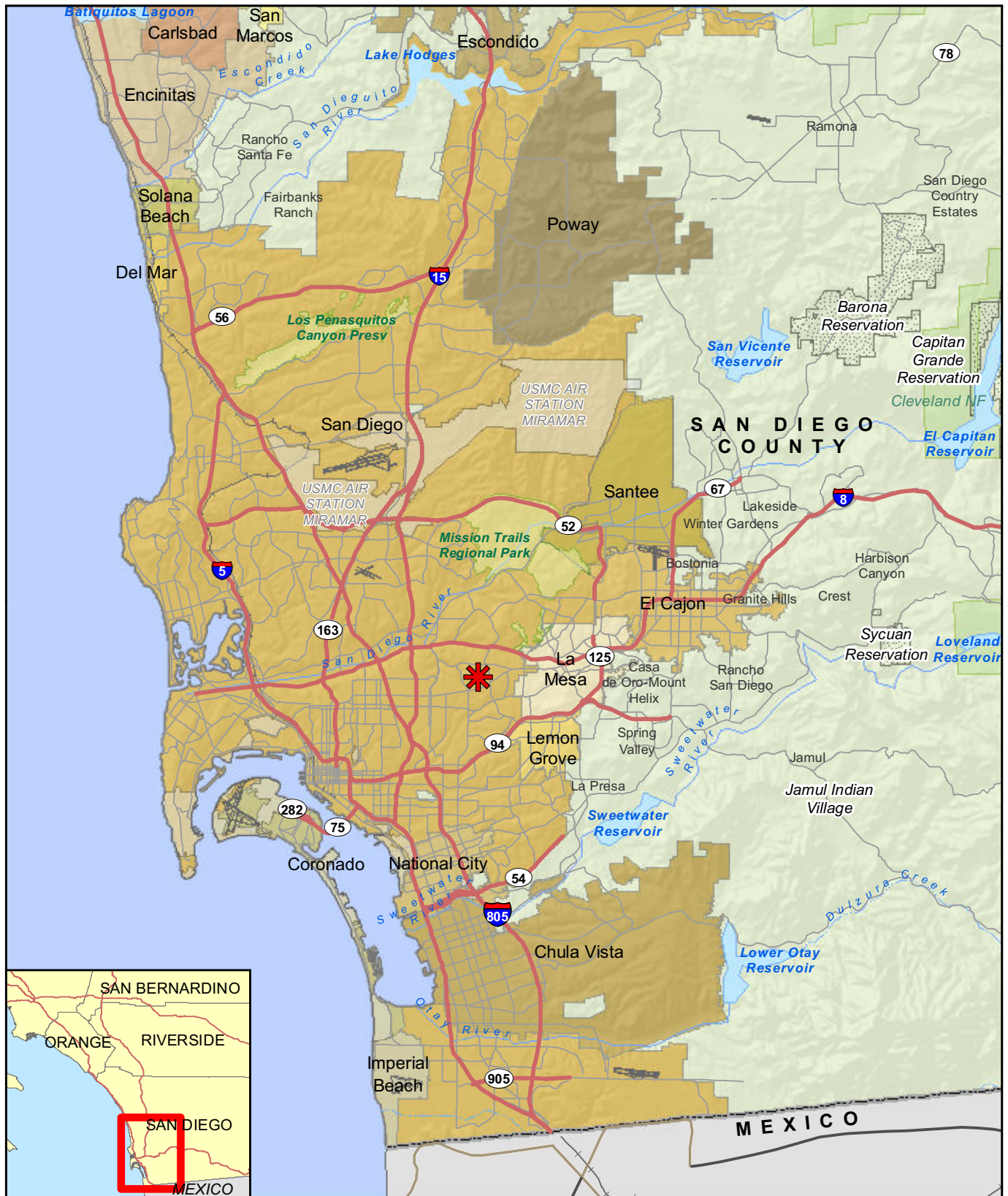
Any impacts to USACE, CDFW, or RWQCB waters would require a Section 404 permit authorization from USACE, a 1600 Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB. Impacts to City wetlands would require and qualify for a deviation from the Environmentally Sensitive Lands (ESL) regulations (City of San Diego 2012), and appropriate mitigation would be applied. Mitigation for temporary and permanent impacts will occur at an appropriate PUD mitigation site for project impacts to non-wetland waters/streambed and wetland waters. The proposed mitigation would reduce impacts to jurisdictional waters to a level of less than significant. As direct impacts would occur to jurisdictional waters, indirect impacts to adjacent jurisdictional waters may occur. Implementation of best management practices is anticipated to minimize indirect impacts to jurisdictional waters. In addition to off-site mitigation, on-site revegetation will occur for temporarily impacted areas.

1.0 Introduction

The purpose of this biological resources report is to (1) document the existing biological conditions within the project survey area; (2) evaluate the survey area and the vicinity for the potential to support sensitive biological resources, including Environmentally Sensitive Lands (ESL); (3) provide an impact analysis based on the potential impacts associated with the proposed project; and (4) provide a discussion of avoidance, minimization, and mitigation measures that may be required to reduce those impacts to below a level of significance.

1.1 Project Location

The City of San Diego (City) Public Works Department's College Area Sewer and AC Water Project (project) is located within the city of San Diego, California (Figure 1). The project is within the Mission San Diego Land Grant of the U.S. Geological Survey (USGS) 7.5-minute topographic map, La Mesa quadrangle (Figure 2; USGS 1994). The project is situated along an unnamed tributary to Alvarado Creek within the College community planning area within Council District 9, and is bounded by Collwood Boulevard, Montezuma Road, Adams Avenue, and College Avenue (Figure 3). A portion of the project area is within the developed right-of-way in Campanile Way, Campanile Drive, Baja Drive, and 54th Street, while the other portion of the project area runs west-east within an undeveloped canyon generally south of Baja Drive, west of the western terminus of Campanile Way, and east of Collwood Boulevard (Figures 4a and 4b).

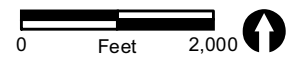
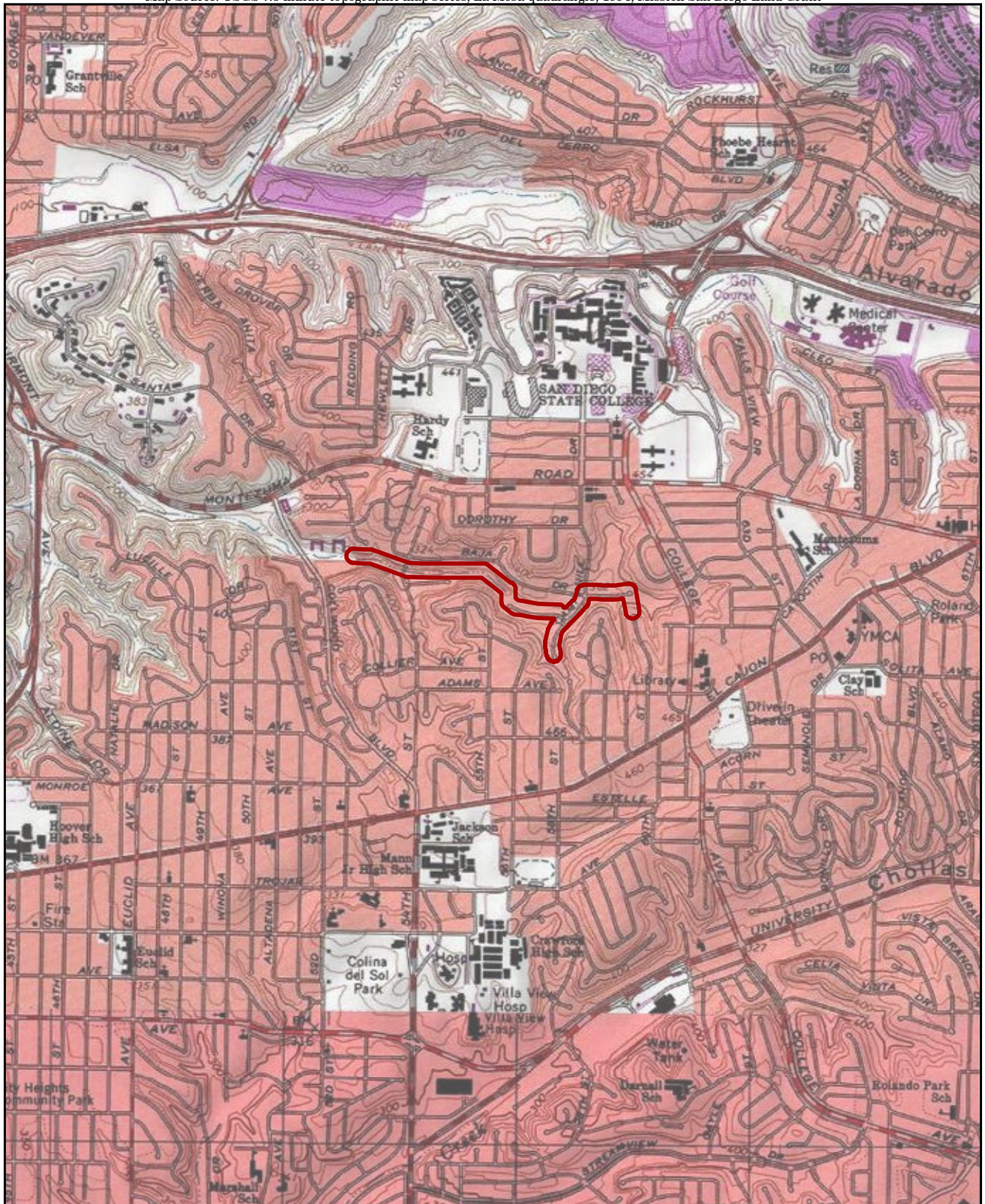


 Project Location

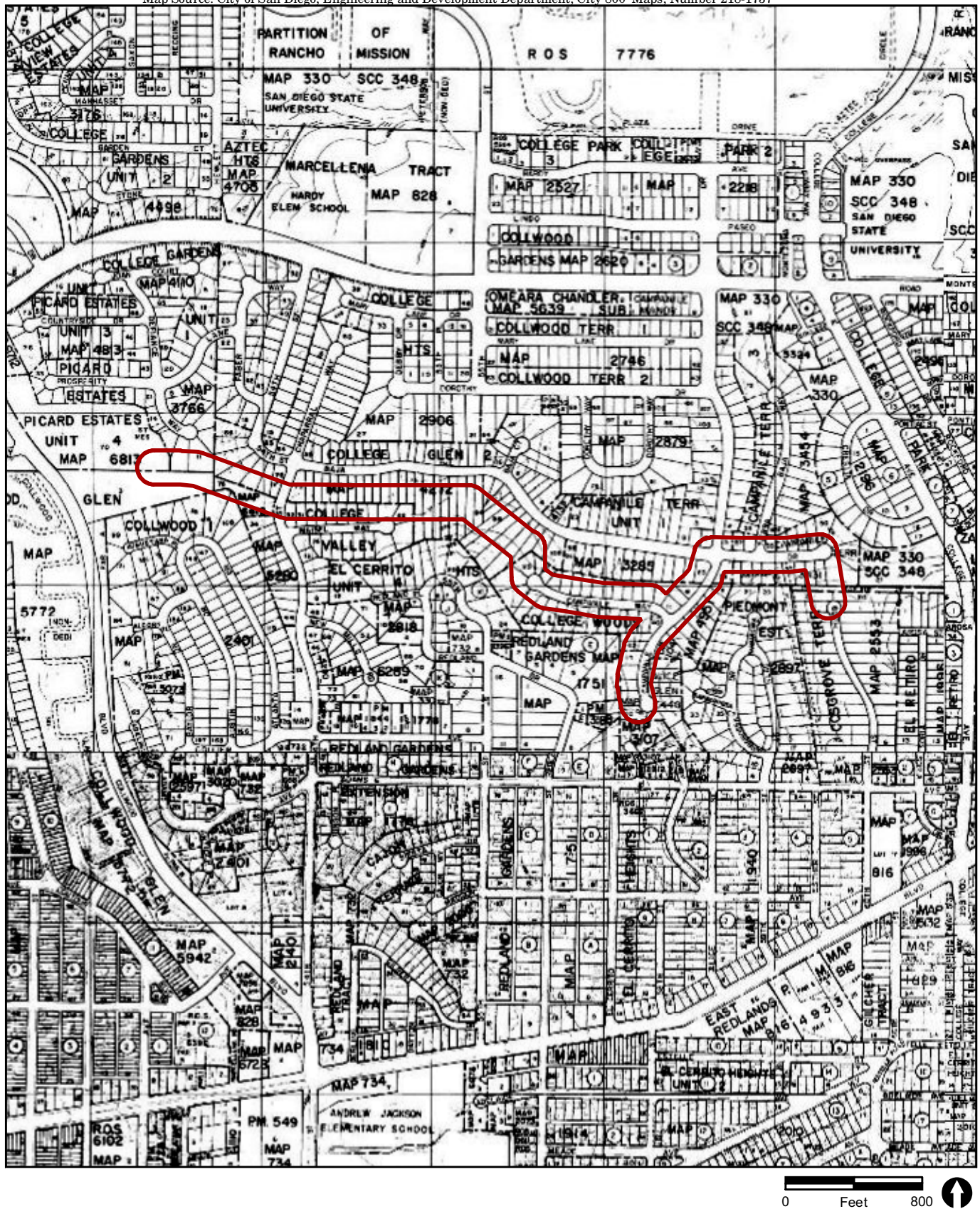
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FIGURE 1
Regional Location



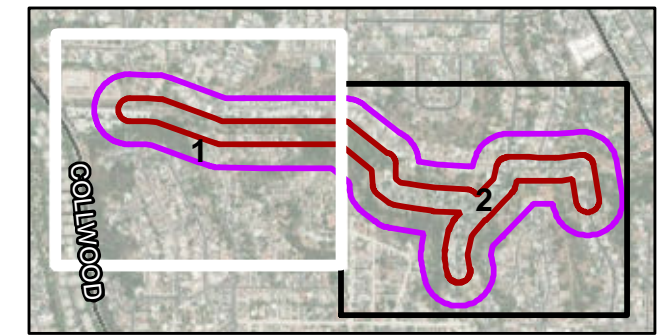
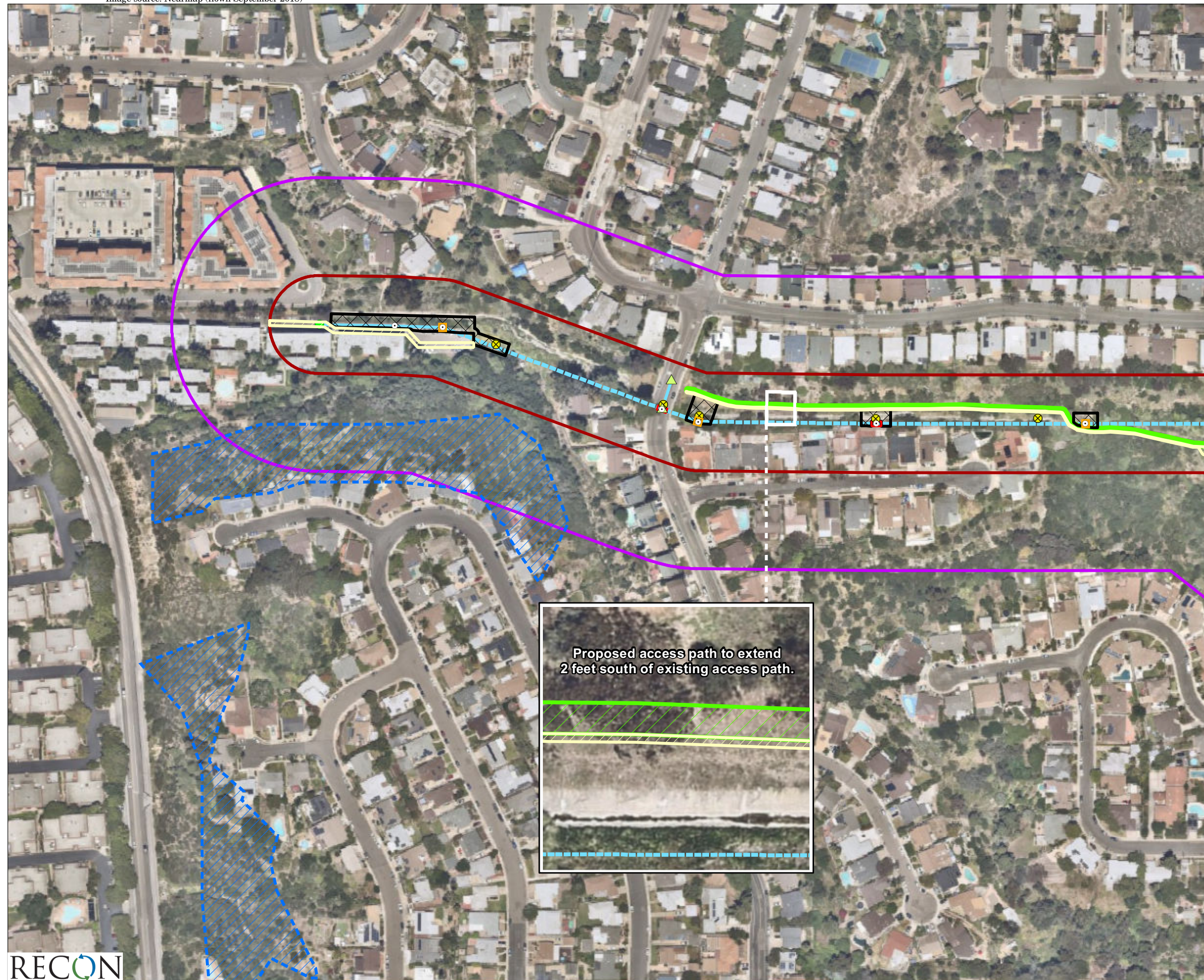
 Vegetation Survey Area



Vegetation Survey Area

FIGURE 3

Project Location on City 800' Map



- Vegetation Survey Area
- Wildlife Survey Area
- City of San Diego MHPA
- Project Features**
- Proposed Sewer Main Replacement
- Proposed Sewer Main Replacement - Trenchless
- Existing Manhole
- ⊗ Existing Manhole to be Abandoned
- Existing Access Path (8' wide)
- Permanent Impacts**
- ⊙ Proposed Manhole (5'x5')
- ▲ Proposed Vault (13'x11'8")
- Proposed Access Path
- Temporary Impacts**
- Launching Pit (10'x20')
- Receiving Pit (10'x10')
- Temporary Construction Area

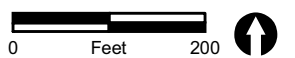
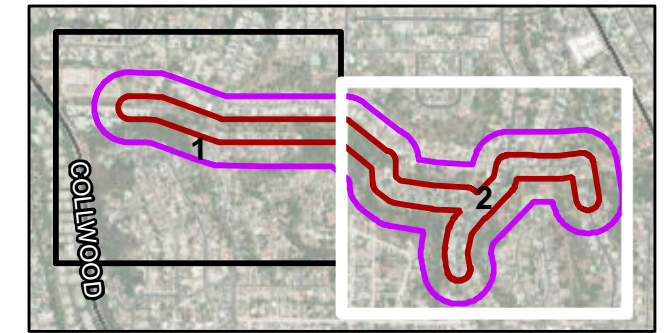
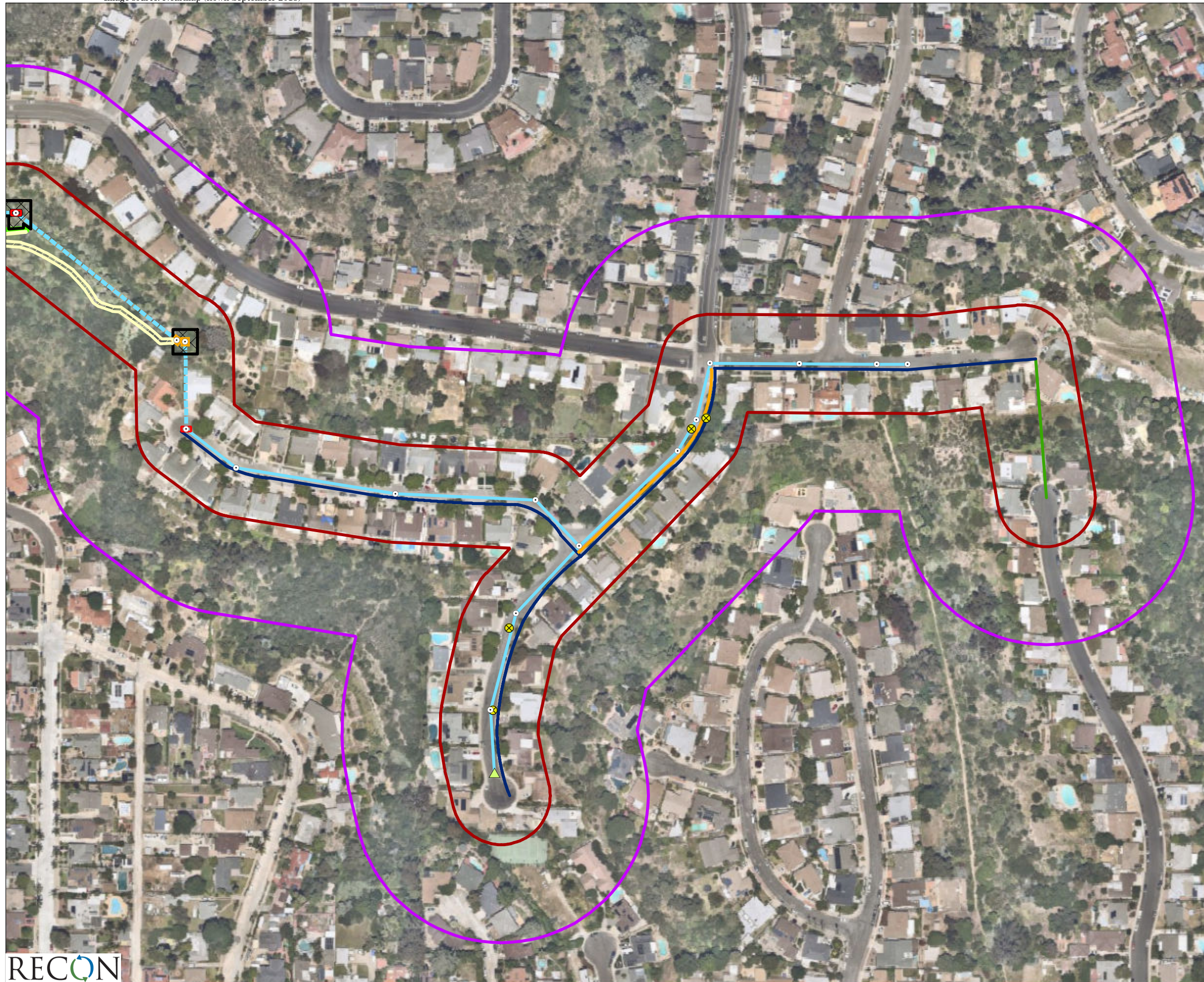


