

BIOLOGICAL TECHNICAL REPORT

MAPLE CANYON STORM DRAIN PROJECT

CITY OF SAN DIEGO, CALIFORNIA

Prepared for:

City of San Diego
Meryl Jimenez
Engineering and Capital Projects
525 B Street
San Diego, California 92101

Submitted by:

AECOM
401 West A Street, Suite 1200
San Diego, California 92101

May 2015
Revised September 2016
Revised March 2018

TABLE OF CONTENTS

| <u>Section</u> | <u>Page</u> |
|--|--------------------|
| LIST OF ACRONYMS AND ABBREVIATIONS | iv |
| 1.0 EXECUTIVE SUMMARY | 1 |
| 2.0 INTRODUCTION | 3 |
| 3.0 REGULATORY FRAMEWORK | 5 |
| 3.1 Federal Regulations | 5 |
| 3.2 State Regulations | 6 |
| 3.3 CDFW Species of Concern | 9 |
| 3.4 California Native Plant Society | 9 |
| 3.5 CEQA Significance Criteria | 9 |
| 3.6 Local Programs | 10 |
| 4.0 METHODS | 13 |
| 5.0 RESULTS | 15 |
| 5.1 Study Site Location and Description | 15 |
| 5.2 Physical Characteristics | 15 |
| 5.2.1 Topography and Drainage | 15 |
| 5.2.2 Soils | 15 |
| 5.3 Biological Resources | 21 |
| 5.3.1 Vegetation Communities | 21 |
| 5.3.2 Wildlife Resources | 28 |
| 5.4 Rare, Threatened, Endangered, Narrow Endemic, Sensitive, and MSCP Species | 28 |
| 5.4.1 Special-Status Plants | 33 |
| 5.4.2 Special-Status Wildlife | 37 |
| 5.5 Other Sensitive Resources | 40 |
| 5.5.1 Jurisdictional Resources | 40 |
| 5.5.2 Wildlife Migration Corridors | 48 |
| 5.5.3 Steep Slopes | 49 |
| 6.0 PROJECT IMPACTS | 53 |
| 6.1 Direct Impacts | 54 |
| 6.1.1 Sensitive Vegetation Communities | 54 |
| 6.1.2 Special-Status Plant Species | 59 |
| 6.1.3 Special-Status Wildlife Species | 59 |
| 6.1.4 Jurisdictional Resources | 59 |

| | | |
|-------|---|----|
| 6.1.5 | Wildlife Dispersal Corridors and Linkages | 65 |
| 6.1.6 | MSCP Consistency | 65 |
| 6.1.7 | Cumulative Impacts | 65 |
| 6.2 | Indirect Impacts | 66 |
| 6.2.1 | Sensitive Vegetation Communities..... | 66 |
| 6.2.2 | Special-Status Plant Species | 66 |
| 6.2.3 | Special-Status Wildlife Species | 66 |
| 6.2.4 | Jurisdictional Resources..... | 66 |
| 6.3 | Essential Public Project..... | 67 |
| 7.0 | MITIGATION..... | 69 |
| 7.1 | Direct Impacts | 70 |
| 7.1.1 | Sensitive Vegetation Communities..... | 70 |
| 7.1.2 | Special-Status Wildlife Species | 71 |
| 7.1.3 | Jurisdictional Areas..... | 72 |
| 7.2 | Indirect Impacts | 73 |
| 7.2.1 | Sensitive Vegetation Communities..... | 73 |
| 7.2.2 | Special-Status Plants..... | 74 |
| 7.2.3 | Special-Status Wildlife | 75 |
| 7.2.4 | Jurisdictional Areas..... | 75 |
| 8.0 | REFERENCES | 77 |

APPENDICES

- A Preparer Qualifications
- B Botanical Species Observed/Detected in the BSA
- C Wildlife Species Observed/Detected in the BSA

LIST OF FIGURES

Figure

| | | |
|---|---|----|
| 1 | Regional Map..... | 16 |
| 2 | Vicinity Map..... | 17 |
| 3 | Soils..... | 19 |
| 4 | Vegetation Communities | 23 |
| 5 | Sensitive Biological Resources and MHPA Boundary..... | 35 |
| 6 | Potential Jurisdictional Waters | 43 |
| 7 | Steep Slopes Analysis | 51 |
| 8 | Vegetation Impacts | 55 |
| 9 | Jurisdictional Water Impacts..... | 61 |