FIGURE 4a
Project Location on Aerial Photograph



- Vegetation Survey Area
- Wildlife Survey Area
- Project Features**
- Proposed Dual 8" Water Main
- Proposed 8" Water Main Replacement
- Water Main to be Abandoned
- Proposed Sewer Main Replacement
- Proposed Sewer Main Replacement - Trenchless
- ⊗ Existing Manhole to be Abandoned
- Existing Access Path (8' wide)
- Permanent Impacts**
- ⊙ Proposed Manhole (5'x5')
- ▲ Proposed Vault (13'x11'8")
- Proposed Access Path
- Temporary Impacts**
- Launching Pit (10'x20')
- Receiving Pit (10'x10')
- Temporary Construction Area



FIGURE 4b
Project Location on Aerial Photograph

1.2 Project Description

The project involves replacement and abandonment of vitrified clay (VC) sewer mains and asbestos cement (AC) water mains and construction of new mains via open trench and trenchless methods, as well as construction of ten launching/receiving pits, nine new manholes, and three new vault structure (see Figures 4a and 4b). More specifically, the project proposes the following:

- Replace-in-place via open trench approximately 1,528 linear feet (0.29 mile) of existing 8-inch and 10-inch VC sewer mains with new 8-inch, 12-inch, 15-inch, and 18-inch sewer mains.
- Replace-in-place via trenchless methods approximately 178 linear feet (0.03 mile) of existing 10-inch sewer main with 15-inch sewer main.
- Construct via open trench 1,014 linear feet (0.19 mile) of new 18-inch, 15-inch, and 10-inch sewer main.
- Construct via trenchless methods 2,045 linear feet (0.39 mile) of new 18-inch sewer main.
- Abandon and slurry fill approximately 3,075 linear feet (0.58 mile) of existing 8- and 10-inch sewer main.
- Replace-in-place via open trench approximately 2,578 linear feet (0.49 mile) of the existing 4-, 6-, and 8-inch AC water mains with new 8-inch diameter water mains.
- Construct via open trench approximately 483 linear feet (0.09 mile) of new 8-inch PVC water main (dual main).
- Abandon and slurry fill approximately 118 linear feet (0.02 mile) of existing 6-inch water main.

Appurtenances and accessory structures associated with the project include nine proposed launching/receiving pits for seven trenchless construction pipeline segments. The launching pits will be approximately 20 feet by 10 feet and the receiving pits will be approximately 10 feet by 10 feet. “Temporary Construction Area(s)” of varying sizes will surround each launching/receiving pit as shown on Figures 4a and 4b. Nine new manholes will also be added and eight manholes will be abandoned. A vault structure with a depth of 26 feet will replace the existing deep manhole on 54th Street. A vault structure with a depth of 32 feet will be added on 54th Street. A vault structure with a depth of 26 feet will replace the existing deep manhole on Campanile Drive. New manhole footprint will be approximately 5 feet by 5 feet for each manhole.

Where the project occurs in the undeveloped canyon, a 10-foot-wide vehicle access path (see “Proposed Access Path” and “Existing Access Path” on Figures 4a and 4b) is proposed to be utilized by construction crews for access to launching/receiving pits. Access to the project site along 54th Street and Collwood Boulevard will be available through an existing unpaved, 8-foot-wide City Public Utilities Department (PUD) maintenance access path (see “Existing Access Path” on Figures 4a and 4b). The access path east of 54th Street would

follow this existing maintenance access path, which generally parallels a 12-foot-wide cement flood control channel. The “Existing Access Path” is proposed to be widened 2 feet south, which would be considered part of the “Proposed Access Path” (see Figure 4a). The “Existing Access Path” connects four of the six launching/receiving pits east of 54th Street within the canyon, while a proposed access path extension would be graded and maintained (i.e., considered a permanent impact) to connect the easternmost segment and access the remaining two receiving pits within the canyon. The access path west of 54th Street would be from a parking lot located at residential apartment complexes east of Collwood Boulevard. Vegetation trimming and grading would be required for vehicle use of the existing and proposed access paths. Equipment within vegetated areas may include excavator, loader/backhoe, drills, crane, dump trucks, utility trucks, generator, and shaker/screen. Additionally, steel plates would be used for vehicle access over the existing concrete channel. All vehicles and construction activities would remain within the limits of the access paths and temporary construction areas.

2.0 Methods and Survey Limitations

Biological resource data for the project was obtained from a combination of literature review, general biological survey, and jurisdictional waters/wetland delineation. The literature review and survey methods are discussed further below.

2.1 Literature Review

RECON Environmental, Inc. (RECON) conducted an analysis of existing sensitive species occurrence records within two miles of the project area. This analysis included searches of the U.S. Fish and Wildlife (USFWS) all-species occurrence database (USFWS 2018a) and critical habitat portal (USFWS 2018b), the SanBIOS database (County of San Diego 2018), the California Natural Diversity Database (CNDDB; California Department of Fish and Wildlife [CDFW] 2018a), and Amphibian and Reptile Atlas of Peninsular California (San Diego Natural History Museum [SDNHM] 2018); as well as reviews of the San Diego County Bird Atlas and Mammal Atlas (Unitt 2004; Tremor et al. 2017). Background research to assess the existing biological conditions also included a review of online aerial satellite imagery (Google 2018), USGS topographic map (USGS 1994), and U.S. Department of Agriculture (USDA) soil survey maps (USDA 1973).

2.2 Biological Survey

RECON biologists JR Sundberg and Kayo Valenti conducted a field survey on October 16, 2018, between 8:30 a.m. and 3:30 p.m. to assess the existing conditions of the biological resources. See Attachment 1 for the biologists’ qualifications. Weather conditions during the survey consisted of a clear sky, winds of 0 to 1 mile per hour, and air temperature of 65 to 79 degrees Fahrenheit. The survey area consisted of the entire project area based on the project features provided by the City in September 2018 and the surrounding 100-foot radius for vegetation and surrounding 300-foot radius for wildlife. Final access path locations in the canyon were provided by the City on February 1, 2019, based on

information gathered from the biologists during the field survey. The biologists conducted the survey on foot by meandering throughout the survey area where slope and vegetation density allowed access. Areas that were too steep or densely vegetated were viewed from the closest accessible areas. Private property was avoided, but the biologists covered the streets within the project area in order to search for additional pockets of vegetation or assess ornamental plantings for suitable wildlife habitat. Digital photographs of representative areas were taken during the survey. Fieldwork focused on three primary objectives: (1) vegetation mapping, (2) plant and wildlife species inventory and assessment of the potential occurrence for sensitive species, and (3) delineating jurisdictional waters and wetlands.

2.2.1 Vegetation Mapping

Vegetation communities and land cover types were mapped on a 1-inch-equals-100-feet scale aerial photograph (flown June 2018) of the vegetation survey area (herein referred to as survey area). A sub-meter-accurate global positioning system (GPS) unit was used to record sensitive vegetation communities. Dominant plant species were noted for each vegetation community. Vegetation community classifications follow Holland (1986) as modified by Oberbauer et al. (2008), with minor adjustments for consistency with the City of San Diego's Biology Guidelines (City of San Diego 2012).

2.2.2 Species Inventory and Assessment

Plant species observed within the survey area were noted; however, a complete inventory of non-native ornamental species within developed and landscaped areas was not recorded. The survey also included a directed search for sensitive plants that would have been apparent at the time of the survey. Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, as the survey was conducted in fall so spring annuals may not have been detected. Floral nomenclature follows the Jepson Manual (Baldwin et al. 2012) as updated by the Jepson Flora Project (University of California 2018). In instances where common names were not provided in these resources, common names were obtained from Rebman and Simpson (2014), the USDA maintained database (USDA 2013), or the Sunset Western Garden Book (Brenzel 2001).

All animal species observed directly or detected from calls, tracks, or other sign were recorded. The wildlife survey was limited by seasonal and temporal factors. Nocturnal animals could only be detected by sign, as the survey was performed during the day. In addition, as the survey was conducted in fall, spring or summer migrants would likely not have been detected. Zoological nomenclature follows the American Ornithological Society's Checklist (2018) and Unitt (2004) for birds; Baker et al. (2003) for mammals; Crother et al. (2008) for amphibians and reptiles; and SDNHM (2002) and Evans (2007) for invertebrates.

Determination of the potential occurrence for listed, sensitive, or noteworthy species is based upon the literature review, habitat conditions, and known ranges and habitat preferences for the species (Jennings and Hayes 1994; Unitt 2004; CDFW 2018b–e; California Native Plant Society [CNPS] 2018; Reiser 2001).

2.2.3 Jurisdictional Waters/Wetland Delineation

RECON biologist JR Sundberg conducted a routine jurisdictional waters/wetland delineation in the survey area during the October 16, 2018 field survey, following the guidelines set forth by the U.S. Army Corps of Engineers (USACE; 1987, 2008a, 2008b) to determine the presence and extent of wetlands and/or waters under the jurisdiction of USACE, CDFW, Regional Water Quality Control Board (RWQCB), and/or the City. Wetlands were delineated using the following three parameters: hydrophytic vegetation, wetland hydrology such as the presence of seasonal flows and an ordinary high watermark, and hydric soils. According to the USACE, indicators for all three parameters must be present to qualify an area as a wetland. RWQCB waters of the state include all areas that meet one of three criteria (hydrology, hydric soils, or wetland vegetation) and generally include, but are not limited to, all waters under the jurisdiction of the USACE. The CDFW has jurisdiction over streambed and wetland habitats associated with watercourses, delineated by the outer edge of wetland vegetation or at the top of the bank of streams or lakes, whichever is wider. City wetlands include wetland waters of the state within the city of San Diego.

To determine presence of hydrophytic vegetation, a direct search was conducted for wetland vegetation or areas dominant by wetland plant species, as defined by the National Wetland Plant List (Lichvar 2016). To determine the presence of wetland hydrology, hydrologic information for the site was obtained by reviewing USGS topographic maps and by directly observing hydrology indicators in the field. To determine the presence of hydric soils, sample points were selected within potential wetland areas and near the apparent boundary between wetland and upland. This boundary was inferred based on topography and changes in the composition of the vegetation. A complete list of hydric soil indicators is provided in the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008b). Information on the soil types sampled in the survey area is summarized from the Soil Survey for San Diego County (USDA 1973), the San Diego Association of Governments (SANDAG) 1995 geographic information system data (SANDAG 1995), and the USDA Hydric Soils of California list (hydric soil list; USDA 2015).

Wetland Determination Data Forms (USACE 2008b) were completed at three sample points. Non-wetland waters were delineated based on A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008a). Updated OHWM datasheets (USACE 2010) were completed at two locations within the project survey area. Refer to the Jurisdictional Waters/Wetland Delineation Report for a more detailed description of methods (RECON 2019).

3.0 Existing Conditions and Survey Results

This section describes the existing physical and biological conditions of the project survey area. This includes a summary of land use, topographical features, and soils observed during the biological survey conducted on October 16, 2018.

3.1 Physical Characteristics

3.1.1 Existing Land Use

Half of the survey area occurs within residential development and the other half within an undeveloped canyon that falls within the residential development. The undeveloped canyon occurs within the southeastern portion of a larger mosaic of urban canyons around Interstate 8 and Fairmount Avenue. The portion that falls within the survey area contains an unnamed tributary to Alvarado Creek.

3.1.2 Topography and Soils

The survey area generally consists of developed land on the top of a mesa, surrounding narrow finger canyons. The undeveloped canyon of the survey area contains a low channel in the middle that generally runs east-west with north- and south-facing slopes on either side. In the eastern portion of the survey area within the canyon, the channel curves southeast with the aspect of the slopes changing accordingly.

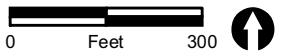
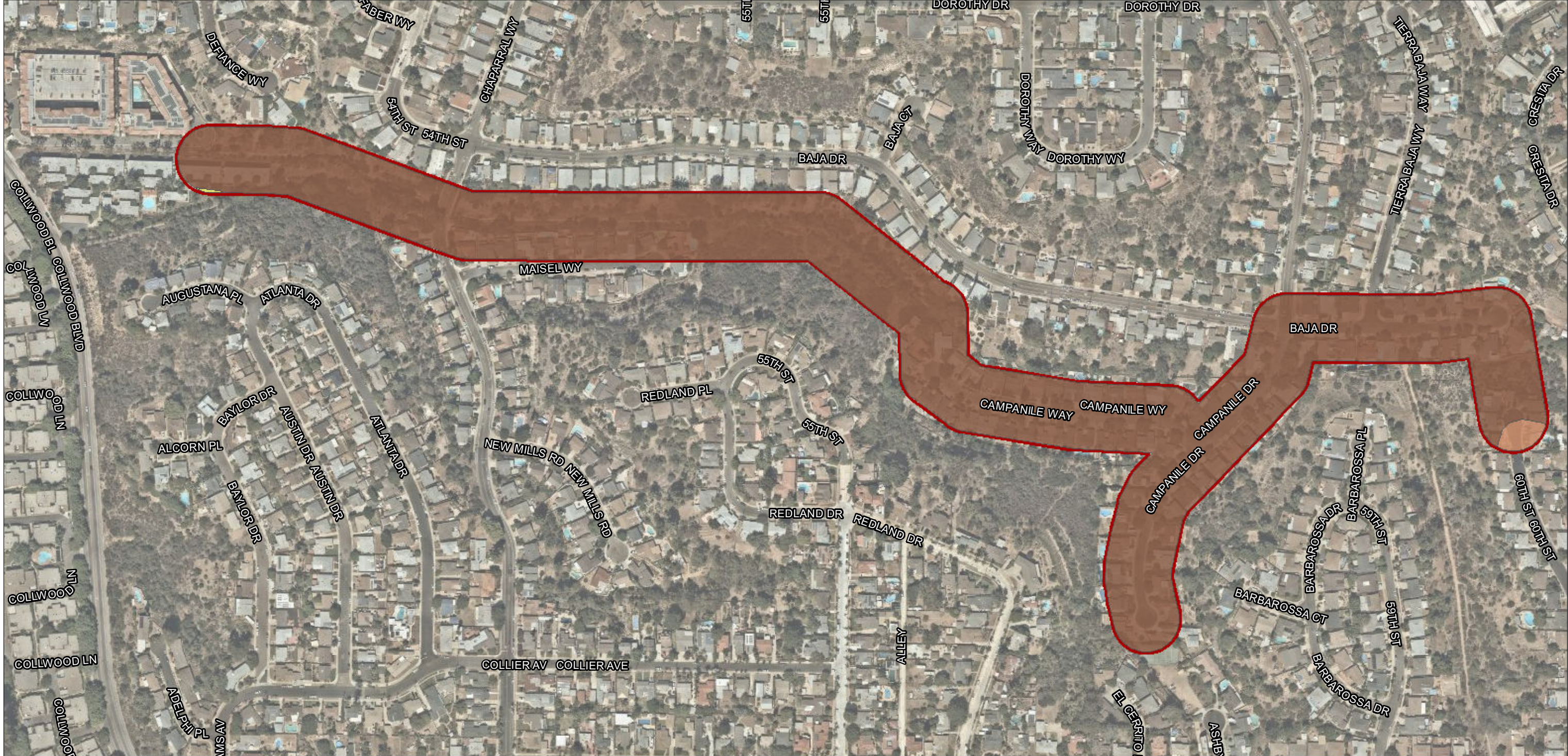
The highest elevation within the survey area is approximately 454 feet above mean sea level (AMSL) within the southeastern portion of the residential development, and the lowest elevation is approximately 260 feet AMSL within the western portion of the unnamed tributary (USGS 1994).

Three soil series, Diablo, Redding, and Olivenhain, are mapped within the survey area (Figure 5; USDA 1973). Characteristics of these soils are summarized below from the Soil Survey of San Diego Area, California (USDA 1973).

Diablo-Urban land complex, 5 to 15 percent slopes, indicates areas that originally supported Diablo, but have been altered through cut-and-fill operations and leveling. This occurs within almost the entire survey area.

Redding-Urban land complex, 2 to 9 percent slopes, indicates areas that originally supported Redding, but have been altered through cut-and-fill operations and leveling. Redding cobbly loam is on the hydric soil list and can be hydric in depressions (USDA 2015). This occurs within the majority of the eastern tip of the survey area.

Olivenhain-Urban land complex, 2 to 9 percent slopes, indicates areas that originally supported Olivenhain, but have been altered through cut-and-fill operations and leveling. Olivenhain cobbly loam is on the hydric soil list and can be hydric in depressions (USDA 2015). This occurs as a small sliver at the western tip of the survey area.



- Vegetation Survey Area
- Soil Type**
- Diablo-Urban Land Complex, 5 to15 Percent Slopes
 - Olivenhain-Urban Land Complex, 2 to 9 Percent Slopes
 - Redding-Urban Land Complex, 2 to 9 Percent Slopes

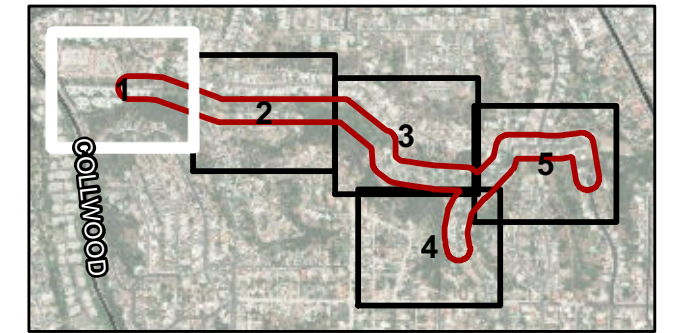
FIGURE 5
Soils within the Project Survey Area

3.2 Biological Resources

3.2.1 Botanical Resources

The following nine vegetation communities and land cover types were identified in the 25.061-acre survey area: non-native riparian, disturbed wetland (including vegetated channel, artificial hydrology, and unvegetated channel), maritime succulent scrub, Diegan coastal sage scrub, disturbed coastal sage scrub, eucalyptus woodland, disturbed land, ornamental plantings, and urban/developed land. Table 1 lists the acreage of each vegetation community and land cover type, and Figures 6a through 6e illustrate the location of each within the survey area. Photographs 1 through 9, taken from Photo Points A through I on Figures 6a through 6c, provide views of the vegetation communities. A total of 106 plant species were identified within the survey area (Attachment 2). Of this total, 43 (41 percent) are species native to southern California and 63 (59 percent) are introduced species. Sensitive species observed or with high to moderate potential to occur within the survey area are discussed below in the Sensitive Biological Resources section (Section 3.3).

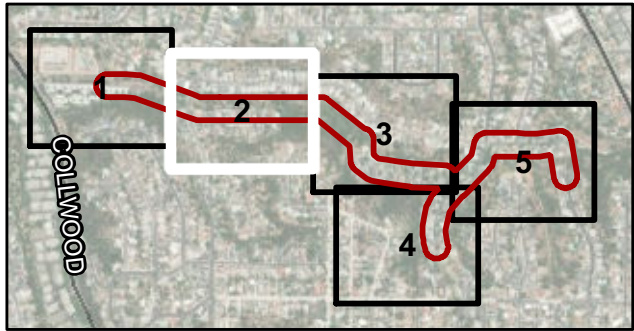
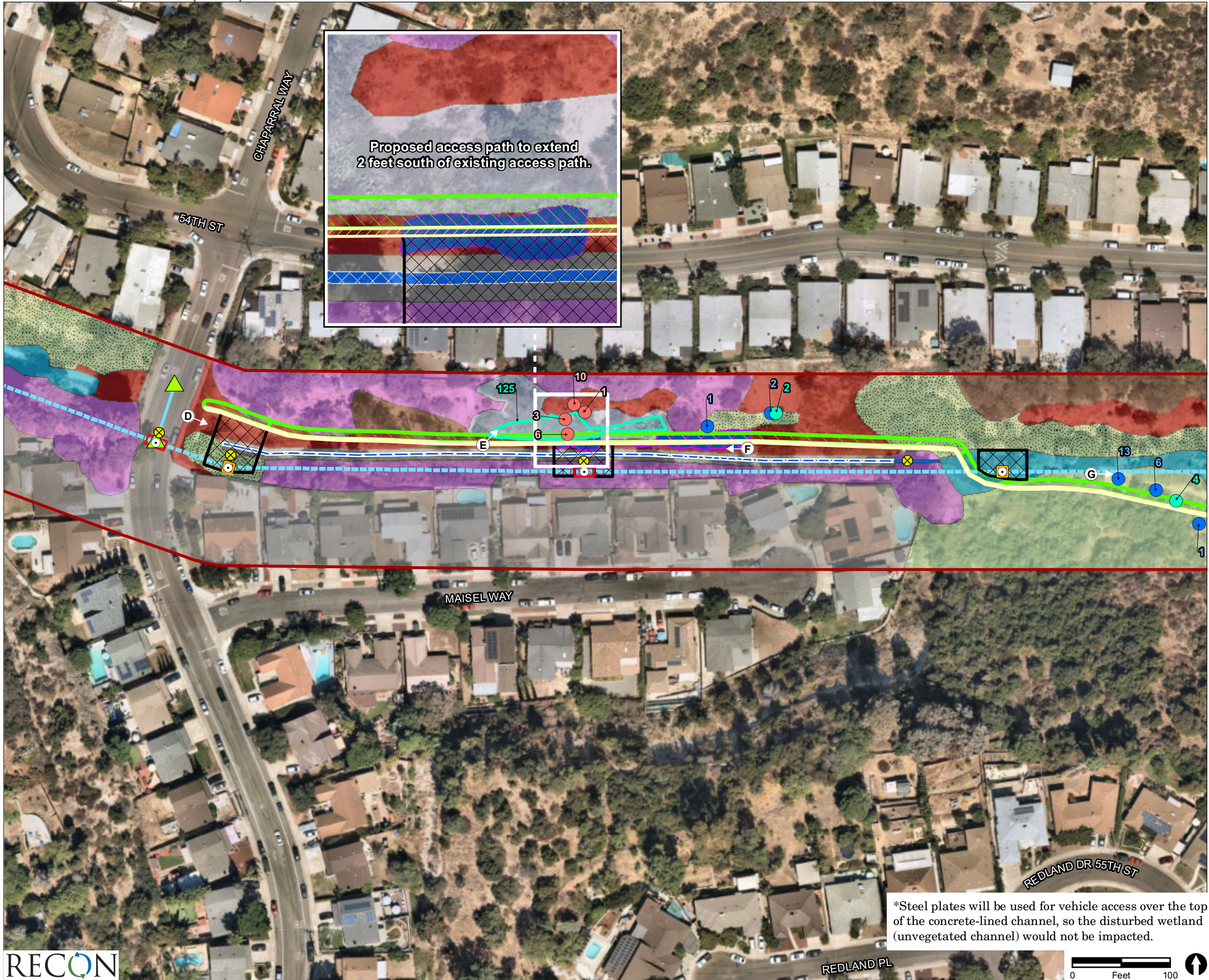
Community or Type (Holland Code as modified by Oberbauer)	City of San Diego Tier	Acres
Non-native riparian (65000)	-- ^a	0.784
Disturbed wetland (vegetated channel) (11200)	-- ^a	0.016
Disturbed wetland (artificial hydrology) (11200)	-- ^a	0.048
Disturbed wetland (unvegetated channel) (11200)	-- ^a	0.068
Maritime succulent scrub (32400)	I	0.173
Diegan coastal sage scrub (32500)	II	2.326
Disturbed coastal sage scrub (32500)	II	1.608
Eucalyptus woodland (79100)	IV	0.285
Disturbed land (11300)	IV	1.132
Ornamental plantings (11000)	IV	2.297
Urban/developed land (12000)	-- ^b	16.324
TOTAL		25.061
^a Wetlands do not have City of San Diego-assigned tiers.		
^b No City of San Diego-assigned tier.		



- Vegetation Survey Area
- City of San Diego MHPA
- Photo Point
- Vegetation Communities**
 - Diegan Coastal Sage Scrub
 - Disturbed Coastal Sage Scrub
 - Disturbed Land
 - Disturbed Wetland (Vegetated Channel)
 - Disturbed Wetland (Unvegetated Channel)
 - Non-Native Riparian
 - Ornamental Plantings
 - Urban/Developed
- Sensitive Plant Species**
 - Nuttall's Scrub Oak
- Project Features**
 - Proposed Sewer Main Replacement
 - Proposed Sewer Main Replacement - Trenchless
 - Existing Manhole
 - ⊗ Existing Manhole to be Abandoned
- Permanent Impacts**
 - ⊙ Proposed Manhole (5'x5')
 - Proposed Access Path
- Temporary Impacts**
 - Receiving Pit (10'x10')
 - Temporary Construction Area*

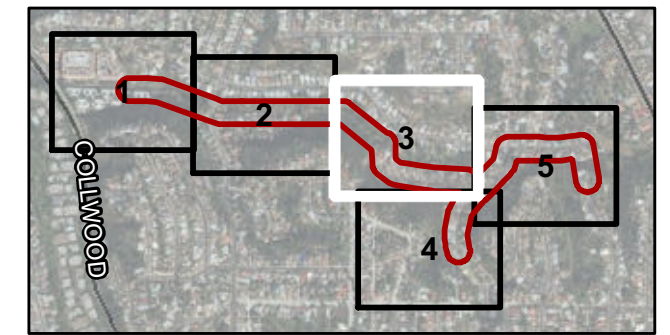
*Steel plates will be used for vehicle access over the top of the concrete-lined channel, so the disturbed wetland (unvegetated channel) would not be impacted.

FIGURE 6a
Existing Biological
Resources and Impacts



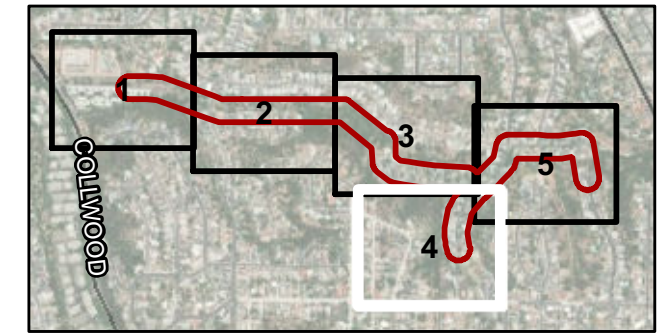
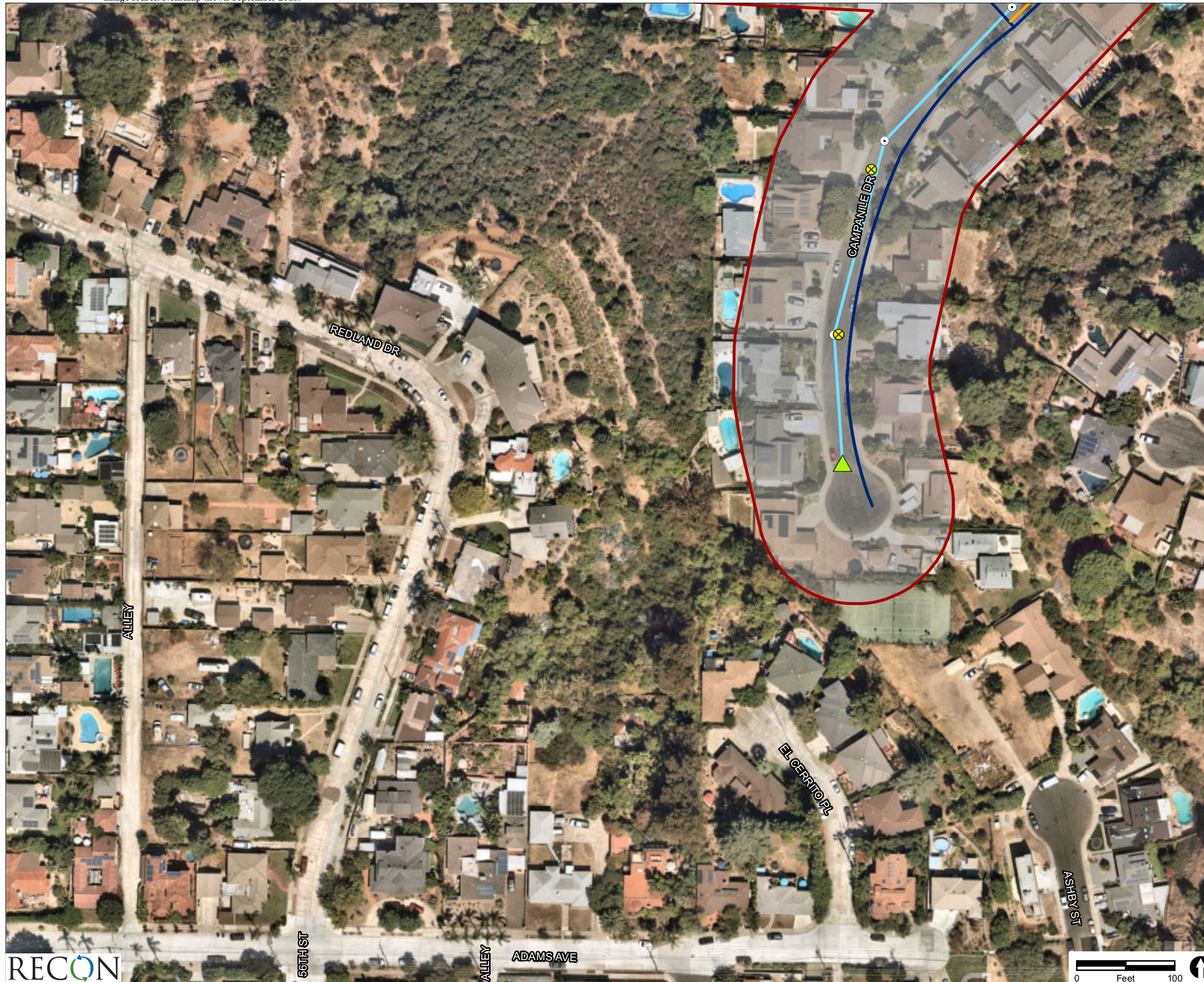
- Vegetation Survey Area
- Photo Point
- Vegetation Communities**
 - Diegan Coastal Sage Scrub
 - Disturbed Coastal Sage Scrub
 - Disturbed Land
 - Disturbed Wetland (Vegetated Channel)
 - Disturbed Wetland (Artificial Hydrology)
 - Disturbed Wetland (Unvegetated Channel)
 - Eucalyptus Woodland
 - Maritime Succulent Scrub
 - Non-Native Riparian
 - Ornamental Plantings
 - Urban/Developed
- Sensitive Plant Species**
 - California Adolphia
 - Nuttall's Scrub Oak
 - San Diego County Viguiera
- Project Features**
 - Proposed Sewer Main Replacement
 - Proposed Sewer Main Replacement - Trenchless
 - Existing Access Path (8' wide)
 - Existing Manhole to be Abandoned
- Permanent Impacts**
 - Proposed Manhole (5'x5')
 - Proposed Vault (13'x11'8")
 - Proposed Access Path
- Temporary Impacts**
 - Launching Pit (10'x20')
 - Receiving Pit (10'x10')
 - Temporary Construction Area*

FIGURE 6b
Existing Biological
Resources and Impacts



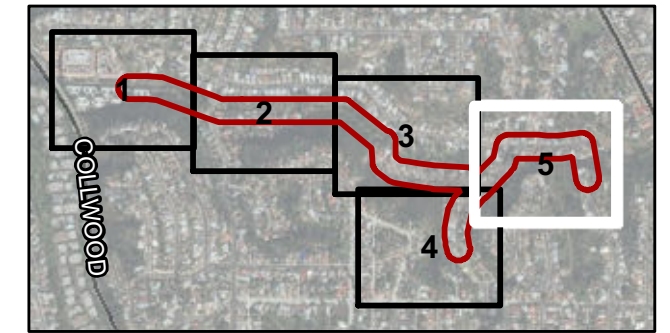
- Vegetation Survey Area
- Photo Point
- Vegetation Communities**
 - Diegan Coastal Sage Scrub
 - Disturbed Coastal Sage Scrub
 - Disturbed Land
 - Disturbed Wetland (Vegetated Channel)
 - Eucalyptus Woodland
 - Non-Native Riparian
 - Ornamental Plantings
 - Urban/Developed
- Sensitive Plant Species**
 - Nuttall's Scrub Oak
- Project Features**
 - Proposed Dual 8" Water Main
 - Proposed 8" Water Main Replacement
 - Proposed Sewer Main Replacement
 - Proposed Sewer Main Replacement - Trenchless
 - Existing Access Path (8' wide)
- Permanent Impacts**
 - ⊙ Proposed Manhole (5'x5')
 - Proposed Access Path
- Temporary Impacts**
 - Launching Pit (10'x20')
 - Receiving Pit (10'x10')
 - Temporary Construction Area

FIGURE 6c
Existing Biological
Resources and Impacts



- Vegetation Survey Area**
- Vegetation Communities**
- Urban/Developed
- Project Features**
- Proposed Dual 8" Water Main
 - Proposed 8" Water Main Replacement
 - Proposed Sewer Main Replacement
 - Existing Manhole to be Abandoned
- Permanent Impacts**
- Proposed Manhole (5'x5')
 - Proposed Vault (13'x11'8")

FIGURE 6d
Existing Biological
Resources and Impacts



- Vegetation Survey Area
- Vegetation Communities**
 - Diegan Coastal Sage Scrub
 - Urban/Developed
- Project Features**
 - Proposed Dual 8" Water Main
 - Proposed 8" Water Main Replacement
 - Water Main to be Abandoned
 - Proposed Sewer Main Replacement
 - X Existing Manhole to be Abandoned
 - Proposed Manhole (5'x5')
- Permanent Impacts**
 - Proposed Manhole (5'x5')

FIGURE 6e
Existing Biological
Resources and Impacts



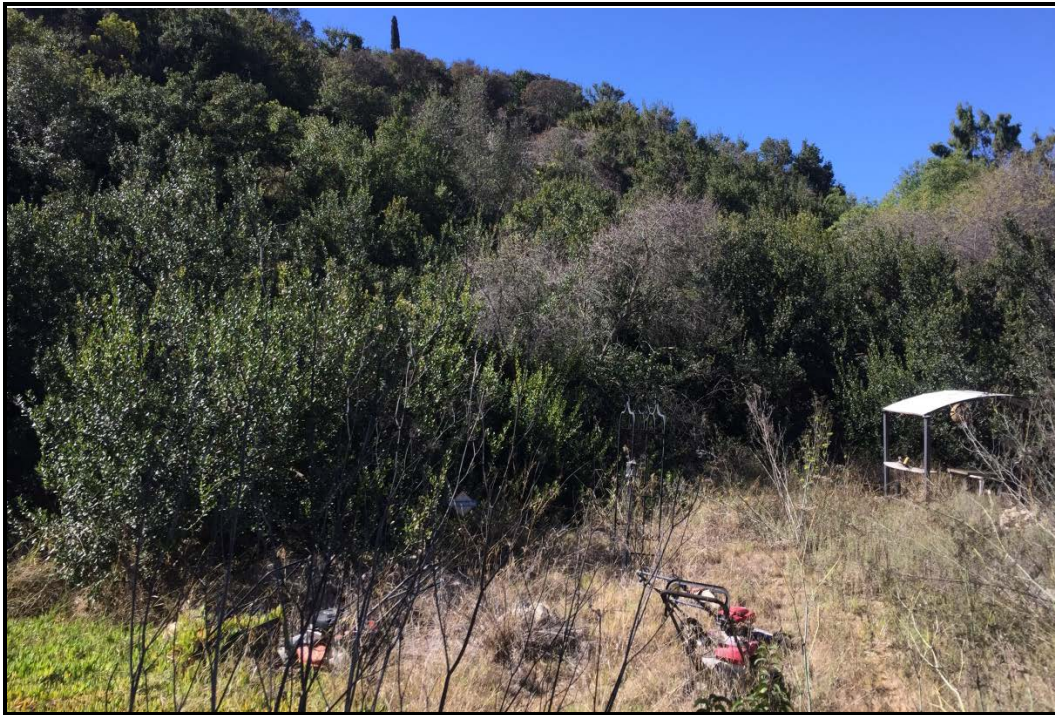
PHOTOGRAPH 1

Photo Point A of Disturbed Coastal Sage Scrub on the Left, Disturbed Wetland (Unvegetated Channel) along the Bottom of the Channel, and Ornamental Plantings Right of the Channel, Facing Southeast, Taken on October 16, 2018



PHOTOGRAPH 2

Photo Point B of Non-native Riparian and Disturbed Coastal Sage Scrub on the Right, Facing West, Taken on October 16, 2018



PHOTOGRAPH 3

Photo Point C of Disturbed Land and Diegan Coastal Sage Scrub,
Facing South, Taken on October 16, 2018



PHOTOGRAPH 4

Photo Point D of Disturbed Land, Eucalyptus Woodland, and
Ornamental Plantings, Facing East, Taken on October 16, 2018



PHOTOGRAPH 5

Photo Point E of Maritime Succulent Scrub, Facing Northeast,
Taken on October 16, 2018



PHOTOGRAPH 6

Photo Point F of Disturbed Wetland (Unvegetated Channel) Shown at
the Bottom of the Channel and Disturbed Wetland (Artificial
Hydrology) with Cattails on the Right, Facing West,
Taken on October 16, 2018



PHOTOGRAPH 7

Photo Point G of Nuttall's Scrub Oak within the Access Route,
Facing East, Taken on October 16, 2018



PHOTOGRAPH 8

Photo Point H of Non-native Riparian and Diegan Coastal Sage Scrub,
Facing Northeast, Taken on October 16, 2018

RECON



PHOTOGRAPH 9

Photo Point I of Disturbed Wetland (Vegetated Channel) and
Non-native Riparian, Facing Northwest, Taken on October 16, 2018

3.2.1.1 Non-Native Riparian

Non-native riparian is a densely vegetated riparian thicket dominated by non-native, invasive species (Oberbauer et al. 2008). It occurs along the unnamed tributary within the western and eastern portions of the survey area (see Figures 6a through 6c). It is dominated by Mexican fan palm (*Washingtonia robusta*), contains scattered ornamental trees, such as Brazilian pepper tree (*Schinus terebinthifolius*) and shamel ash (*Fraxinus uhdei*), and contains a few native arroyo and Goodding's black willow trees (*Salix lasiolepis* and *Salix gooddingii*) (see Photographs 2, 8, and 9). While the non-native riparian is dominated by non-native trees, it is considered moderate-quality habitat for wildlife due to the dominance of mature trees that can provide habitat to a variety of wildlife species, and occurrence adjacent to other mature coastal sage scrub. Non-native riparian is considered a wetland vegetation community under the City of San Diego's Biology Guidelines (2012) and is considered sensitive by the State of California resource agencies.

3.2.1.2 Disturbed Wetland

Disturbed wetlands are areas that are permanently or periodically inundated and have been significantly modified by human activity. They include portions of wetlands with obvious artificial structures such as concrete lining, barricades, riprap, piers, or gates. These areas are often unvegetated, but may contain scattered native or non-native vegetation. Disturbed wetland examples may include lined channels, Arizona crossings, detention basins, culverts, and ditches (Oberbauer et al. 2008). Disturbed wetland is considered a wetland vegetation community under the City of San Diego's Biology Guidelines (2012) and is considered sensitive by the State of California resource agencies.

Disturbed wetland occurs in three locations within the survey area (see Figures 6a through 6c):

- Unvegetated Channel – This category of disturbed wetland occurs along the bottom of a 3-foot-wide section of the 12-foot-wide cement flood control channel (Photographs 1 and 6). This area was unvegetated, but contained standing water at the time of the survey. It is considered low-quality habitat for wildlife due to the lack of vegetation.
- Vegetated Channel - This category of disturbed wetland occurs in portions of the concrete channel that are covered in sediment and/or ponded water and surrounded by mature trees (Photograph 9). These areas transition to non-native riparian in portions of the channel that are dominated by trees, with the exception of the ornamental plantings in the eastern portion of the canyon. This area of disturbed wetland is considered moderate-quality habitat for wildlife as it occurs adjacent to vegetation that contains mature shrubs and trees that likely provide habitat to a variety of wildlife species but is ultimately bound by residential development.
- Artificial Hydrology – This category of disturbed wetland occurs as two patches within the canyon upslope of the cement channel east of 54th Street and appear to be

supported by runoff discharging from a private property via a three-inch corrugated plastic pipe. These patches of disturbed wetlands are dominated by broad-leaved cattail (*Typha latifolia*) and freeway iceplant (*Carpobrotus edulis*) (see Photograph 6). These areas are considered low-quality habitat for wildlife due to the prevalence of a non-native ruderal species and as they are ultimately bound by residential development.

3.2.1.3 Maritime Succulent Scrub

Maritime succulent scrub is a low, open vegetation community dominated by drought deciduous, subligneous (somewhat woody), malacophyllous (soft-leaved) shrubs with a rich mixture of cacti and stem and leaf succulents. The proportion of cacti is typically highest in inland areas. Ground cover is more or less devoid of vegetation between shrubs. Growth and flowering are concentrated in the spring. Maritime succulent scrub occurs on thin rocky or sandy soils, often on steep slopes of coastal headlands and bluffs, and often intergrades with southern coastal bluff scrub on more exposed areas, and with coastal sage scrub on better developed, moister soils away from the immediate coast (Holland 1986).

Maritime succulent scrub occurs as a small patch within the central portion of the canyon in the survey area, east of 54th Street (see Figure 6b). This vegetation community is dominated by a mix of coast prickly-pear (*Opuntia littoralis*), coast cholla (*Cylindropuntia prolifer*), and California adolphia (*Adolphia californica*) (see Photograph 5). The maritime succulent scrub is considered moderate-quality habitat for wildlife as it occurs within a vegetated canyon among mature shrubs and trees that likely provide habitat to a variety of wildlife species, but is ultimately bound by residential development. Maritime succulent scrub is considered sensitive by state resource agencies, and a Tier I (rare uplands) community under the City's Biology Guidelines (2012).