LIST OF TABLES

Table

Page

| | | |
|---|---|----|
| 1 | Vegetation Communities within the BSA ¹ | 22 |
| 2 | Potential and Observed Special-Status Plant Species Occurring within the Biological Study Area..... | 30 |
| 3 | Potential and Observed Special-Status Wildlife Species Occurring within the Biological Study Area..... | 38 |
| 4 | Jurisdictional Waters within the BSA..... | 42 |
| 5 | Permanent and Temporary Direct Impacts to Vegetation Communities | 59 |
| 6 | Permanent Impacts to Jurisdictional Waters | 60 |
| 7 | Temporary Impacts to Jurisdictional Waters | 60 |
| 8 | Mitigation for Impacts to Sensitive Vegetation Communities | 70 |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------------------|--|
| ASMD | Area Specific Management Directive |
| Biology Guidelines | City of San Diego Biology Guidelines |
| BMP | best management practice |
| BSA | biological study area |
| CCR | California Code of Regulations |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFGF | California Fish and Game Code |
| CFR | Code of Federal Regulations |
| CNDDB | California Natural Diversity Data Base |
| CNPS | California Native Plant Society |
| CWA | Clean Water Act |
| EPP | Essential Public Project |
| ESL | Environmentally Sensitive Land |
| FESA | Federal Endangered Species Act |
| GIS | geographic information system |
| HCP | habitat conservation plan |
| MBTA | Migratory Bird Treaty Act |
| MHPA | Multiple Habitat Planning Area |
| MSCP | Multiple Species Conservation Program |
| NRCS | Natural Resources Conservation Service |
| OHWM | ordinary high water mark |
| RCP | reinforced concrete pipe |
| RWQCB | Regional Water Quality Control Board |
| SCS | Soil Conservation Service |
| SWPPP | Storm Water Pollution Prevention Plan |
| USACE | U.S. Army Corps of Engineers |
| USEPA | U.S. Environmental Protection Agency |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

1.0 EXECUTIVE SUMMARY

AECOM biologists conducted a general biological resources assessment for the Maple Canyon Storm Drain Project in the City of San Diego, California in March 2013. As these studies are 5 years old as of the revision of this Biological Technical Report (March 2018), AECOM conducted a new general biological resource survey in March 2018 to update the resources previously discovered. The biological study area (BSA) for the project includes the project site (4.47 acres) plus a surrounding 500-foot buffer area (115.87 acres). The approximately 120.34-acre BSA is bounded by Spruce and Thorn Streets to the north, Kalmia Street to the south, 6th Avenue and Balboa Drive to the east, and Union Street to the west in San Diego. First Avenue passes through the approximate middle of the BSA. The purpose of this document is to summarize the general biological resources within the BSA and to assess the suitability of the BSA to support special-status species and sensitive habitat types.

The project consists of replacing 14 existing storm drains (12- and 18-inch-diameter) in-place with new reinforced concrete pipe (RCP), extending each storm drain to the bottom of the canyon, and constructing new headwalls and dissipaters (Project site). Replacement and extension of the 14 storm drains would result in 1,500 total linear feet of RCP installation. Trenching for each storm drain is estimated at a width of 4 feet and a depth of 8 to 10 feet. The RCP would be installed at the same depth. The location of staging areas has not yet been determined; however, it is possible that staging may occur within the canyon near Maple Street, in previously disturbed areas. Staging areas would be located mostly outside of sensitive (Tier I-IIIB) vegetation communities, with a portion of the staging areas located within Tier IIIB nonnative grassland habitat. Construction is anticipated to last between 6 and 9 months.

Based on the results of the updated biological survey conducted in March 2018, several changes have taken place in the canyon that resulted in changes to some vegetation communities and jurisdictional features. The changes are explained here, while the remainder of the report has been updated to reflect the updated conditions. The main changes that have taken place in the canyon involve the continued erosion of the main channel on the canyon floor. This erosion has resulted in an increase in channel width near the downstream end of the canyon. The ongoing erosion in this area has caused some trees to fall along the bank of the creek. The channel widening occurred outside the limits of impacts, but the report and figures have been updated to note the change.

Erosion in other locations within the canyon has also caused several additional eucalyptus trees to fall. This has lowered the number and density of eucalyptus trees along the creek to the point

that the eucalyptus woodland previously mapped as California Department of Fish and Wildlife (CDFW) waters no longer functions as associated riparian habitat.

Additionally, the original survey identified areas delineated as City wetland (i.e. meeting two of three U.S. Army Corps of Engineers [USACE] wetland parameters) due to the presence of hydrology and nonnative riparian canopy. Due to losses of trees along the channel and isolation of hydrology to the creek, these areas no longer support nonnative riparian species and thus no longer meet the definition of a City wetland. The figures and tables that follow include the above changes.