3.2.1.4 Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a plant community consisting of low-growing, aromatic, drought-deciduous soft-woody shrubs that have an average height of approximately 3 to 4 feet. It is typically dominated by facultative drought deciduous species such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and white sage (*Salvia apiana*). The community typically is found on low moisture-availability sites with steep, xeric slopes or clay rich soils that are slow to release stored water. These sites often include drier south- and west-facing slopes and occasionally north-facing slopes, where the community can act as a successional phase of chaparral development. Diegan coastal sage scrub intergrades at higher elevations with several types of chaparrals, or in northern inland areas with Riversidean sage scrub. Diegan coastal sage scrub is found in coastal areas from Los Angeles County south into Baja California (Holland 1986).

Diegan coastal sage scrub occurs along the southern portion of the survey area, generally on north-facing slopes (see Figures 6a through 6e), and extends south of the survey area within the canyon. It has a thick shrub cover (approximately 80 percent) and is dominated

by lemonade berry (*Rhus integrifolia*) and contains other scattered species such as laurel sumac, toyon (*Heteromeles arbutifolia*), California buckwheat, and Nuttall's scrub oak (*Quercus dumosa*) (see Photographs 3, 7, and 8). In the Vegetation Classification Manual for Western San Diego County (Sproul et al. 2011) under Appendix C Classification Crosswalks for Vegetation Alliances and Associations of San Diego County the *Rhus integrifolia* Alliance crosswalks to Diegan coastal sage scrub in Vegetation Communities of San Diego County (Oberbauer et al. 2008). The Diegan coastal sage scrub is considered moderate-quality habitat for wildlife as it occurs within a vegetated canyon with mature shrubs and trees that likely provide habitat to a variety of wildlife species, but is ultimately bound by residential development. Diegan coastal sage scrub is considered sensitive by federal and state resource agencies, and is a Tier II (uncommon uplands) community under the City's Biology Guidelines (2012).

3.2.1.5 Disturbed Coastal Sage Scrub

Disturbed coastal sage scrub occurs within the northern portion of the survey area, generally on steep, south-facing slopes with a shrub cover of approximately 40 percent (see Figures 6a through 6c). This vegetation community occurs adjacent to residences and associated ornamental vegetation. It is dominated by lemonade berry and contained non-native grasses (*Bromus* spp.) in the understory (see Photographs 1 and 2). The disturbed coastal sage scrub is considered moderate-quality habitat for wildlife as it occurs within a vegetated canyon with mature shrubs and trees that likely provide habitat to a variety of wildlife species, but is ultimately bound by residential development. Diegan coastal sage scrub is considered sensitive by federal and state resource agencies, and is a Tier II (uncommon uplands) community under the City's Biology Guidelines (2012).

3.2.1.6 Eucalyptus Woodland

Eucalyptus woodland occurs as two patches in the north-central portion of the canyon within the survey area (see Figure 6b). Sugar gum (*Eucalyptus cladocalyx*) and silver dollar gum (*Eucalyptus polyanthemos*) were observed as the dominant eucalyptus trees in this vegetation community (see Photograph 4). As the eucalyptus woodland is dominated by mature trees adjacent to other mature shrubs and trees within the canyon that is ultimately bound by development, it is considered moderate-quality nesting habitat for raptors, tree-cavity nesters, and ground-dwelling species such as reptiles and mammals. Eucalyptus woodland is considered a Tier IV (other uplands) vegetation community under the City's Biology Guidelines (2012).

3.2.1.7 Disturbed Land

Disturbed land is composed of areas that have been previously disturbed and no longer function as a native or naturalized vegetation community. Vegetation, if present, is dominated by opportunistic non-native species. Disturbed land can also include previously graded lands such as fire breaks, off-road-vehicle trails, and construction staging sites (Oberbauer et al. 2008).

Disturbed land occurs as several patches throughout the vegetated canyon of the survey area (see Figures 6a through 6c). It is dominated by non-native ruderal species such as Russian thistle (*Salsola tragus*), Australian saltbush (*Atriplex semibaccata*), ripgut grass (*Bromus diandrus*), and freeway iceplant (see Photograph 3 and 4). The disturbed land provides low-quality habitat due to the prevalence of non-native ruderal species and general absence of shrubs. Disturbed land is considered a Tier IV (other uplands) vegetation community under the City's Biology Guidelines (2012).

3.2.1.8 Ornamental Plantings

Ornamental plantings were dominated by non-native trees associated with the residential development along the canyon within the survey area (see Figures 6a through 6c). It contained species such as Peruvian pepper tree (*Schinus molle*), carob tree (*Ceratonia siliqua*), rusty fig (*Ficus rubiginosa*), golden rain tree (*Koelreuteria paniculata*), Chinese elm (*Ulmus parvifolia*), and understory species such as freeway iceplant and English ivy (*Hedera helix*) (see Photograph 1 and 4). The ornamental plantings is considered low-quality habitat due to the dominance of trees and occurrence within an undeveloped canyon that is ultimately bound by development. Ornamental plantings are considered a Tier IV (other uplands) vegetation community under the City's Biology Guidelines (2012).

3.2.1.9 Urban/Developed

Urban/developed land is the dominant land cover type within the survey area and includes all paved streets (including vegetation that has been planted along the streets) and private residences (including most maintained vegetation occurring on their property) (see Figures 6a through 6e). Urban/developed land is not a sensitive vegetation community and is not assigned a tier under the City's Biology Guidelines (2012).

3.2.2 Zoological Resources

A total of 30 animal species was detected within the wildlife survey area, including 11 invertebrates, 2 reptiles, 15 birds, and 2 mammals (Attachment 3). Overall, the survey area provides moderate- to low-quality habitat within the canyon and low value habitat for wildlife species where the survey area is developed. A complete list of the wildlife species detected within the survey area is provided in Attachment 3.

Wildlife species observed within the wildlife survey area consist largely of species characteristic of scrub communities, as well as those commonly observed within the urban-wildland interface. These species include cabbage white (*Pieris rapae*), gulf fritillary (*Agraulis vanillae incarnata*), common buckeye (*Junonia coenia grisea*), common side-blotched lizard (*Uta stansburiana*), California scrub-jay (*Aphelocoma californica*), spotted towhee (*Pipilo maculatus*), lesser goldfinch (*Spinus psaltria hesperophilus*), northern mockingbird (*Mimus polyglottos polyglottos*), and northern raccoon (*Procyon lotor*).

3.3 Sensitive Biological Resources

Sensitive biological resources include sensitive vegetation communities and Multi-Habitat Planning Area (MHPA) per ESL Regulations; sensitive plant and wildlife species; wildlife movement corridors and nursery sites; and jurisdictional wetlands and waters. Biological resource sensitivity determinations follow the City's Significance Determination Thresholds (City of San Diego 2011).

Sensitive vegetation communities are those that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive species, have particular value to other wildlife, or have a combination of these characteristics. For purposes of this report, sensitive vegetation communities include all wetland communities and upland communities identified as Tier I, II, IIIA, or IIIB by the City of San Diego (2012).

For purposes of this report and in accordance with the City Guidelines for Conducting Biology Surveys (City of San Diego 2012), plant and wildlife species will be considered sensitive if they are: (1) listed by state or federal agencies as threatened or endangered or are proposed for listing; (2) designated by the City as a narrow endemic species (City of San Diego 1997, 2012); (3) covered species under the Multiple Species Conservation Program (MSCP) or Vernal Pool Habitat Conservation Plan; (4) given a California Rare Plant Rank (CRPR) 1B (considered endangered throughout its range), 2 (considered endangered in California but more common elsewhere), 3 (more information about the plant's distribution and rarity needed), or 4 (plants of limited distribution) in the CNPS Inventory of Rare and Endangered Plants of California (2018); (5) considered rare, endangered, or threatened by CDFW (2018b–e); or (6) identified by another recognized conservation or scientific group as being depleted, potentially depleted, declining, rare, critical, endemic, endangered, or threatened.

Active bird nests are covered by the California Fish and Game Code (CFGC) 3503, which states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird” unless authorized (State of California 1991). Raptors (birds of prey) and active raptor nests are protected by the CFGC 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 (State of California 1991).

In accordance with the ESL Regulations, lands within the MHPA and habitat for sensitive species will also be considered sensitive biological resources. The ESL Regulations, as defined in the City Biology Guidelines, apply to lands within the MHPA; wetlands occurring within or outside the MHPA; vegetation communities classified as Tier I, II, IIIA, or IIIB; habitat for sensitive species; coastal beaches; coastal bluffs; and/or Special Flood Hazard Areas.

3.3.1 Sensitive Vegetation Communities

Pursuant to the City's Biology Guidelines, five sensitive vegetation communities occur within the project survey area: non-native riparian, disturbed wetland (vegetated channel), maritime succulent scrub, Diegan coastal sage scrub, and disturbed coastal sage scrub. The locations of these vegetation communities are shown on Figures 6a through 6e. Disturbed wetland (unvegetated channel) and disturbed wetland (artificial hydrology) are not considered sensitive vegetation communities for purposes of this report. The concrete-lined channel will not be impacted as steel plates will be used for vehicle access. The concrete channel will remain the same as pre-impact conditions following construction. The City does not recognize artificial wetlands as a wetland habitat.

3.3.2 Sensitive Plant Species

Three sensitive plant species—Nuttall's scrub oak, California adolphia, and San Diego viguiera (*Bahiopsis* [= *Viguiera*] *laciniata*)—were observed within the survey area during the biological survey. Figures 6a through 6c show the observed locations and number of individuals. Attachment 4 summarizes these species and other potentially occurring sensitive plant species.

3.3.2.1 Nuttall's Scrub Oak (*Quercus dumosa*)

Nuttall's scrub oak is a CRPR 1B.1 species (CNPS 2018). This species is found near the coast in Santa Barbara, Orange, and San Diego counties and in Baja California, Mexico. It grows at elevations below 1,300 feet in chaparral, coastal scrub, and closed-cone coniferous forest habitats (CNPS 2018), and is particularly common in flat, open-canopy coastal chaparral, but can grow in dense stands on north-facing slopes (Reiser 2001). In San Diego County, it is known to grow as far inland as Camp Elliott and Otay Mesa (Reiser 2001), being replaced by the similar scrub oak (*Q. berberidifolia*) in higher, drier locations (Hickman 1993).

Thirty-four Nuttall's scrub oak individuals were observed within Diegan coastal sage scrub, disturbed coastal sage scrub, non-native riparian, and ornamental plantings of the survey area. Six individuals occur within the temporary construction area, three individuals occur within the existing access path, and one individual occurs within the proposed access path (see Figures 6a through 6c).

3.3.2.2 California Adolphia (*Adolphia californica*)

California adolphia is a CRPR 2B.1 species (CNPS 2018). This species generally occurs at elevations below 1000 feet in Diegan coastal sage scrub, near the edge of chaparral, particularly in dry canyons or washes. Its range is limited to San Diego County and northern Baja California, Mexico. In San Diego County, it is found from the Carlsbad area south into the Proctor Valley and the Otay area (Beauchamp 1986).

Approximately 130 California adolphia individuals occur within the maritime succulent scrub and Diegan coastal sage scrub of the survey area. Ten individuals occur within the existing access path (see Figure 6b).

3.3.2.3 San Diego County Viguiera (*Bahiopsis laciniata*)

San Diego County viguiera is a CRPR 4.3 species (CNPS 2018). Its range extends from Sonora and Baja California, Mexico northward into San Diego and Orange County (CNPS 2018), although the population in Orange County may not be native (Reiser 2001). In San Diego County it is rare north of Highway 78, becoming increasingly common to the south, until it is the dominant shrub in coastal sage scrub in non-coastal southern San Diego County (Reiser 2001). San Diego County viguiera occurs on dry, shrubby slopes in Diegan coastal sage scrub and chaparral habitats between 200 and 2,500 feet elevation. Overall, this species is in decline due to development. However, there are many areas containing substantial populations (Reiser 2001).

Twenty San Diego County viguiera individuals were observed within the maritime succulent scrub and disturbed land of the survey area. Three individuals occur within the existing access path (see Figure 6b).

3.3.3 Sensitive Wildlife Species

No sensitive wildlife species were detected within the wildlife survey area. However, Attachment 5 assesses the potential for other sensitive wildlife species to occur. Based on those assessments, two sensitive wildlife species—Belding’s orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) and Cooper’s hawk (*Accipiter cooperii*)—have a moderate to high potential to occur within the project survey area. Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is not expected to occur, as there are no suitable cactus thickets required by this species for nesting. Coastal California gnatcatcher (*Polioptila californica californica*) has a low potential to forage or nest within the project survey area because the coastal sage scrub lacks the low-growing habitat required by this species; it is dominated by lemonade berry, a tall shrub, with only a low number of scattered California sagebrush and California buckwheat shrubs.

3.3.3.1 Belding’s Orange-throated Whiptail (*Aspidoscelis hyperythra beldingi*)

Belding’s orange-throated whiptail is a CDFW watch list species (CDFW 2018b) and an MSCP covered species (City of San Diego 1997). This species ranges from the coast to the Peninsular mountain ranges from Orange and southwestern San Bernardino counties to the tip of Baja California, Mexico (Stebbins 2003). It occurs in a variety of habitats and is most common in sandy areas of low, open sage scrub or chaparral, particularly where there is California buckwheat, sage (*Salvia* spp.), or chamise (*Adenostoma fasciculatum*; Lemm 2006). This species feeds primarily on the western subterranean termite (*Reticulitermes hesperus*; Bostic 1966). It is active during spring and summer but largely dormant during the fall and winter when temperatures drop (Jennings and Hayes 1994). Breeding occurs

from May through July. The decline of this species is attributed to habitat loss and fragmentation (McGurty 1980).

Although this species was not observed during the survey, it has been recorded within two miles of the survey area (CDFW 2018a; County of San Diego 2018). The survey area contains potentially suitable open habitat that occurs within a small, somewhat isolated canyon constrained by development. As this species has a low sensitivity to human disturbances, there is moderate potential for this species to occur within the Diegan coastal sage scrub, disturbed coastal sage scrub, maritime succulent scrub, and disturbed land of the survey area.

3.3.3.2 Cooper's Hawk (*Accipiter cooperii*)

Cooper's hawk is a CDFW watch list species (nesting) and an MSCP covered species (CDFW 2018b; City of San Diego 1997). The Cooper's hawk's year-round range extends throughout most of the United States. Its wintering range extends south to Central America, and its breeding range extends north to southern Canada (Curtis et al. 2006). Breeding birds are widespread over San Diego County's coastal slope and most abundant in lowland and foothill canyons and in urban areas. It is a common breeder in both oak and willow riparian woodlands and urban environments, with eucalyptus trees used nearly as often as oaks (Unitt 2004). Additionally, this species has been known to nest within planted trees, including pine (Unitt 2004). Breeding occurs from February to August, and nests are typically located high in the tree but under the canopy. This hawk forages primarily on medium-sized birds but is also known to eat small mammals such as chipmunks and other rodents (Curtis et al. 2006). Although urbanization and loss of habitat have contributed to the decline of this species, the Cooper's hawk acclimation to city living over the last few decades has generously increased their numbers (Unitt 2004).

Although this species was not observed during the survey, it has been recorded within two miles of the survey area (County of San Diego 2018). This species has a high potential to forage within the survey area due to presence of tall trees for perching and vegetation that would contain prey species. Additionally, this species has a high tolerance to human disturbance and reported occurrences within residential areas. It has moderate potential to nest within the survey areas, as the narrow strips of ornamental plantings and eucalyptus woodland contain taller trees preferred by the species.

3.3.4 Multi-Habitat Planning Area

As shown on Figures 6a-e, the project area does not occur within the MHPA. However, the MHPA occurs within 300 feet of the southwest portion of the survey area (see Figure 6a).

3.3.5 Wildlife Movement Corridor

Although the survey area contains a canyon with a drainage and riparian vegetation, it is heavily constrained by residential development and neighborhood streets on all sides. As a result, it would not be considered a wildlife movement corridor. The presence of native

vegetation cover in combination with the patchwork of surrounding urban canyons, likely serves as a wildlife corridor for urban-acclimated species and as “stepping stones” for avian species’ travel. Connection to San Diego River corridor to the northwest or Chollas Creek to the south is impeded by busy streets, Collwood Boulevard, Montezuma Road, College Avenue, and El Cajon Boulevard. Therefore, the adjoining canyons would not facilitate the movement of large terrestrial wildlife and, therefore, do not serve as a wildlife movement corridor.

3.4 Jurisdictional Waters/Wetlands

Jurisdictional wetlands and waters are regulated by the USACE, CDFW, RWQCB and/or City. USACE regulates the discharge of dredged or fill material into waters of the U.S. (wetland and non-wetland jurisdictional waters) according to Section 404 of the Clean Water Act. CDFW regulates all changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. With several exceptions, CDFW jurisdictional areas overlap USACE jurisdictional areas on a given site. However, riparian habitat, regardless of USACE jurisdiction, is regulated by CDFW. RWQCB is the regional agency responsible for protecting water quality in California. City wetlands include waters with hydrophytic vegetation, state jurisdictional wetlands, and USACE wetlands as per the City’s Biology Guidelines (City of San Diego 2012). This section provides a general overview of the potential jurisdictional waters and wetlands within the survey area. A more detailed description, wetland determination datasheets, and OHWM datasheets are provided in the Jurisdictional Waters/Wetland Delineation Report (RECON 2019).

3.4.1 Locations of Jurisdictional Waters/Wetlands

The results from the Jurisdictional Waters/Wetland Delineation Report for the College Area Sewer and AC Water project (RECON 2019) are summarized in Table 2 and discussed in this section. Figure 7 shows the locations of sample points, cross sections, and the jurisdictional waters and wetlands identified in the survey area for each agency jurisdiction.

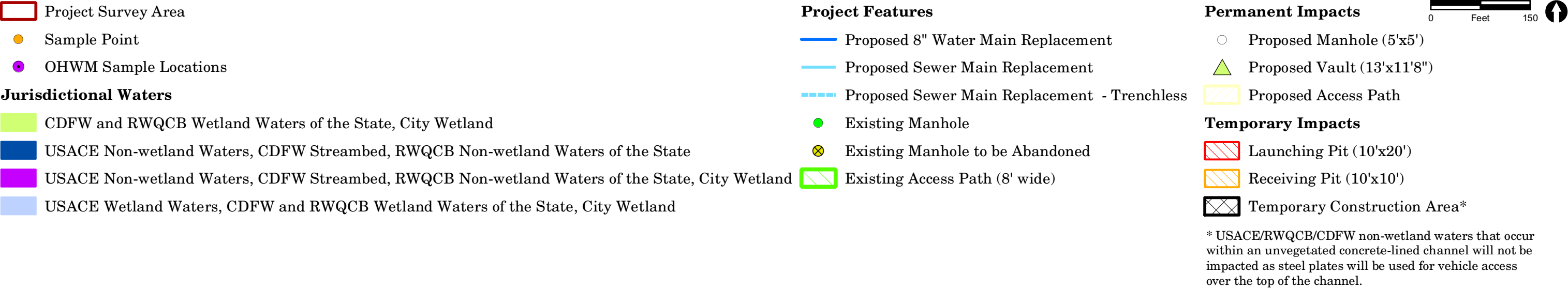


Table 2		
Existing Jurisdictional Areas within the Survey Area		
Jurisdictional Areas	Acreage	Linear feet
USACE Jurisdictional Areas (404)		
Non-wetland Waters of the U.S. ^a	0.151	2,066
Wetland Waters of the U.S. ^b	0.570	n/a
Total USACE Jurisdiction	0.721	2,066
RWQCB Jurisdictional Areas (401)		
Non-wetland Waters of the state ^a	0.151	2,066
Wetland Waters of the state ^b	0.717	n/a
Total RWQCB Jurisdiction	0.868	2,066
CDFW Jurisdictional Areas (1602)		
Streambed ^a	0.151	2,066
Wetland Waters of the state ^b	0.717	n/a
Total CDFW Jurisdiction	0.868	2,066
City of San Diego Jurisdiction Wetland		
Wetland ^{ab}	0.801	n/a
Total City of San Diego Jurisdiction	0.801	n/a
^a USACE/RWQCB/CDFW non-wetland waters and streambed entirely overlap. City wetlands fall within USACE/RWQCB/CDFW non-wetland waters. ^b RWQCB/CDFW/City wetland waters entirely overlap. USACE wetland waters fall within RWQCB/CDFW wetland waters. n/a = Not applicable		

3.4.1.1 USACE Jurisdictional Areas

USACE jurisdictional areas in the survey area consist of non-wetland waters and wetland waters of the U.S. in the form of a seasonal stream channel and associated wetlands. A total of 0.151 acre of non-wetland waters of the U.S. likely considered under the jurisdiction of USACE was delineated within the survey area (see Figure 7). The non-wetland waters are considered ephemeral riverine, covering a length of 2,066 linear feet and an average width of 3 feet. These non-wetland waters lack hydrophytic vegetation, either due to surface water or concrete liner. The jurisdictional status of this stream channel was determined based on the presence of an OHWM and a connection to Alvarado Creek, which is a tributary to the San Diego River, which drains into the Pacific Ocean (a traditional navigable water) approximately nine miles to the west. The lateral extent of the non-wetland waters was determined by the observable OHWM, and the upstream extent was determined by the culvert head wall. The stream channel was hydrologically connected but broken by culverted sections.

A total of 0.570 acre of wetland waters of the U.S. likely considered under the jurisdiction of USACE were delineated within the survey area (see Figure 7). The vegetation associated with much of the floodplain of the channel satisfies the three-parameter criteria for USACE wetlands.

A disturbed wetland area (0.048 acre) due to artificial hydrology is located just upslope of the concrete-lined channel in a small topographic depression shown on Figure 6 as disturbed wetland (artificial hydrology). While this area satisfies the three wetland

parameters: hydrophytic vegetation, hydric soils, and wetland hydrology (dry-season surface water, saturation, and hydrogen sulfide odor), it appears to be supported by runoff discharging from a private property via a three-inch corrugated plastic pipe (Photographs 10 and 11). A portion of the area is within an access road and is bounded by a steep slope and the concrete liner of the flood control channel. Based on the presence of the pipe, water source is not expected to be a natural source such as rainwater, seep, or spring. As it can take many years to develop strong hydrology indicators in this area, the pipe must be providing a consistent source of water. Additionally, the concrete channel liner acts as a dam to hold the water on the access road, preventing it from infiltrating or draining, and maintains saturated conditions in this area. If the artificial water source was interrupted it is expected that this wetland would cease to exist. Therefore, this area would not likely be considered under the jurisdiction of the USACE.

3.4.1.2 CDFW Jurisdictional Area

Waters of the state likely under the jurisdiction of the CDFW (under CFGC 1600-1607) include both streambed and wetland areas (see Figure 7). CDFW streambed was delineated within the stream channel and totals 0.151 acre. CDFW wetland habitat totals 0.717 acre on-site and includes the non-native riparian habitat and disturbed wetlands associated with the stream channel. This includes a 0.570-acre area considered USACE wetlands, as well as areas of hydrophytic vegetation that do not meet all three wetland parameters. An additional wetland area (0.048 acre) with artificial hydrology would not likely be considered waters of the state.

3.4.1.3 RWQCB Jurisdictional Areas

RWQCB likely jurisdictional areas (under Clean Water Act Section 401) include the 0.151 acre of streambed, 0.570 acre of USACE wetlands, and an additional 0.147 acre of wetlands of the state which only meet the hydrophytic vegetation parameter but not the soil or hydrology parameters. An additional wetland area (0.048 acre) with artificial hydrology would not likely be considered waters of the state. These wetlands overlap with the CDFW jurisdictional wetlands.

3.4.1.4 City Wetland Jurisdictional Areas

City wetland likely jurisdictional areas total 0.801 acre and include all CDFW and RWQCB wetland waters plus vegetated non-wetland waters (i.e., vegetated portions of the channel and non-wetland waters that overlap as non-native riparian).



PHOTOGRAPH 10

Water Source of Wetland Near Sample Point 1 Coming from Residences, Taken North of End of Maisel Way, Facing Northwest



PHOTOGRAPH 11

End of Corrugated Pipe Near Sample Point 1, Taken North of End of Maisel Way, Facing West

4.0 Project Impact Analysis

Project impacts were analyzed according to the City's Biology Guidelines (City of San Diego 2012) and Significance Determination Thresholds (City of San Diego 2011).

According to the Significance Determination Thresholds (City of San Diego 2011), total upland impacts (Tiers I- IIIB) of less than 0.1 acre are not considered significant and do not require mitigation. Total wetland impacts of less than 0.01 acre are not considered significant and do not require mitigation. However, any impacts to vernal pools or wetlands within the Coastal Zone require mitigation.

Direct, indirect, and cumulative impacts may result from a project. Impacts are considered direct when they result in a physical change (e.g., vegetation removal, grubbing, grading, excavation) of the environment. Indirect impacts are secondary changes in the environment that are caused by a project but occur later in time or at a different place. For example, generation of dust, noise, lighting, and erosion could result in indirect impacts to plants, wildlife, and/or waterways. The MSCP was designed to address cumulative impacts and compensate for the regional loss of biological resources throughout the region.

Project implementation would result in both permanent and temporary direct impacts as shown on Figures 6a through 6e. City requires mitigation for all impacts, whether they are temporary or permanent.

Impacts that are considered temporary are the areas where the ground would be regraded to pre-existing conditions and revegetated following construction and include:

- Temporary construction areas,
- Launching pits, and
- Receiving pits.

Permanent impacts would result from the following features that will remain after project activities:

- The proposed access path,
- Proposed manholes, and
- The proposed vaults.

Impacts associated with the existing 8-foot-wide access path east of 54th Street were incurred and mitigated for by the 54th Street Emergency Sewer Repair project (Dudek 2002). Therefore, impacts associated with the existing access path are not discussed further. This existing 8-foot-wide access path east of 54th Street would be widened to 10 feet and extended as a 10-foot-wide access path extending east until it connects with the final construction area approximately 150 feet north of the western terminus of Campanile Way. The widened and extended portions of the access path are considered permanent impacts associated with the proposed access path.

The potential direct (temporary and permanent), indirect, and cumulative impacts to sensitive biological resources that may result from the proposed project are discussed below.

4.1 Impacts to Sensitive Vegetation Communities

Project implementation would result in both permanent and temporary impacts to sensitive vegetation communities. The temporary construction area and launching/receiving pits would cause temporary impacts to sensitive vegetation communities. The proposed access path and manholes would require permanent impacts to sensitive vegetation. The proposed access path east of Collwood Boulevard occurs within a paved road to an apartment complex and would not result in impacts to vegetation. Steel plates would be used for vehicle access over the top of the concrete-lined channel, so the disturbed wetland (unvegetated channel) would not be impacted.

In total, the proposed project would cause direct impacts to 0.749 acre, including 0.273 acre of permanent impacts and 0.476 acre of temporary impacts. This includes permanent impacts to 0.006 acre of sensitive wetland communities and 0.108 acre of Tier I and II sensitive vegetation communities, and temporary impacts to 0.102 acre of sensitive wetland communities and 0.037 acre of Tier I and II sensitive vegetation communities. Impacts to sensitive vegetation communities would be considered significant and would require mitigation. Impacts to other vegetation communities/land cover types including 0.008 acre of permanent and 0.005 acre of temporary impacts to non-sensitive wetland communities and 0.152 acre of permanent and 0.331 acre of temporary impacts to Tier IV communities and developed land would not be significant and would not require mitigation (Table 3; see Figures 6a through 6e).

The project is not expected to result in indirect impacts to sensitive vegetation communities due to erosion, as the project would include implementation of best management practices (BMPs) and revegetation of temporary impact areas following construction. Indirect impacts to adjacent sensitive vegetation communities may occur as a result of project-related dust (i.e., interfere with photosynthetic processes). However, implementation of BMPs to reduce dust would be required and would minimize potential indirect impacts.

The project would conform to the MSCP. Therefore, with implementation of habitat-based mitigation required by the City Biology Guidelines (2012), no cumulative impacts to sensitive vegetation communities are anticipated to occur.

Table 3 Project Impacts to Vegetation Communities/Land Cover Types				
Vegetation Community	Survey Area Total	Permanent Impacts	Temporary Impacts	Total Direct Impacts
Wetland Communities				
Non-native riparian	0.784	0.006	0.098	0.104
Disturbed wetland (vegetated channel)	0.016	—	0.004	0.004
Wetland Subtotal	0.800	0.006	0.102	0.108
Non-sensitive Wetland Communities				
Disturbed wetland (unvegetated channel)	0.068	—	—*	—
Disturbed wetland (artificial hydrology)	0.048	0.008	0.005	0.013
Non-sensitive Wetland Subtotal	0.116	0.008	0.005	0.013
Tier I and II Communities				
Maritime succulent scrub	0.173	—	—	—
Diegan coastal sage scrub	2.326	0.104	0.008	0.112
Disturbed coastal sage scrub	1.608	0.004	0.029	0.033
Tier I and II Subtotal	4.107	0.108	0.037	0.145
Tier IV Communities or Developed Land				
Eucalyptus woodland	0.285	0.002	—	0.002
Disturbed land	1.132	0.032	0.063	0.095
Ornamental plantings	2.297	0.004	0.177	0.181
Urban/developed land	16.324	0.114	0.091	0.205
Tier IV Subtotal	20.038	0.152	0.331	0.483
TOTAL	25.061	0.273	0.476	0.749
NOTE: All areas are presented in acres rounded to the nearest 0.001.				
*Steel plates would be installed over the concrete channel mapped as disturbed wetland (unvegetated channel) so impacts to this area would be avoided.				

4.2 Impacts to Sensitive Plants

The project would directly impact three sensitive plant species, Nuttall's scrub oak (CNPS CRPR 1B.1 species), California adolphia (CNPS CRPR 2B.1 species), and San Diego viguiera (CNPS CRPR 4.3 species).

4.2.1 Nuttall's Scrub Oak

Of the 34 Nuttall's scrub oak within the survey area, 10 would be impacted: six within the temporary construction area, three within the existing access path, and one within the proposed access path. Impacts to approximately 30 percent (10 of 34) of the population observed within the survey area are not expected to threaten the local and regional long-term survival of this species. Multiple presumed extant Nuttall's scrub oak populations have been reported to CNDDB within coastal San Diego County (CDFW 2018a). As impacts to six individuals fall within the temporary impact footprint, it is recommended that this species be included in the revegetation plant palette. Therefore, the proposed impacts would be considered less than significant and require no mitigation.

Indirect impacts to Nuttall's scrub oak occurring adjacent to the proposed project impact area may occur as a result of project-related dust (i.e., interfere with photosynthetic processes). However, implementation of BMPs to reduce dust would be required and would minimize potential indirect impacts. Additionally, the remaining mapped individuals within the survey area occur either upslope of an existing access path or scattered among other mature shrubs within Diegan coastal sage scrub. Therefore, potential indirect impacts to this species by project-related dust are anticipated to be minimal and require no mitigation.

As Nuttall's scrub oak would be included within the revegetation plant palette, and due to the type and small scale of the project, no cumulative impacts to this species are anticipated.

4.2.2 California Adolphia

The proposed project would impact 10 of the 130 California adolphia individuals within the survey area. Impacts to approximately 8 percent (10 of 130) of the population observed within the survey area are not expected to threaten the local and regional long-term survival of this species. Therefore, the proposed impacts would be considered less than significant and require no mitigation.

Indirect impacts to California adolphia occurring adjacent to the proposed project impact area may occur as a result of project-related dust. However, implementation of BMPs to reduce dust would be required and would minimize potential indirect impacts. Additionally, the remaining mapped individuals within the survey area occur upslope of an existing access path that would not require substantial grading. Therefore, potential indirect impacts to this species by project-related dust are anticipated to be minimal and require no mitigation.

Although impacts to 8 percent of the observed on-site population of California adolphia would occur, the majority of the population would remain intact. Additionally, due to the type and small scale of the project, no cumulative impacts to this species are anticipated.

4.2.3 San Diego Viguiera

Three of the 20 San Diego viguiera individuals recorded within the survey area would be impacted by grading activities within the existing access path. Impacts to approximately 15 percent (3 of 20) of the population observed within the survey area are not expected to threaten the local and regional long-term survival of this species. Therefore, the proposed impacts would be considered less than significant and require no mitigation.

Indirect impacts to San Diego viguiera occurring adjacent to the proposed project impact area may occur as a result of project-related dust. However, implementation of BMPs to reduce dust would be required and would minimize potential indirect impacts. Additionally, the remaining mapped individuals within the survey area occur upslope of an existing access path that would not require substantial grading. Therefore, potential indirect

impacts to this species by project-related dust are anticipated to be minimal and require no mitigation.

Although impacts to 15 percent of the observed on-site population of San Diego viguiera would occur, the majority of the population would remain intact. Additionally, due to the type and small scale of the project, no cumulative impacts to this species are anticipated.

4.3 Impacts to Sensitive Wildlife

The project may result in direct impacts to sensitive bird species, including Cooper's hawk and avian species covered by the CFGC 3503 and 3503.5. In addition, the proposed project may result in direct impacts to one sensitive reptile species, Belding's orange-throated whiptail, that has a moderate potential to occur within the survey area.

4.3.1 Cooper's Hawk

Cooper's hawk (a CDFW watch list species [nesting] and an MSCP covered species) has a high potential to forage within survey area and a moderate potential to nest within the survey area. Direct impacts to Cooper's hawk are not expected as impacts to eucalyptus woodland would consist of trimming of a narrow section within the existing access path. The remaining vegetation proposed to be removed during project activities do not contain suitable tall trees preferred by nesting Copper's hawk. Indirect noise impacts could occur as a result of project activities if work is conducted during the species' nesting season, which typically occurs between February 1 and August 31. Any direct or indirect impacts that adversely affect nesting success would be considered significant. Avoidance and minimization measures would be required to reduce potential direct and indirect impacts to Cooper's hawk to a level of less than significant.

The project's conformance with the MSCP, and its species-specific conditions for coverage, is expected to prevent any cumulative impacts to MSCP-covered wildlife species, including Cooper's hawk. Additionally, no substantial cumulative impacts are anticipated to occur due to the small scale of the proposed project.

4.3.2 Nesting Avian Species

Nesting birds and raptors covered by CFGC 3503 and 3503.5 have potential to be directly impacted if removal of vegetation occurs during the nesting season of February 1 to September 15. Direct impacts to nesting birds would be considered significant and require avoidance measures.

Although general avian species are not covered by the MSCP, no substantial cumulative impacts are anticipated to occur due to the small scale of the proposed project and the project's conformance with CFGC 3503 and 3503.5.

4.3.3 Belding's Orange-throated Whiptail

Project activities could result in direct impacts to Belding's orange-throated whiptail (CDFW watch list and MSCP covered species) through direct mortality during construction activities and loss of habitat. Temporary and permanent loss of habitat for this species are expected to be minor. Suitable habitat within the impact area comprises a small fraction of the available habitat for any local populations, and potential impacts are not expected to reduce the population of this species to below a self-sustaining level. Therefore, species-specific avoidance, minimization, and mitigation measures would not be required for impacts to Belding's orange-throated whiptail.

The project's conformance with the MSCP, and its species-specific conditions for coverage, is expected to prevent any cumulative impacts to MSCP-covered wildlife species, including Belding's orange-throated whiptail. Additionally, no substantial cumulative impacts are anticipated to occur due to the small scale of the proposed project.

4.4 Impacts to Multi-Habitat Planning Area

As shown on Figures 6a through 6e, the western proposed impact area occurs approximately 125 feet north and downslope from the edge of the MHPA. Therefore, no direct impacts within the MHPA are anticipated. However, given this close proximity to the MHPA, indirect impacts could occur. Section 1.4.3 of the City's MSCP Subarea Plan presents Land Use Adjacency Guidelines that largely address indirect impacts within the MHPA (City of San Diego 1997). These Land Use Adjacency Guidelines address drainage, toxics, lighting, noise, barriers, invasive, brush management, and grading/land development. Each guideline is summarized below, along with a discussion of the project's avoidance or conformance with each guideline.

4.4.1 Drainage

All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA.

The proposed project would not cause drainage into the MHPA, as the impact area lies downslope of and a minimum of 125 feet away from the MHPA. Additionally, BMPs are anticipated to be implemented during construction to prevent off-site runoff or sedimentation.

4.4.2 Toxics

Land uses, such as recreation, urban landscaping, and agriculture, that use chemicals or generate by-products, such as manure, that are potentially toxic or impactive to wildlife,

sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by application or drainage of such materials into the MHPA.

The proposed project is not expected to cause release of toxics into the MHPA, as the project site lies downslope of and a minimum of 125 feet away from the MHPA. Additionally, the project is anticipated to implement BMPs (such as use of drip pans and refueling vehicles away from drainages) during construction to prevent construction-related toxins from leaving the immediate project impact area.

4.4.3 Lighting

Lighting of all developed areas within and adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.

All project activities will occur during the day and will require no nighttime lighting.

4.4.4 Noise

Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and other uses that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

The proposed project is not expected to cause noise impacts within the MHPA. The project impact area is located a minimum of 125 feet from the edge of the MHPA, and the stand of dense, 15-foot-tall lemonade berry shrubs would dissipate construction noise between the construction area and the MHPA. Additionally, this section of canyon is surrounded by residential development and paved roads that would be subjected to increased noise on a regular basis. Coastal California gnatcatcher is not anticipated to occur within the MHPA adjacent to the project due to the lack of suitable nesting habitat.

4.4.5 Barriers

New development within or adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation. Access to the MHPA, if any, should be directed to minimize impacts and reduce impacts associated with domestic pet predation.

No new development is proposed as part of the project. No access currently exists between the MHPA and the project impact area.

4.4.6 Invasive Plants

No invasive plant species shall be introduced into areas adjacent to the MHPA.

The project is not anticipated to introduce invasive plant species. As portions of the temporary impact area occur within vegetation communities mapped as ornamental vegetation, disturbed habitat, and non-native riparian, invasive plants already exist within the project impact area. Following project construction, revegetation is anticipated to include a native seed mix and/or plant palette and a monitoring program.

4.4.7 Brush Management

New development located adjacent to the MHPA must be set back to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zone 2 may be located in the MHPA except where narrow wildlife corridors require it to be located outside the MHPA. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible.

No new development is proposed as part of this project.

4.4.8 Grading/Land Development

Manufactured slopes associated with site development shall be included with the development footprint for projects within or adjacent to the MHPA.

No new developed or paved areas are proposed as part of the project.

4.5 Impacts to Wildlife Movement Corridors

The site does not function as a wildlife movement corridor. Therefore, the project would not hinder wildlife movement through the area.

4.6 Impacts to Federal and State Jurisdictional Waters and Wetlands

As sewer main replacement within the canyon occurs along jurisdictional waters, impacts could not be avoided. However, project design would minimize impacts to wetland waters by including steel plates over concrete-lined portions of the drainage, trenchless design methods, and siting the proposed access path outside of wetland waters where practical due to surrounding slopes.

Impacts to jurisdictional waters are shown on Figure 7 and presented in Table 4. The project would result in permanent impacts to wetland waters of the U.S. and state. The project would also result in temporary impacts to non-wetland waters and wetland waters of the U.S. and state. USACE/RWQCB/CDFW non-wetland waters and streambed entirely

overlap. RWQCB/CDFW wetland waters entirely overlap. USACE wetland waters fall within RWQCB/CDFW wetland waters. Permanent impacts would occur as a result of grading and widening the access path. However, improvements are minimal; where the access path crosses the jurisdictional waters the crossing would still convey flows following project activities. Therefore, the impact would not result in the loss of aquatic resources to the area. Temporary impacts to jurisdictional waters include temporary construction areas that may be graded. Temporary jurisdictional water impact locations are anticipated to return to pre-existing contours following project activities. Impacts to jurisdictional waters would be considered significant and would require mitigation. The unvegetated channel (i.e., the concrete-lined channel) would not be impacted as steel plates would be utilized to prevent damage to or alteration of the channel.

Table 4			
Impacts to Jurisdictional Waters			
Jurisdictional Areas	Permanent Impact	Temporary Impact [linear feet]	Total Direct Impacts [linear feet]
USACE Jurisdictional Areas (404)			
Non-wetland Waters of the U.S. ^a	—	0.007 [130 lf]	0.007 [130 lf]
Wetland Waters of the U.S. ^b	0.004	0.094	0.098
Total USACE Jurisdiction	0.004	0.101 [130 lf]	0.105 [130 lf]
RWQCB Jurisdictional Areas (401)			
Non-wetland Waters of the state ^a	—	0.007 [130 lf]	0.007 [130 lf]
Wetland Waters of the state ^b	0.006	0.095	0.101
Total RWQCB Jurisdiction	0.006	0.102 [130 lf]	0.108 [130 lf]
CDFW Jurisdictional Areas (1602)			
Streambed ^a	—	0.007 [130 lf]	0.007 [130 lf]
Wetland Waters of the state ^b	0.006	0.095	0.101
Total CDFW Jurisdiction	0.006	0.102 [130 lf]	0.108 [130 lf]
NOTE: All areas are presented in acres rounded to the nearest 0.001; where relevant, linear feet [lf] are presented in brackets.			
^a USACE/RWQCB/CDFW non-wetland waters and streambed entirely overlap.			
^b RWQCB/CDFW wetland waters entirely overlap. USACE wetland waters fall within RWQCB/CDFW wetland waters.			

As direct impacts would occur to jurisdictional waters, indirect impacts to adjacent jurisdictional waters may occur during construction as a result of altered hydrology, fugitive dust, and chemical and particulate pollution. However, implementation of BMPs would be required and would minimize potential indirect impacts to a level of less than significant.

4.7 Impacts to City Jurisdictional Wetlands

The project would result in permanent impacts of 0.006 acre and temporary impacts of 0.102 acre to City wetlands (see Figure 7). City wetlands entirely overlap with RWQCB and CDFW wetland waters and include USACE/RWQCB/CDFW vegetated non-wetland waters (i.e., vegetated portions of the channel and non-wetland waters that overlap as non-native riparian). Wetlands with artificially induced hydrology are not recognized by the City.

Impacts to wetlands within the City of San Diego would require a deviation from the ESL wetland regulations (City of San Diego 2012).

Per Section 126.0505 and 143.0510(d) of the San Diego Municipal Code a deviation to the ESL wetland regulations may be granted provided the project (A) can demonstrate that no feasible alternative exists that would avoid impacts to wetlands, and (B) meets the definition of an Essential Public Projects. The project's compliance with these requirements is discussed below:

(A) The project was designed to avoid and minimize impacts to wetlands to the extent feasible. It comprises maintenance of existing sewer and water pipelines that run down the bottom of a canyon, complete avoidance is impossible and redirection of the pipelines out of the canyon (and out of wetlands) is not feasible. However, the wetlands that would be impacted by the project are disturbed wetlands and non-native riparian, both of which are dominated by exotic species.

(B) As the project proposes maintenance of an existing linear infrastructure, namely water and sewer pipelines, it meets criterion (ii) for Essential Public Projects.

5.0 Mitigation and Monitoring Measures

The proposed project has the potential to result in significant direct and indirect impacts to sensitive biological resources. Avoidance, minimization, and mitigation measures shall be implemented to maintain potential impacts to a level of less than significant.

5.1 Mitigation for Sensitive Vegetation Communities

The project would result in 0.108 acre of permanent and temporary impacts to sensitive wetland communities and 0.145 acre of permanent and temporary impacts to Tier I and II sensitive vegetation communities. Permanent and temporary impacts would be mitigated with preservation at existing PUD mitigation sites inside the MHPA.

Impacts to wetland vegetation communities would be mitigated at a total 2:1 ratio with a combination of wetland creation and wetland enhancement credits, each at a 1:1 ratio. Wetland creation credits would be acquired at the PUD-owned San Diego River Wetland Creation site in the City's Mission Valley community. This mitigation site supports 3.43 acres of created high-quality riparian forest, of which 1.22 acres is available to be used. Wetland enhancement credits would be acquired at the Rancho Mission Canyon Wetland Enhancement site in the City's Allied Gardens community. This enhancement site contains 8.74 acres of southern willow scrub enhancement credits, of which 6.61 acres are remaining. These creation and enhancement sites support higher quality wetland communities than those that would be impacted.

Impacts to Tier I and II upland vegetation communities would be mitigated with credits at the Otay Mesa Mitigation Bank. This mitigation site is located in the Goat Mesa area of Otay Mesa and is surrounded by other City Park and Recreation Open Space lands and federal lands. It supports 45.43 acres of maritime succulent scrub, of which 11.51 acres is available to be used as mitigation. Maritime succulent scrub is a Tier I community that would be an up-tier from the Diegan coastal sage scrub and disturbed coastal sage scrub that would be impacted.

The mitigation ratios shown in Table 5 assume the mitigation site would occur within the MHPA. In addition, temporarily impacted areas would be revegetated on-site. The proposed mitigation would reduce impacts to sensitive habitat to a level of less than significant.

Table 5					
Vegetation Communities/Land Cover Types, Impacts, and Mitigation within the Project					
Vegetation Community	Impact		Total Direct Impacts	Mitigation Ratio	Required Mitigation
	Permanent	Temporary			
Wetland Communities					
Non-native riparian	0.006	0.098	0.104	2:1	0.208
Disturbed wetland (vegetated channel)	—	0.004	0.004	2:1	0.008
Wetland Subtotal	0.006	0.102	0.108	2:1	0.216
Non-sensitive Wetland Communities					
Disturbed wetland (unvegetated channel)	—	—	—	N/A	—
Disturbed wetland (artificial hydrology)	0.008	0.005	0.013	N/A	—
Non-sensitive Wetland Subtotal	0.008	0.005	0.013	N/A	—
Tier I and II Communities					
Maritime succulent scrub	—	—	—	1:1	—
Diegan coastal sage scrub	0.104	0.008	0.112	1:1	0.112
Disturbed coastal sage scrub	0.004	0.029	0.033	1:1	0.033
Tier I and II Subtotal	0.108	0.037	0.145	1:1	0.145
Tier IV Communities or Developed Land					
Eucalyptus woodland	0.002	—	0.002	N/A	—
Disturbed land	0.032	0.063	0.095	N/A	—
Ornamental plantings	0.004	0.177	0.181	N/A	—
Urban/developed land	0.114	0.091	0.205	N/A	—
Tier IV Subtotal	0.152	0.331	0.483	N/A	—
TOTAL	0.273	0.476	0.749	N/A	0.361
NOTE: All areas are presented in acres rounded to the nearest 0.001.					

5.2 Mitigation for Sensitive Species

As detailed in Section 4.0, the project would not cause significant impacts to sensitive plant species or Belding's orange-throated whiptail; potential impacts to sensitive wildlife species, including Cooper's hawk and nesting avian species, would be mitigated through application

of City standard mitigation measures of I. A through G, II. A B, and III. A and B in Section 5.7 below. Application of these mitigation measures would reduce potential impacts to sensitive species to a level of less than significant.

5.3 Mitigation for Multi-Habitat Planning Area

No indirect impacts to MHPA are anticipated as a result of the project. However, adherence to Measure III.B stated below in Section 5.7 is anticipated to prevent potential indirect impacts to sensitive habitat within the MHPA. No additional mitigation is required.

5.4 Mitigation for Wildlife Movement Corridor

The proposed project is not anticipated to cause impacts to wildlife movement corridors, so no mitigation would be required.

5.5 Mitigation for Federal and State Jurisdictional Waters and Wetlands

Impacts to jurisdictional waters would require permit authorizations from the USACE through the Section 404 Permit Program, from the CDFW through a 1602 Streambed Alteration Agreement, and from the RWQCB through a 401 State Water Quality Certification. Most utility projects are permitted through a USACE Nationwide Permit track. The state agencies also have a specialized permit track for utility projects. Compensatory mitigation for impacts to jurisdictional waters would be addressed in a mitigation plan to be submitted for approval with the permit application packages.

Authorized impacts to jurisdictional waters would require in-kind mitigation through habitat creation, enhancement, or preservation to achieve a no-net-loss of jurisdictional waters. Mitigation for temporary and permanent impacts to non-wetland waters/streambed and wetland waters will occur at an appropriate PUD mitigation site. Anticipated mitigation is presented below in Table 6. The mitigation ratios applied for permanent and temporary impacts assume the mitigation site would occur within the Alvarado Creek/San Diego River watershed (see Table 6). If the mitigation site occurs in an adjacent watershed, a greater mitigation ratio may be required. Wetlands with artificially induced hydrology are anticipated to cease to exist if the artificial water source is interrupted; therefore, this feature is not considered jurisdictional and will not receive mitigation. Indirect impacts to jurisdictional waters from altered hydrology, fugitive dust, and chemical and particulate pollution would be minimized through anticipated implementation of BMPs (e.g., sediment basin, silt fence, fiber rolls, drip pans beneath staged equipment).

Table 6
Jurisdictional Waters, Impacts, and Anticipated Mitigation

Jurisdictional Areas	Impact		Total Direct Impacts [linear feet]	Mitigation Ratio ^{ab}	Mitigation [linear feet]
	Permanent	Temporary [linear feet]			
USACE Jurisdictional Areas (404)					
Non-wetland Waters of the U.S. ^c	—	0.007 [130 lf]	0.007 [130 lf]	2:1	0.014 [260 lf]
Wetland Waters of the U.S. ^d	0.004	0.094	0.098	2:1	0.196
Total USACE Jurisdiction	0.004	0.101 [130 lf]	0.105 [130 lf]	2:1	0.210 [260 lf]
RWQCB Jurisdictional Areas (401)					
Non-wetland Waters of the state ^c	—	0.007 [130 lf]	0.007 [130 lf]	2:1	0.014 [260 lf]
Wetland Waters of the state ^d	0.006	0.095	0.101	2:1	0.202
Total RWQCB Jurisdiction	0.006	0.102 [130 lf]	0.108 [130 lf]	2:1	0.216 [260 lf]
CDFW Jurisdictional Areas (1602)					
Streambed ^c	—	0.007 [130 lf]	0.007 [130 lf]	2:1	0.014 [260 lf]
Wetland Waters of the state ^d	0.006	0.095	0.101	2:1	0.202
Total CDFW Jurisdiction	0.006	0.102 [130 lf]	0.108 [130 lf]	2:1	0.216 [260 lf]
City of San Diego Wetlands					
Wetlands ^{cd}	0.006	0.102	0.108	2:1	0.216
Total City of San Diego Jurisdiction	0.006	0.102	0.108	2:1	0.216
NOTE: All areas are presented in acres rounded to the nearest 0.001; where relevant, linear feet [lf] are presented in brackets.					
^a Final mitigation ratios may be greater and will be determined by USACE, RWQCB, and CDFW. In-kind mitigation is required.					
^b Ratio for impacts is based on the location of mitigation site. The proposed ratio assumes the mitigation site occurs within the same watershed. If the mitigation site occurs in an adjacent watershed, a greater mitigation ratio may be required.					
^c USACE/RWQCB/CDFW non-wetland waters and streambed entirely overlap. City wetlands fall within USACE/RWQCB/CDFW non-wetland waters.					
^d RWQCB/CDFW/City wetland waters entirely overlap. USACE wetland waters fall within RWQCB/CDFW wetland waters.					

5.6 Mitigation for City Jurisdictional Wetlands

The project would result in permanent impacts of 0.006 acre and temporary impacts of 0.102 acre to City wetlands (see Figure 7). City wetlands entirely overlap with RWQCB and CDFW wetland waters and include USACE/RWQCB/CDFW vegetated non-wetland waters. Wetlands with artificially induced hydrology are not recognized by the City.

Impacts to City wetlands would require a deviation from the ESL wetland regulations. The project would qualify for a wetland deviation under the Essential Public Projects Option, and appropriate mitigation would be applied. Anticipated mitigation at a ratio of 2:1 would bring the total mitigation for impacts to City wetlands to 0.216 acre. Mitigation for temporary and permanent impacts to wetland waters will occur at an appropriate PUD mitigation site.

5.7 City Standard Mitigation Measures

The following City standard mitigation for biological resource protection during construction shall be incorporated:

I. Prior to Construction

- A. **Biologist Verification** – The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City's Biological Guidelines (2012), has been retained to implement the proposed project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the proposed project.
- B. **Preconstruction Meeting** – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** – The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, MSCP, ESL Ordinance, project permit conditions, California Environmental Quality Act (CEQA; City of San Diego 2011), endangered species acts (ESAs), and/or other local, state or federal requirements.
- D. **Biological Construction Monitoring Exhibit** – The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, the BCME shall include the following: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or

other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City Administrator Deputy Director (ADD)/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

- E. **Avian Protection Requirements** –To avoid any direct impacts to any species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.
- F. **Resource Delineation** – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. **Education** – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

II. During Construction

- A. **Monitoring** – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.
- B. **Subsequent Resource Identification** – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on-site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state, or federal regulations have been determined and applied by the Qualified Biologist.

III. Post-construction

- A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

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ATTACHMENTS

ATTACHMENT 1

Biologists' Qualifications

Jason (JR) Sundberg

Biologist/Botanist



Experience Highlights

- ✓ Conducts botanical and wildlife surveys
- ✓ Extensive rare plant survey experience
- ✓ Plant identification using taxonomic keys and field characters
- ✓ Wetland delineation and permitting

Experience

10 years

Education/Registrations

B.S. Botany, Northern Michigan University

Certifications/Permits

International Society of Arboriculture-Certified Arborist

CDFW Scientific Collecting Permit for amphibians, birds, invertebrates (California vernal pool branchiopods [fairy shrimp] and terrestrial invertebrates), small mammals, and reptiles

CDFW California Endangered Species Act Plant Voucher Collecting Permit

Mr. Sundberg is responsible for rare plant identification and surveys; habitat assessments for coastal California gnatcatcher and coastal cactus wren; vegetation mapping; environmental compliance monitoring; and focused surveys for endangered, threatened, and sensitive species throughout southern California. He prepares biological technical reports to document findings and uses GPS to map vegetation and sensitive species habitats.

Mr. Sundberg also has completed wetland delineations, and assessments, within riverine, lacustrine, and estuarine wetland systems. His experience includes wetland delineations within difficult and atypical wetlands including vernal pool complexes and urbanized streams as well as montane meadows, perennial and intermittent river systems, and ephemeral drainages.

Lakeside Fire Station No. 1 Wetland Permitting, San Diego County, CA

Mr. Sundberg prepared the permit applications (1602, 401, 404) and jurisdictional waters/wetland delineation report for the Lakeside Fire Station No. 1 project.

Beyer Park Development Project, San Diego, CA

Mr. Sundberg conducted constraints level biological assessment within maritime succulent scrub and coastal sage scrub vegetation. He also assessed potential jurisdictional waters on-site.

El Cajon Mountain Preserve, San Diego County, CA

Mr. Sundberg conducted rare plant, weed, and Quino checkerspot butterfly habitat surveys within preserved land on El Cajon Mountain. Difficult access issues were overcome.

TL 6914 Wetland Assessment and Monitoring, Lakeside, CA

Mr. Sundberg assessed potential jurisdictional waters along a multi-mile utility corridor from Lakeside to Dehesa, including urban, rural, and open space areas. He assisted in the preparation of wetland assessment technical report and the associated figures. Additional responsibilities included attending construction meetings, monitoring work near sensitive aquatic resources, and communicating the requirements of the related permits.

CDFW Flat-Tailed Horned Lizard Training and Certification

OSHA 10-Hour Training Course in Construction Safety and Health

USFWS Permit TE-797665 for vernal pool and upland plants; to conduct surveys for the Quino checkerspot butterfly

Training

Wetland Delineation Training, Wetland Training Institute

California Rapid Assessment Method Certified

CNPS Rapid Assessment Training

SDNHM Native Plant Identification Workshop

Jepson Herbarium Workshops

Affiliations

California Native Plant Society

Southern California Botanists

TL6939 Wetland Assessment and Rare Plant Survey, San Diego, CA

Mr. Sundberg assessed potential jurisdictional waters and surveyed for rare plants and their habitat along a multi-mile utility corridor through the Camino del Sur and 4S Ranch area of San Diego. He assisted in the preparation of wetland assessment technical report, rare plant survey report, and the associated figures.

TL 637 Wetland Assessment and Monitoring, Ramona, CA

Mr. Sundberg assessed potential jurisdictional waters along a multi-mile utility corridor spanning from Ramona to Santa Ysabel through primarily rural ranch lands. He assisted in the preparation of wetland assessment technical report and the associated figures. His responsibilities extended into managing a water resource monitoring staff to provide on-site guidance to construction crews.

Coast Highway (Hill Street) Bridge Replacement Project, Oceanside, CA

Mr. Sundberg conducted a wetland delineation for bridge improvements in tidally influenced riverine wetland.

Wetland Impacts of Emergency Repair, Borrego Springs, CA

Mr. Sundberg assessed impacts to jurisdictional waters along a utility corridor after an emergency repair. He prepared a letter report and associated figures detailing the impacts to jurisdictional waters for submittal to the regulatory agencies.

SDG&E Wetlands Delineation, Carlsbad, CA

Mr. Sundberg conducted a wetland delineation and prepared a wetland delineation report in support of the design phase of a new transmission structure.

TL 649 Wetland Assessment, Chula Vista, CA

Mr. Sundberg assessed potential jurisdictional waters along a multi-mile utility corridor in and near the City of Chula Vista. The survey area included ephemeral streams and a vernal pool complex. He assisted the preparation of wetland assessment technical report and the associated figures.

SDG&E Wetlands Delineation, Carlsbad, CA

Mr. Sundberg conducted a jurisdictional delineation for several transmission structures and access roads in Carlsbad. He prepared a jurisdictional delineation technical report and the associated figures in support of the design phase of flood hardening of the transmission structures.

Kayo Valenti

Biologist



Experience Highlights

- ✓ Environmental compliance project management
- ✓ General biological surveys and vegetation mapping
- ✓ Threatened and endangered species surveys and monitoring
- ✓ Habitat restoration

Experience

13 years

Education/Registrations

B.S. Biology, Emphasis Ecology, San Diego State University

Certifications/Permits

CDFW Scientific Collecting Permit for Invertebrates, Rodents/Small Mammals, and Reptiles/Amphibians

CDFW California Endangered Species Act Plant Voucher Collecting Permit

CDFW Flat-Tailed Horned Lizard Training and Certification

OSHA 10-Hour Training Course in Construction Safety and Health

Ms. Valenti has extensive experience conducting sensitive and non-native floral species surveys, vegetation mapping, focused surveys for vernal pool branchiopods, general biological assessments, and environmental compliance monitoring, utilizing GPS technology for accurate data collection, and assisting with focused surveys for endangered, threatened, and sensitive fauna species in a variety of habitats in southern California. Ms. Valenti manages native habitat restoration/mitigation implementation and environmental compliance monitoring projects, including reporting. She has experience in the preparation of biological reports to document findings and evaluate project impacts on sensitive biological resources in accordance with local and regional conservation plans.

Cañon Street Pocket Park Project, San Diego, CA

Ms. Valenti conducted the biological resources survey and prepared the letter report to document biological resources and assess project impacts for this City of San Diego proposed pocket park.

Sewer and AC Water Group 697A Project, San Diego, CA

Ms. Valenti conducted the biological resources survey and prepared the biological letter report to document biological resources, assess project impacts, and recommend avoidance and mitigation measures for this City of San Diego sewer and water line replacement project.

City of San Diego Vernal Pool Habitat Conservation Plan Plant Monitoring, San Diego, CA

Ms. Valenti conducted vernal pool plant surveys in support of the vernal pool habitat conservation plan and prepared a report that includes methods, results, and recommendations for associated management activities in accordance with the Vernal Pool Management and Monitoring Plan.

El Camino Real/SR-56 Bike Path Connector, Biological Monitoring, San Diego, CA

Ms. Valenti managed biological mitigation monitoring and reporting for this City of San Diego mitigation project. She managed construction biological monitoring and reporting, mapped and assisted with sensitive plant species Del Mar mesa sand aster translocation during and after construction

USFWS Permit TE-797665
for Vernal Pool
Branchiopods

Training

Introduction to Surveying,
Monitoring, and Handling
Techniques Workshop,
Desert Tortoise Council

Identification and Ecology
of the Fairy Shrimp and
Tadpole Shrimp of
California and Oregon
Course

San Diego Audubon
Society Introductory
Birding Course

Affiliations

California Native Plant
Society

San Diego Audubon
Society

Sierra Club

activities, and managed revegetation biological monitoring and reporting.

Camino Del Rey Drainage and Road Improvements Project, Bonsall, County of San Diego, CA

Ms. Valenti conducted the biological resources survey and is preparing the biological letter report to document survey results, including sensitive riparian habitat and several sensitive avian species. Project impacts and mitigation recommendations will be included in the report for this project adjacent to Moosa Creek, in the community of Bonsall.

Beyer Park Development Project, San Diego, CA

Ms. Valenti managed vernal pool branchiopod surveys and reporting requirements, and assisted with coastal California gnatcatcher and burrowing owl surveys for this City of San Diego proposed park development project.

Manning Canyon Sewer and Water Replacement Project, San Diego, CA

Ms. Valenti conducted biological monitoring of pipe removal that occurred within a portion of Tecolote Canyon Natural Park, which supports coastal sage scrub habitat, provides nesting habitat for multiple sensitive avian species, and contains jurisdictional drainages. Following construction activities, she continues to monitor revegetation activities, which includes report submittals, for this City of San Diego sewer and water replacement project.

Dehesa Road and Harbison Canyon Road Intersection Improvement Project, Dehesa, CA

Ms. Valenti conducted a biological survey and prepared the biological resources letter report for the Dehesa Road and Harbison Canyon Road Intersection Improvements project. The impact analysis and recommended mitigation measures were based on the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements.

Casita Way Emergency Storm Drain Replacement Project, San Diego, CA

Ms. Valenti manages, monitors, and schedules maintenance activities for this revegetation project that occurs on a steep slope behind two private properties in the City of San Diego.

ATTACHMENT 2

Plant Species Observed within the
College Area Sewer and AC Water Project Survey Area

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
FERNS			
PTERIDACEAE	BRAKE FAMILY		
<i>Pentagramma triangularis</i> (Kaulf.) Yatsk. Windham & E. Wollenw.	goldback fern	CSS	N
GYMNOSPERMS			
CUPRESSACEAE	CYPRESS FAMILY		
<i>Italian cypress</i>	Italian cypress	ORN	I
<i>Juniperus chinensis</i> L.	Hollywood juniper	ORN	I
PINACEAE	PINE FAMILY		
<i>Pinus halepensis</i> Mill.	Aleppo pine	ORN	I
PODOCARPACEAE	FERN PINE FAMILY		
<i>Afrocarpus falcatus</i> (Thunb.) C.N.Page	common yellow wood, yew pine	NNR	I
ANGIOSPERMS: MAGNOLIIDS-PIPERALES			
SAURURACEAE	LIZARD'S TAIL FAMILY		
<i>Anemopsis californica</i> (Nutt.) Hook. & Arn.	yerba mansa	DW	N
ANGIOSPERMS: MONOCOTS			
AGAVACEAE	AGAVE FAMILY		
<i>Agave americana</i> L.	American century plant	ORN	I
<i>Agave attenuata</i> Salm.	lion's tail, foxtail, swan's neck	ORN	I
<i>Yucca guatemalensis</i> Baker	bluestem yucca	ORN, U/D	I
ARECACEAE	PALM FAMILY		
<i>Phoenix canariensis</i> Chabaud	Canary Island palm	NNR	I
<i>Washingtonia robusta</i> H. Wendl.	Mexican fan palm	NNR, ORN, U/D	I
ASPARAGACEAE	ASPARAGUS FAMILY		
<i>Asparagus asparagoides</i> (L.) Druce	florist's-smilax	NNR	I
<i>Asparagus setaceus</i> (Kunth) Jessop	asparagus-fern	NNR	I
CYPERACEAE	SEDGE FAMILY		
<i>Bolboschoenus maritimus</i> (L.) Palla ssp. <i>paludosus</i> (A. Nelson) T. Koyama [= <i>Scirpus maritimus</i>]	saltmarsh bulrush, alkali bulrush	DW	N
<i>Cyperus eragrostis</i> Lam.	tall flatsedge	NNR	N
<i>Cyperus involucratus</i> [= <i>Cyperus alternifolius</i>] Rottb.	African umbrella plant	NNR	I

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
<i>Schoenoplectus</i> [= <i>Scirpus</i>] <i>californicus</i> (C.A. Mey.) Soják	southern bulrush	DW	N
IRIDACEAE	IRIS FAMILY		
<i>Dietes grandiflora</i> N.E.Br	fortnight lily	ORN	I
POACEAE (GRAMINEAE)	GRASS FAMILY		
<i>Arundo donax</i> L.	giant reed	NNR	I
<i>Avena barbata</i> Pott ex Link	slender wild oat	DL, DCSS	I
<i>Brachypodium distachyon</i> (L.) P. Beauv.	purple falsebrome	CSS, DCSS	I
<i>Bromus diandrus</i> Roth	ripgut grass	DL, DCSS, CSS	I
<i>Bromus madritensis</i> L. ssp. <i>rubens</i> (L.) Husn.	red brome	DL, DCSS, CSS, MSS	I
<i>Cortaderia selloana</i> (Schult. & Schult. f.) Asch. & Graebn.	pampas grass	NNR	I
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	NNR, DL, DW	I
<i>Paspalum dilatatum</i> Poir.	dallis grass	NNR	I
<i>Pennisetum setaceum</i> (Forssk.) Chiov.	crimson fountain grass	DCSS, ORN	I
<i>Stipa</i> [= <i>Nassella</i>] <i>lepida</i> Hitchc.	foothill needle grass	CSS	N
<i>Stipa miliacea</i> (L.) Hoover var. <i>miliacea</i> [= <i>Piptatherum miliaceum</i> ssp. <i>miliaceum</i> and <i>Oryzopsis miliacea</i>]	smilo grass	NNR	I
THEMIDACEAE	BRODIAEA FAMILY		
<i>Bloomeria crocea</i> (Torr.) Coville	common goldenstar	CSS	N
TYPHACEAE	CATTAIL FAMILY		
<i>Typha latifolia</i> L.	broad-leaved cattail	DW, NNR	N
ANGIOSPERMS: DICOTS			
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Carpobrotus edulis</i> (L.) N.E. Br.	freeway iceplant	DW, DL, DCSS, ORN	I
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		
<i>Malosma laurina</i> Nutt. ex Abrams	laurel sumac	CSS	N
<i>Rhus integrifolia</i> (Nutt.) Benth. & Hook. f. ex Rothr.	lemonade berry	CSS, DCSS	N
<i>Schinus molle</i> L.	Peruvian pepper tree	NNR, ORN	I
<i>Schinus terebinthifolius</i> Raddi	Brazilian pepper tree	NNR	I
<i>Toxicodendron diversilobum</i> (Torr. & A. Gray) Greene	western poison oak	CSS	N

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
APIACEAE (UMBELLIFERAE)	CARROT FAMILY		
<i>Apium graveolens</i> L.	celery	NNR, DW	I
<i>Foeniculum vulgare</i> Mill.	fennel	DL	I
ARALIACEAE	GINSENG FAMILY		
<i>Hedera helix</i> L.	English ivy	ORN	I
ASTERACEAE	SUNFLOWER FAMILY		
<i>Ambrosia psilostachya</i> DC.	western ragweed	NNR, DW, DCSS	N
<i>Artemisia californica</i> Less.	California sagebrush	CSS, DCSS, MSS	N
<i>Baccharis salicifolia</i> (Ruiz & Pav.) Pers. ssp. <i>salicifolia</i>	mule fat, seep-willow	NNR	N
<i>Baccharis sarothroides</i> A. Gray	broom baccharis	DCSS, CSS	N
<i>Bahiopsis</i> [=Viguiera] <i>laciniata</i> (A. Gray) E.E. Schilling & Panero	San Diego viguiera, San Diego County viguiera	MSS	N
<i>Carduus pycnocephalus</i> L.	Italian thistle	NNR	I
<i>Centaurea melitensis</i> L.	totalote, Maltese star-thistle	DL, DCSS	I
<i>Glebionis coronaria</i> (L.) Spach [=Chrysanthemum coronarium]	garland, crown daisy	DL	I
<i>Lactuca serriola</i> L.	prickly lettuce	DL, DCSS	I
<i>Pseudognaphalium</i> [=Gnaphalium] <i>californicum</i> (DC.) Anderb.	California everlasting, green everlasting	DCSS, CSS	N
<i>Senecio linearifolius</i> A. Rich.	linear-leaved Australian fireweed	DW	N
<i>Sonchus oleraceus</i> L.	common sow thistle	DL	I
<i>Xanthium strumarium</i> L.	cocklebur	DW, NNR	N
BIGNONIACEAE	BIGNONIA FAMILY		
<i>Jacaranda mimosifolia</i> D. Don	blue jacaranda	ORN, U/D	I
BORAGINACEAE	BORAGE FAMILY		
<i>Echium candicans</i> L. f.	pride of Madeira	DL, NNR	I
<i>Heliotropium curassavicum</i> L. var. <i>oculatum</i> (A. Heller) I. M. Johnst. ex Tidestr.	seaside heliotrope, alkali heliotrope	DW, CSS	N
CACTACEAE	CACTUS FAMILY		
<i>Cereus peruvianus</i> (L.) Mill.	Peruvian apple cactus	ORN	I
<i>Cylindropuntia</i> [=Opuntia] <i>prolifera</i> (Engelm.) F.M. Knuth	coast cholla	MSS	N
<i>Opuntia ficus-indica</i> (L.) Mill.	mission prickly-pear, Indian fig	DCSS	I
<i>Opuntia littoralis</i> (Engelm.) Cockerell.	coast prickly-pear, shore cactus	MSS	N

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY		
<i>Lonicera subspicata</i> Hook. & Arn.	southern honeysuckle	CSS	N
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Atriplex semibaccata</i> R. Br.	Australian saltbush	DL	I
<i>Bassia hyssopifolia</i> (Pall.) Kuntze	five-hook bassia	DW, DL	I
<i>Salsola tragus</i> L.	Russian thistle, tumbleweed	DL, MSS	I
CONVOLVULACEAE	MORNING-GLORY FAMILY		
<i>Ipomoea indica</i> (Burm.) Merr.	Indian morning-glory	NNR	I
CRASSULACEAE	STONECROP FAMILY		
<i>Crassula ovata</i> (Mill.) Druce	jade plant	ORN, DL	I
<i>Dudleya lanceolata</i> (Nutt.) Britton & Rose	lance-leaved dudleya, lanceleaf liveforever	CSS	N
CUCURBITACEAE	GOURD FAMILY		
<i>Marah macrocarpa</i> (Greene) Greene	wild cucumber	CSS	N
DIDIEREACEAE	FAMILY DIDIEREACEAE		
<i>Portulacaria afra</i> Jacq.	dwarf jade plant	ORN	N
EUPHORBIACEAE	SPURGE FAMILY		
<i>Euphorbia peplus</i> L.	petty spurge	DL	I
<i>Ricinus communis</i> L.	castor bean	NNR	I
FABACEAE (LEGUMINOSAE)	LEGUME FAMILY		
<i>Acacia cyclops</i> A. Cunn. ex G. Don	western coastal wattle	NNR	I
<i>Acacia redolens</i> Maslin	vanilla-scented wattle	ORN	I
<i>Acmispon glaber</i> (Vogel) Brouillet [= <i>Lotus scoparius</i>]	deerweed, California broom	CSS, DCSS	N
<i>Astragalus trichopodus</i> (Nutt.) A. Gray var. <i>lonchus</i> (M.E. Jones) Barneby	ocean locoweed	CSS	N
<i>Ceratonia siliqua</i> L.	carob tree	ORN	I
<i>Melilotus</i> sp.	sweetclover	DL, DCSS	I
<i>Senna didymobotrya</i> (Fresen.) H.S. Irwin & Barneby	African senna	DL	I
FAGACEAE	OAK FAMILY		
<i>Quercus dumosa</i> Nutt.	Nuttall's scrub oak	DCSS, CSS, NNR, ORN	N

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
LAMIACEAE	MINT FAMILY		
<i>Marrubium vulgare</i> L.	horehound	DL	I
<i>Salvia mellifera</i> Greene	black sage	CSS, DCSS	N
MALVACEAE	MALLOW FAMILY		
<i>Malacothamnus fasciculatus</i> (Nutt. ex Torr. & A. Gray) Greene	chaparral mallow	CSS, DCSS	N
<i>Malva parviflora</i> L.	cheeseweed, little mallow	DL, DCSS	I
MORACEAE	MULBERRY FAMILY		
<i>Ficus rubiginosa</i> Desf. ex Vent.	rusty fig	ORN	I
MYRTACEAE	MYRTLE FAMILY		
<i>Eucalyptus cladocalyx</i> F. Muell.	sugar gum	EW	I
<i>Eucalyptus polyanthemus</i> Schauer	silver dollar gum, red box	EW	I
NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
<i>Bougainvillea</i> sp. Comm. ex Juss.	bougainvillea	U/D, ORN	I
OLEACEAE	OLIVE FAMILY		
<i>Fraxinus uhdei</i> (Wenz.) Lingelsh.	shamel ash	NNR, U/D	I
<i>Olea europaea</i> L.	olive	ORN	I
ONAGRACEAE	EVENING-PRIMROSE FAMILY		
<i>Epilobium canum</i> (Greene) P.H. Raven ssp. <i>canum</i>	California fuchsia, zauschneria	CSS	N
<i>Oenothera elata</i> Kunth ssp. <i>hirsutissima</i> (S. Watson) W. Dietr.	great marsh evening-primrose	DW, NNR	N
PHRYMACEAE [=SCROPHULARIACEAE]	HOPSEED FAMILY		
<i>Diplacus [=Mimulus] aurantiacus</i> (Curt.) Jeps.	bush monkey-flower	CSS	N
PITTOSPORACEAE	PITTOSPORUM FAMILY		
<i>Pittosporum tobira</i> (Thunb.) W.T.Aiton	Japanese pittosporum, mock orange	NNR, U/D	I
PLANTAGINACEAE	PLANTAIN FAMILY		
<i>Plantago major</i> L.	common plantain	DL	I
PLUMBAGINACEAE	LEADWORT FAMILY		
<i>Plumbago auriculata</i> Lam.	Cape leadwort	DL, ORN	I
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Eriogonum fasciculatum</i> Benth. var. <i>fasciculatum</i>	coast California buckwheat	DCSS, CSS, MSS	N
<i>Rumex crispus</i> L.	curly dock	NNR	I

Attachment 2
Plant Species Observed

Scientific Name	Common Name	Habitat	Origin
PROTEACEAE	PROTEA FAMILY		
<i>Grevillea robusta</i> A.Cunn. ex R.Br.	silk oak	ORN	N
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Adolphia californica</i> S. Watson	California adolphia, spineshrub	MSS, CSS, DCSS	N
ROSACEAE	ROSE FAMILY		
<i>Heteromeles arbutifolia</i> (Lindl.) M. Roem.	toyon, Christmas berry	CSS	N
RUBIACEAE	MADDER FAMILY		
<i>Galium angustifolium</i> Nutt. ex A. Gray ssp. <i>angustifolium</i>	narrow-leaf bedstraw	CSS	N
SALICACEAE	WILLOW FAMILY		
<i>Salix gooddingii</i> C.R. Ball.	Goodding's black willow	NNR	N
<i>Salix lasiolepis</i> Benth.	arroyo willow	NNR	N
SAPINDACEAE	SOAPBERRY FAMILY		
<i>Koelreuteria paniculata</i> Laxm.	golden rain tree	ORN, NNR	N
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Datura wrightii</i> Regel	western Jimson weed	DL	N
ULMACEAE	ELM FAMILY		
<i>Ulmus parvifolia</i> Jacq.	Chinese elm, lacebark elm	ORN	I
HABITATS CSS = Diegan Coastal Sage Scrub DCSS= Disturbed Coastal Sage Scrub DL = Disturbed Land DW = Disturbed Wetland EW = Eucalyptus Woodland MSS = Maritime Succulent Scrub NNR = Non-Native Riparian ORN = Ornamental Plantings U/D = Urban/Developed ORIGIN N = Native to locality I = Introduced species from outside locality (I) = Introduced species to the ecoregion in which the survey occurred; however, native to other ecoregions within San Diego County.			

ATTACHMENT 3

Wildlife Species Observed within the College Area Sewer and AC Water Project Survey Area

**Attachment 3
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-Site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
INVERTEBRATES (Nomenclature for spiders and insects from Evans 2008; for butterflies from San Diego Natural History Museum 2002)				
APIDAE	HONEY BEES			
<i>Apis mellifera</i>	honey bee (I)	CSS		O
CULICIDAE	MOSQUITOS			
Not identified to species	Mosquito larvae	DW		O
FORMICIDAE	ANTS			
<i>Linepithema humile</i>	Argentine ant (I)	NNR		O
PAPILIONIDAE	PARNASSIANS & SWALLOWTAILS			
<i>Papilio zelicaon</i>	anise swallowtail	CSS		O
PIERIDAE	WHITES & SULPHURS			
<i>Colias</i> sp.	sulphur	CSS		O
<i>Pieris rapae</i>	cabbage white (I)	DL, CSS		O
LYCAENIDAE	BLUES, COPPERS, & HAIRSTREAKS			
<i>Brephidium exile</i>	western pygmy-blue	DL		O
<i>Leptotes marina</i>	marine blue	CSS, DCSS		O
NYMPHALIDAE	BRUSH-FOOTED BUTTERFLIES			
<i>Agraulis vanillae incarnata</i>	gulf fritillary	MSS		O
<i>Junonia coenia grisea</i>	common buckeye	DCSS		O
<i>Nymphalis antiopa</i>	mourning cloak	CSS, DL		O
REPTILES (Nomenclature from Crother 2008)				
PHRYNOSOMATIDAE	SPINY LIZARDS			
<i>Sceloporus occidentalis</i>	western fence lizard	DL		O
<i>Uta stansburiana</i>	common side-blotched lizard	DL		O
BIRDS (Nomenclature from Chesser et al. 2018 and Unitt 2004)				
ACCIPITRIDAE	HAWKS, KITES, & EAGLES			
<i>Buteo jamaicensis</i>	red-tailed hawk	F	F / Y	O

**Attachment 3
Wildlife Species Observed**

Scientific Name	Common Name	Occupied Habitat	On-Site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
TROCHILIDAE	HUMMINGBIRDS			
<i>Calypte anna</i>	Anna's hummingbird	ORN, U/D, CSS, NNR	C / Y	O
TYRANNIDAE	TYRANT FLYCATCHERS			
<i>Empidonax difficilis</i>	Pacific-slope flycatcher	NNR	F / S	O
<i>Sayornis nigricans semiatra</i>	black phoebe	CSS, ORN	F / Y	O
<i>Tyrannus vociferans vociferans</i>	Cassin's kingbird	ORN, EW	F / Y	O
CORVIDAE	CROWS, JAYS, & MAGPIES			
<i>Aphelocoma californica</i>	California [=western] scrub-jay	ORN, CSS, DCSS	F / Y	O
<i>Corvus brachyrhynchos hesperis</i>	American crow	ORN, U/D	F / Y	O
TROGLODYTIDAE	WRENS			
<i>Troglodytes aedon parkmanii</i>	house wren	DL, ORN	F / Y	O
MIMIDAE	MOCKINGBIRDS & THRASHERS			
<i>Mimus polyglottos polyglottos</i>	northern mockingbird	ORN, U/D, CSS, NNR	F / Y	O
PARULIDAE	WOOD WARBLERS			
<i>Setophaga [=Dendroica] coronata</i>	yellow-rumped warbler	NNR	F / W	O
EMBERIZIDAE	EMBERIZIDS			
<i>Melospiza [=Pipilo] crissalis</i>	California towhee	DL, CSS, ORN	C / Y	O
<i>Pipilo maculatus</i>	spotted towhee	CSS	F / Y	V
FRINGILLIDAE	FINCHES			
<i>Spinus [=Carduelis] psaltria hesperophilus</i>	lesser goldfinch	NNR	F / Y	V
<i>Haemorhous [=Carpodacus] mexicanus frontalis</i>	house finch	U/D, ORN	C / Y	O
ESTRILDIDAE	WEAVER-FINCHES			
<i>Lonchura punctulata</i>	scaly-breasted munia [=nutmeg manikin] (I)	CSS, NNR, ORN	F / Y	O

Attachment 3
Wildlife Species Observed

Scientific Name	Common Name	Occupied Habitat	On-Site Abundance/ Seasonality (Birds Only)	Evidence of Occurrence
MAMMALS (Nomenclature from Baker et al. 2003)				
SCIURIDAE	SQUIRRELS & CHIPMUNKS			
<i>Spermophilus beecheyi</i>	California ground squirrel	CSS		B
PROCYONIDAE	PROCYONIDS			
<i>Procyon lotor</i>	northern raccoon	NNR, DCSS		T, S
(I) = Introduced species HABITATS CSS = Diegan Coastal Sage Scrub DCSS = Disturbed Coastal Sage Scrub DL = Disturbed Land DW = Disturbed Wetland EW = Eucalyptus Woodland F = Flying overhead MSS = Maritime Succulent Scrub NNR = Non-Native Riparian ORN = Ornamental Plantings U/D = Urban/Developed EVIDENCE OF OCCURRENCE B = Burrow O = Observed S = Scat T = Track V = Vocalization ABUNDANCE (birds only; based on Garrett and Dunn 1981) C = Common to abundant; almost always encountered in proper habitat, usually in moderate to large numbers F = Fairly common; usually encountered in proper habitat, generally not in large numbers SEASONALITY (birds only) S = Spring/summer resident; probable breeder on-site or in vicinity W = Winter visitor; does not breed locally Y = Year-round resident; probable breeder on-site or in vicinity				

ATTACHMENT 4

Sensitive Plant Species Observed
or with the Potential to Occur within the
College Area Sewer and AC Water Project Survey Area

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
ANGIOSPERMS: DICOTS						
CHENOPODIACEAE GOOSEFOOT FAMILY						
<i>Aphanisma blitoides</i> aphanisma	—/—	1B.2	NE, MSCP	Annual herb; coastal bluff scrub, beach dunes; sandy soils; blooms March–June; elevation less than 1,000 feet.	No	This species is known from one 1884 record within two miles of the project area, but is labeled “needs fieldwork” to confirm (CDFW 2018a). This species is not expected to occur within the project area due to lack of appropriate coastal bluff or dune habitat.
APIACEAE CARROT FAMILY						
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	CE/FE	1B.1	NE, MSCP	Biennial/perennial herb; vernal pools, mesic areas of coastal sage scrub and grasslands, blooms April–June; elevation less than 2,000 feet. Known from San Diego and Riverside counties. Additional populations occur in Baja California, Mexico.	No	This species has been known to occur within two miles of the project area (CDFW 2018a); However, this species is not expected to occur due to lack of vernal pool habitat.
ASTERACEAE SUNFLOWER FAMILY						
<i>Ambrosia monogyra</i> [= <i>Hymenoclea monogyra</i>] singlewhorl burrobrush	—/—	2B.2	—	Perennial shrub; sandy, chaparral, Sonoran desert scrub; blooms August–November; elevation 30–1,650 feet.	No	Although this species has been reported within two miles of the project area (CDFW 2018a), it is not expected to occur due to lack of sandy soils. Additionally, this conspicuous perennial shrub would have likely been apparent if present.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' Scientific Name Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Ambrosia pumila</i> San Diego ambrosia	–/FE	1B.1	NE, MSCP	Perennial herb (rhizomatous); chaparral; coastal sage scrub; valley and foothill grasslands; creek beds with open, sandy areas; vernal pools; often in disturbed areas; blooms May–September; elevation less than 1,400 feet. Many occurrences extirpated in San Diego County.	No	This species has been reported within two miles of the project area; however, the locale is now thought to be extirpated (CDFW 2018a). This species is not expected to occur within the project area due to lack of open, sandy areas generally preferred by the species.
<i>Bahiopsis</i> [= <i>Viguiera</i>] <i>laciniata</i> San Diego viguiera [=San Diego County viguiera]	–/–	4.3	–	Perennial shrub; chaparral, coastal sage scrub; blooms February–June; elevation less than 2,500 feet.	Yes	Twenty San Diego County viguiera individuals were observed within maritime succulent scrub and disturbed land within the survey area, including three individuals within the project impact area.
<i>Ericameria palmeri</i> var. <i>palmeri</i> [= <i>E. palmeri</i> ssp. <i>palmeri</i>] Palmer's goldenbush [=Palmer's ericameria]	–/–	1B.1	MSCP	Perennial evergreen shrub; chaparral, coastal sage scrub, typically in mesic areas; blooms July–November; elevation less than 2,000 feet. Known in California from sixteen occurrences all of which are in San Diego County. Additional populations in Baja California, Mexico.	No	Although this species was reported to the CNDDB in 1935 and 1965 within two miles of the project area, the 1965 reported population is possibly extirpated according to a review of the records in 2015 and the 1935 record is labeled “needs fieldwork” to confirm (CDFW 2018a). None of the 16 currently known occurrences in San Diego County lie within the project area. This conspicuous perennial evergreen shrub is not expected to occur, and would have likely been apparent if present.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Stylocline citroleum</i> oil nest-straw	–/–	1B.1	–	Annual herb; chenopod scrub; potentially coastal sage scrub, valley and foothill grasslands in the vicinity of oil fields; clay soils; blooms March–April; elevation less than 1,300 feet. California endemic. Known from San Diego (questionable record) and Kern counties.	No	This species is known from one 1883 observation reported to the CNDDB within two miles of the project area (CDFW 2018a); however, this record is questionable in identification (Reiser 2001). This species is not expected to occur, as it is likely extirpated from San Diego County (Reiser 2001; Rebman and Simpson 2014).
BRASSICACEAE MUSTARD FAMILY						
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's peppergrass	–/–	4.3	–	Annual herb; dry exposed locales within open coastal sage scrub and chaparral; blooms January– July; elevation less than 2,900 feet.	No	This species was reported to the CNDDB in 1935 and 2005 within two miles of the project area (CDFW 2018a). The 1935 record is labeled “needs fieldwork” to confirm and the 2005 record occurs adjacent to Lake Murray (CDFW 2018a). The species has a low potential to occur as the south- facing slopes containing dry exposed locales within disturbed coastal sage scrub occurs downslope of previous cut and fill for the residential development. Additionally, while the survey was conducted after the blooming period for the species, desiccated individuals would likely have been observed if present.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
CACTACEAE CACTUS FAMILY						
<i>Ferocactus viridescens</i> San Diego barrel cactus	—/—	2B.1	MSCP	Perennial stem succulent; chaparral, coastal sage scrub, valley and foothill grasslands, vernal pools; blooms May–June; elevation less than 1,500 feet.	No	This species has been reported to the CNDDDB within two miles of the project area (CDFW 2018a). This species is not expected to occur within the project area due to lack of dry exposed cobbly locales within open coastal sage scrub. Additionally, as this is a conspicuous perennial succulent, this species would likely have been observed, if present.
CRASSULACEAE STONECROP FAMILY						
<i>Dudleya variegata</i> variegated dudleya	—/—	1B.2	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools, isolated rocky substrates; blooms May–June; elevation less than 1,900 feet.	No	This species was reported to the CNDDDB in 1936 and 2001 within two miles of the project area (CDFW 2018a). The 1936 record is possibly extirpated and the 2001 record occurs adjacent to Lake Murray (CDFW 2018a). This species is not expected to occur within the project area due to lack of suitable isolated rocky substrates within the open, disturbed coastal sage scrub.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
ERICACEAE HEATH FAMILY						
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> summer holly	–/–	1B.2	–	Perennial evergreen shrub; chaparral; blooms April–June; elevation 100–2,600 feet.	No	This species has been reported to the CNDDDB within two miles of the project area (CDFW 2018a). This conspicuous perennial evergreen shrub is not expected to occur, as it would have likely been apparent if present.
FAGACEAE OAK FAMILY						
<i>Quercus dumosa</i> Nuttall's scrub oak	–/–	1B.1	–	Perennial evergreen shrub; closed-cone coniferous forest, coastal chaparral, coastal sage scrub; sandy and clay loam soils; blooms February–March; elevation less than 1,300 feet.	Yes	Thirty-four individuals were observed within Diegan coastal sage scrub, disturbed coastal sage scrub, non-native riparian, and ornamental plantings of the survey area. Ten individuals occur within the project impact area. This species has been reported to the CNDDDB within two miles of the project area (CDFW 2018a).
LAMIACEAE MINT FAMILY						
<i>Acanthomintha ilicifolia</i> San Diego thornmint	CE/FT	1B.1	NE, MSCP	Annual herb; chaparral, coastal sage scrub, and grasslands; friable or broken clay soils; blooms April–June; elevation less than 3,200 feet.	No	Although this species has been reported within two miles of the project area, the records are from 1949 and earlier, and the reported populations are identified as “possibly extirpated” according to a review of the records (CDFW 2018a). This species is not expected to occur within the project area due to lack of friable or broken clay soils.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Pogogyne abramsii</i> San Diego mesa mint	CE/FE	1B.1	NE, MSCP	Annual herb; vernal pools; blooms April–July; elevation 300–700 feet. San Diego County endemic.	No	This species was reported in 1941 and 1952 within two miles of the project area; however, both are thought to be extirpated due to development (CDFW 2018a). This species is not expected to occur within the project area due to lack of vernal pool habitat.
<i>Pogogyne nudiuscula</i> Otay mesa mint	CE/FE	1B.1	NE, MSCP	Annual herb; vernal pools; blooms May–July; elevation 300–820 feet. In California, known from approximately 10 occurrences in Otay Mesa in San Diego County. Additional populations occur in Baja California, Mexico.	No	This species was reported in 1930 within two miles of the project area; however, this recorded population is considered extirpated due to development (CDFW 2018a). This species is not expected to occur within the project area due to lack of vernal pool habitat.
PLANTAGINACEAE PLANTAIN FAMILY						
<i>Stemodia durantifolia</i> purple stemodia	–/–	2B.1	–	Perennial herb; Sonoran desert scrub, mesic; sandy soils; blooms January–December; elevation 600–1,000 feet.	No	This species was reported in 1935 and 1940 within two miles of the project area, but both records are labeled “needs fieldwork” to confirm (CDFW 2018a). This species is not expected to occur within the project area due to lack of sandy soils.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
RHAMNACEAE BUCKTHORN FAMILY						
<i>Adolphia californica</i> California adolphia	—/—	2B.1	—	Perennial deciduous shrub; Diegan coastal sage scrub and chaparral; blooms December– May; elevation 100–2,500 feet.	Yes	Approximately 130 individuals occur within the maritime succulent scrub and Diegan coastal sage scrub of the survey area. Ten individuals occur within the project impact area. This species has been reported to the CNDDB within two miles of the project area (CDFW 2018a).
<i>Ceanothus verrucosus</i> wart-stemmed ceanothus	—/—	2B.2	MSCP	Perennial evergreen shrub; chaparral; blooms December– April; elevation less than 1,300 feet.	No	This species has been reported to the CNDDB within two miles of the project area (CDFW 2018a). This conspicuous perennial evergreen shrub is not expected to occur, as it would have likely been apparent if present.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
ANGIOSPERMS: MONOCOTS						
THEMIDACEAE BRODIAEA FAMILY						
<i>Bloomeria</i> [=Muilla] <i>clevelandii</i> San Diego goldenstar	—/—	1B.1	MSCP	Perennial herb (bulbiferous); somewhat open locales; does not typically grow in the shade of woody perennials; preferred habitats are valley and foothill grassland and near vernal pools; open, low-growing coastal sage scrub; clay soils; blooms May; elevation 170–1,500 feet.	No	The CNDDDB has three records of this species within two miles of the project area (CDFW 2018a). Two records are from 1950 and earlier, and are identified as “possibly extirpated” according to a review of the records. The third record is from 2001 and occurs at Chollas Heights Naval Radio Station within non-native grassland and low growing coastal sage scrub. This species is not expected to occur within the project area due to lack of suitable open, low growing coastal sage scrub, as the open, disturbed coastal sage scrub of the survey area is dominated by a tall woody perennial and occurs downslope of previous cut and fill for residential development.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

Species' <i>Scientific Name</i> Common Name	State/Federal Status	CNPS Rank	City of San Diego	Habitat/ Preference/Requirements/ Blooming Period	Observed?	Basis for Determination of Occurrence Potential
<i>Brodiaea orcuttii</i> Orcutt's brodiaea	–/–	1B.1	MSCP	Perennial herb (bulbiferous); preferred habitats are vernal moist grasslands and near vernal pools; mesic, clay and gravelly loam soil; blooms May–July; elevation less than 5,600 feet.	No	This species has been reported to the CNDDB within two miles of the project area (CDFW 2018a). Both records are from 1949 and earlier, and are identified as “possibly extirpated” according to a review of the records. This species is not expected to occur within the project area due to lack of preferred mesic grassland and vernal pool habitat.

Attachment 4
Sensitive Plant Species
Observed or with the Potential for Occurrence

FEDERAL CANDIDATES AND LISTED PLANTS

FE = Federally listed endangered
FT = Federally listed threatened

STATE LISTED PLANTS

CE = State listed endangered

CALIFORNIA NATIVE PLANT SOCIETY (CNPS): CALIFORNIA RARE PLANT RANKS (CRPR)

1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.
.1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat).
.2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat).
.3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known).

CITY OF SAN DIEGO

NE = Narrow endemic
MSCP = Multiple Species Conservation Program covered species

ATTACHMENT 5

Sensitive Wildlife Species Occurring or
with the Potential to Occur within the
College Area Sewer and AC Water Project Survey Area

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
INVERTEBRATES (Nomenclature from Eriksen and Belk 1999; San Diego Natural History Museum 2002)					
BRANCHINECTIDAE FAIRY SHRIMP					
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE, MSCP, *	Vernal pools.	No	Not expected	Although this species has been recorded within two miles of the project area (CDFW 2018a; USFWS 2018a), it is not expected to occur due to a lack of vernal pools within the project area.
NYMPHALIDAE BRUSH-FOOTED BUTTERFLIES					
Quino checkerspot <i>Euphydryas editha quino</i>	FE	Open, dry areas in foothills, mesas, lake margins. Larval host plant dot seed plantain (<i>Plantago erecta</i>). Adult emergence mid-January through April.	No	Not expected	Although this species has been reported within two miles of the project area (County of San Diego 2018; USFWS 2018a), records are from 1953 and earlier. The project area occurs within the bottom of a canyon, downslope of previous cut and fill operations for residential development and lacks suitable open, dry scrub habitats. The project occurs outside the recommended Quino checkerspot survey area.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
AMPHIBIANS (Nomenclature from Crother et al. 2008)					
PELOBATIDAE SPADEFOOT TOADS					
Western spadefoot <i>Spea hammondi</i>	SSC	Vernal pools, floodplains, and alkali flats within areas of open vegetation.	No	Not expected	This species has been reported at Lake Murray, two miles northeast of the project area (County of San Diego 2018). The survey area lacks vernal pools and alkali flats and areas of open vegetation next to the flood control channel within the project site.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
REPTILES (Nomenclature from Crother et al. 2008)					
IGUANIDAE IGUANID LIZARDS					
Coast horned lizard <i>Phrynosoma blainvillii</i> [= <i>P. coronatum</i> coastal population]	SSC, MSCP, *	Chaparral, coastal sage scrub with fine, loose soil. Partially dependent on harvester ants (<i>Pogonomyrmex</i> sp.) for forage.	No	Not expected	Four records for this species exist within two miles of the survey area (CDFW 2018a; County of San Diego 2018). Both records in the CNDDDB are from 1967 and earlier and are identified as “possibly extirpated” according to a review of the records (CDFW 2018a). Both records in SANBIOS are from 1950 and earlier and located near San Diego State University (County of San Diego 2018). In addition, the presence of Argentine ants (<i>Linepithema humile</i>) and substantial development in the survey area likely precludes the occurrence of harvester ants, on which coast horned lizard relies as a main part of its diet (Zeiner et al. 1990; Zee and Holway 2005).

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
SCINCIDAE SKINKS					
Coronado skink <i>Eumeces skiltonianus</i> <i>interparietalis</i>	SSC	Grasslands, open woodlands and forest, broken chaparral. Rocky habitats near streams.	No	Low	Several records for this species exist within two miles of the survey area, with the earliest record from 1951 (County of San Diego 2018). The dense coastal sage scrub adjacent to standing water in the flood control channel provides marginally suitable habitat. However, this species has low potential to occur, as the project area occurs within a small, somewhat isolated canyon with no suitable woodlands, forest, or chaparral habitat.
TEIIDAE WHIPTAIL LIZARDS					
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	SSC, MSCP	Chaparral, coastal sage scrub with coarse sandy soils and scattered brush.	No	Moderate	Several records for this species exist within two miles of the survey area, with only one presumed extant at Chollas Heights (CDFW 2018a; County of San Diego 2018). Potentially suitable open, disturbed coastal sage scrub habitat occurs within the survey area. Potential occurrence is reduced somewhat, as the project area occurs within a small, somewhat isolated canyon.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
BOIDAE BOAS					
Rosy boa <i>Lichanura trivirgata roseofusca</i>	*	Coastal sage scrub, chaparral in inland and desert locales with rocky soils.	No	Low	A record for this species exists within two miles of the project area (County of San Diego 2018); however, the record is from 1931 at Adobe Falls. The project area provides marginally suitable coastal sage scrub habitat, but lacks rocky areas preferred by the species.
COLUBRIDAE COLUBRID SNAKES					
California glossy snake <i>Arizona elegans occidentalis</i>	SSC	Variety of habitats including coastal sage scrub, chaparral, riparian areas, grasslands; and montane pinyon-juniper, oak, and pine woodlands between sea level and 6,000 feet. Often associated with loose or sandy soils. Nocturnal.	No	Not expected	This species is known from one 1937 observation reported to the CNDDB within two miles of the project area, with a recorded locality in the vicinity of Grantville (CDFW 2018a). Nearest known extant population of this species is within El Monte Valley, approximately 12 miles to the northeast. While coastal sage scrub occurs within the project area, this species is not likely to occur due to urbanization and habitat fragmentation within the surrounding areas.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
San Diego ring-necked snake <i>Diadophis punctatus similis</i>	*	Rocky areas in wet locales, such as swamps, damp forests, or riparian woodlands.	No	Not expected	Although this species has been reported within two miles of the project area, the records are from 1948 and earlier (County of San Diego 2018). The project area does not support rocky areas with swamps, damp forests, or riparian woodlands. Although standing water within non-native riparian occurs within the project area, this habitat occurs as a narrow strip and is dominated by Mexican fan palm (<i>Washingtonia robusta</i>). This area would not be considered suitable woodland or forest habitat for the species.
Two-striped gartersnake <i>Thamnophis hammondi</i>	SSC, *	Permanent freshwater streams with rocky bottoms. Mesic areas.	No	Not expected	This species has been recorded within two miles of the project area, with the most recent record from 1957 (County of San Diego 2018). While the flood control channel provides standing water, this species is not likely to occur due to urbanization and habitat fragmentation within the surrounding areas.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
CROTALIDAE RATTLESNAKES					
Red diamond rattlesnake <i>Crotalus ruber</i>	SSC	Desert scrub and riparian, coastal sage scrub, open chaparral, grassland, and agricultural fields.	No	Not expected	This species has been recorded within two miles of the project area, with the most recent record from 1950 (County of San Diego 2018). The species is not expected to occur due to the fragmented nature of the habitat in and around the survey area and high level of human disturbance.
BIRDS (Nomenclature from Chesser et al. 2018 and Unitt 2004)					
ARDEIDAE HERONS & BITTERNS					
Great blue heron (rookery site) <i>Ardea herodias</i>	*	Bays, lagoons, ponds, lakes. Non-breeding year-round visitor, some localized breeding.	No	Not expected	Although this species has been observed within two miles of the survey area (County of San Diego 2018), it is not expected to occur due to lack of bays, lagoons, ponds, or lakes.
Western least bittern <i>Ixobrychus exilis hesperis</i>	SSC	Brackish and freshwater marshes in the coastal lowland. Rare summer resident, rare in winter.	No	Not expected	Although this species has been observed within two miles of the survey area (County of San Diego 2018), it is not expected to occur due to a lack of brackish and freshwater marshes.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
ACCIPITRIDAE HAWKS, KITES, & EAGLES					
Cooper's hawk (nesting) <i>Accipiter cooperii</i>	WL, MSCP	Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	No	High (foraging) Moderate (nesting)	This species has been observed within two miles of the survey area (County of San Diego 2018). This species has a high potential to forage within the survey area due to presence of tall trees for perching and vegetation that would contain prey species. Additionally, this species has a high tolerance to human disturbance and reported occurrences within residential areas. It has moderate potential to nest within the survey areas, as the narrow strips of ornamental plantings and eucalyptus woodland contain taller trees preferred by the species.
FALCONIDAE FALCONS & CARACARAS					
Prairie falcon (nesting) <i>Falco mexicanus</i>	WL	Uses grassland, agricultural fields, and desert scrub for foraging. Cliff-nester. Uncommon winter resident. Rare breeding resident.	No	Not expected	A record for this species exists within two miles of the project area (CDFW 2018a). However, it is not expected to forage or nest within the project area due to lack of suitable cliffs or bluffs required by this species (Steenhof 2013).

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
RALLIDAE RAILS, GALLINULES, & COOTS					
California black rail <i>Laterallus jamaicensis</i>	CT, CFP	Tidal marshes, grassy marshes. Resident populations extirpated.	No	Not expected	Although this species has been observed within two miles of the project area (CDFW 2018a), this species is not expected to occur within the project area due to lack of suitable tidal or grassy marsh habitat.
VIREONIDAE VIREOS					
Least Bell's vireo (nesting) <i>Vireo bellii pusillus</i>	FE, CE, MSCP	Willow riparian woodlands. Summer resident.	No	Not expected	This species has been observed within two miles of the project area (CDFW 2018a; USFWS 2018a). Although the project area contains a few scattered willows within the non-native riparian, no willow riparian woodland habitat occurs.
TROGLODYTIDAE WRENS					
Coastal cactus wren <i>Campylorhynchus brunneicapillus sandiegensis</i>	SSC, MSCP, *	Maritime succulent scrub, coastal sage scrub with prickly pear and/or cholla thickets. Rare localized resident.	No	Not expected	This species has been observed within two miles of the project area (County of San Diego 2018). Although the project area contains a small, isolated patch of coast prickly pear and coast cholla; it does not provide suitable cactus thickets preferred by the species.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
SYLVIIDAE GNATCATCHERS					
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT, SSC, MSCP	Coastal sage scrub, maritime succulent scrub. Nesting vegetation generally comprises low (less than 3 feet) shrub and sub-shrub species. Ideal host shrub is California sagebrush (<i>Artemisia californica</i>), but it is also found nesting in coast California buckwheat (<i>Eriogonum fasciculatum</i>), common encelia (<i>Encelia californica</i>), and broom baccharis (<i>Baccharis saroethroides</i>) (Unitt 2004). Resident.	No	Low (foraging and nesting)	This species has been observed within two miles of the project area (CDFW 2018a; USFWS 2018a; County of San Diego 2018). Although coastal sage scrub habitat occurs within the survey area, it does not occur as a low-growing habitat as it is dominated by a tall shrub, lemonade berry (<i>Rhus integrifolia</i>). While California sagebrush and California buckwheat shrubs were observed within the survey area, these plant species were observed scattered in low numbers. This species has low potential to forage or nest within the largely unsuitable coastal sage scrub of the survey area.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
MAMMALS (Nomenclature from Baker et al. 2003)					
PHYLLOSTOMIDAE NEW WORLD LEAF- NOSED BATS					
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	SSC	Arid habitats including thorn scrub, palo verde-saguaro desert, semi-desert grassland, oak woodland, tropical deciduous forest, and Ponderosa pine forest from sea level to 7,800 feet. In San Diego County, all known records are from urban or suburban areas, utilizing ornamental plants for food sources. Roosts in caves, crevices, mines, buildings, and exposed roots of trees. Migratory.	No	Moderate (foraging) Not expected to roost	No record of this species exists within two miles of the project area; however, the ornamental yucca and agave species within the survey area may provide nectaring opportunities. This species is not expected to roost within the nearby buildings, as they are inhabited.
VESPERTILIONIDAE VESPER BATS					
Western yellow bat <i>Lasiurus xanthinus</i>	SSC	Strongly associated with California fan palm groves in the desert, also occurs in coastal and desert riparian, rural, suburban, and urban settings. Primarily roosts in the “skirts” of dead fronds of native and non-native fan palms; occasionally roosts in cottonwood trees and yuccas.	No	Low (foraging and roosting)	No record of this species exists within two miles of the project area; however, the fan palms of the non-native riparian may provide marginally suitable roost sites. However, this species is considered uncommon in San Diego county. It is historically a desert species. While it is increasingly found west of the mountains due to use of fan palms in landscaping, most observations are from the foothills, with very few in the urban areas.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
MOLOSSIDAE FREE-TAILED BATS					
Western mastiff bat <i>Eumops perotis californicus</i>	SSC	Desert scrub, chaparral, oak woodland, ponderosa pine and mixed conifer forests, meadows. Strongly tied to areas with cliffs and other significant rock features for roosting. Audible echolocation signal.	No	Not expected to roost	This species has been observed within two miles of the project area (CDFW 2018a; County of San Diego 2018). This species is not expected to roost within the project area due to lack of cliffs or significant rock features for roosting.
LEPORIDAE RABBITS & HARES					
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	SSC	Open areas of scrub, grasslands, and agricultural fields.	No	Not expected	This species has been reported in 1928 to occur within two miles of the project area (County of San Diego 2018). Although the project area provides coastal sage scrub, this species is likely now extirpated from urbanized areas due to habitat fragmentation (Tremor et al. 2017).
MURIDAE OLD WORLD MICE & RATS					
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	SSC	Coastal sage scrub, chaparral, pinyon-juniper woodland, and desert scrub. Prefers rocky habitat with succulent vegetation.	No	Low	This species has been reported within two miles of the project area (County of San Diego 2018). Although this species persists in some larger habitat fragments and canyons within urbanized areas, the project area lacks rocky habitat. In addition, no woodrat middens were observed during the survey. The project area provides marginally suitable coastal sage scrub habitat.

Attachment 5
Sensitive Wildlife Species Occurring or with the Potential to Occur

Species' Common Name/ Scientific Name	Listing Status	Habitat Preference/ Requirements	Detected On-Site?	Potential to Occur On-Site?	Basis for Determination of Occurrence Potential
STATUS CODES <u>Listed/Proposed</u> FE = Listed as endangered by the federal government FT = Listed as threatened by the federal government CE = Listed as endangered by the state of California CT = Listed as threatened by the state of California <u>Other</u> CFP = California fully protected species SSC = California Department of Fish and Wildlife species of special concern WL = California Department of Fish and Wildlife watch list species MSCP = City of San Diego Multiple Species Conservation Program covered species * = Taxa listed with an asterisk fall into one or more of the following categories: • Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines • Taxa that are biologically rare, very restricted in distribution, or declining throughout their range • Population(s) in California that may be peripheral to the major portion of a taxon's range but which are threatened with extirpation within California • Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)					