The vegetation communities within the BSA include coast live oak woodland (0.09 acre), marginal-quality disturbed Diegan coastal sage scrub (0.95 acre), eucalyptus woodland (10.73 acres), nonnative grassland (7.82 acres), ornamental/disturbed vegetation (7.61 acres), and urban/developed land (92.14 acres). Three special-status plant species, San Diego sunflower (*Bahiopsis laciniata*), San Diego barrel cactus (*Ferocactus viridescens*), and California box-thorn (*Lycium californicum*), were observed during vegetation mapping. No special-status wildlife species were observed during the general biological survey. Three jurisdictional features and associated riparian corridors were delineated within the BSA totaling 1.63 acres of potential jurisdictional waters. The proposed project has potential to result in impacts to Diegan coastal sage scrub, eucalyptus woodland, nonnative grassland, and ornamental and urban/developed land cover types. The proposed project may also result in impacts to jurisdictional waters of the U.S. and state.

2.0 INTRODUCTION

This report summarizes the findings of an updated biological resources assessment completed for the approximately 120.34-acre BSA bounded by Spruce and Thorn Streets to the north, Kalmia Street to the south, 6th Avenue and Balboa Drive to the east, and Union Street to the west in San Diego, California. This document addresses the on-site physical features, vegetation communities, and plant and wildlife species occurring or potentially occurring on the site. Furthermore, the suitability of habitats to support special-status species and sensitive habitats is analyzed. This biological resources impact assessment has been conducted using the most current project design, dated September 2017. Construction is expected to last between six and nine months once started. Recommendations based on existing conditions and proposed mitigation measures for avoiding, minimizing, and compensating for these impacts are provided.

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3.0 REGULATORY FRAMEWORK

This section provides a summary of the federal and state environmental regulations that govern the biological resources applicable to the BSA. This section also provides a summary of other state and local environmental guidelines or listings that evaluate the rarity of species or the habitats they depend on. The California Environmental Quality Act (CEQA) significance criteria are also included in this section.

3.1 Federal Regulations

Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. FESA is intended to operate in conjunction with the National Environmental Policy Act to help protect the ecosystems upon which endangered and threatened species depend.

FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined to include harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct (FESA Section 3 [(3)(19)]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] Section 17.3). Harass is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR Section 17.3). Actions that result in take can result in civil or criminal penalties. See Section 3.6 for a discussion of the habitat conservation plan (HCP) that addresses endangered and threatened species in the City of San Diego. Projects that are implemented consistent with City of San Diego Land Development Code Biology Guidelines (Biology Guidelines) would be allowed to “take” endangered species with the City’s authorization and approval.

Clean Water Act

Pursuant to Section 404 of the Clean Water Act (CWA), USACE is authorized to regulate any activity that would result in the discharge of dredged or fill material into jurisdictional waters of the U.S., which include those waters listed in 33 CFR Part 328 (Definitions). USACE, with oversight by the U.S. Environmental Protection Agency (USEPA), has the principal authority to issue CWA Section 404 Permits.

Pursuant to Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB), Region 9, certifies that any discharge into jurisdictional waters of the U.S. will comply with state water quality standards. RWQCB, as delegated by USEPA, has the principal authority to issue a CWA Section 401 water quality certification or waiver.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 U.S. Code 703).

The list of migratory birds includes nearly all bird species native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defines species protected under the MBTA and excludes all nonnative species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under the MBTA to directly kill or destroy a nest of nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. Removal of unoccupied nests, or bird mortality resulting indirectly from a project, is not considered a violation of the MBTA.

Any activity, such as grading or grubbing for construction of the project site, that results in destruction of one or more active nests of native birds would entail a violation of the MBTA.

3.2 State Regulations

California Fish and Game Code

The California Fish and Game Code (CFGF) regulates the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act (CESA) (Sections 2050–2115) and Streambed Alteration Agreement regulations (Sections 1600–1616). These sections are described further below.

CFGC Sections 1600–1616 – Pursuant to Section 1600 et seq. of the CFGC, the CDFW (formerly California Department of Fish and Game) regulates activities of an applicant’s project that would substantially alter the flow, bed, channel, or bank of streams or lakes, unless certain conditions outlined by CDFW are met by the applicant. The limits of CDFW jurisdiction are defined in CFGC Section 1600 et seq. as the “bed, channel, or bank of any river, stream,¹ or lake designated by CDFW in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit.”² However, in practice, CDFW usually extends its jurisdictional limit and assertion to the top of a bank of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider.

In some cases, drainage ditches and retention ponds³ can be potentially considered under the regulatory administration of CDFW. CDFW provides specific guidance concerning its regulatory administration in California Code of Regulations Title 14 Section 720 (Designation of Waters of Department Interest):

For the purpose of implementing Sections 1601 and 1603 of the Fish and Game Code, which requires submission to the Department of general plans sufficient to indicate the nature of a project for construction by or on behalf of any person, governmental agency, state or local, and any public utility, of any project which will divert, obstruct, or change the natural flow or bed of any river, stream, or lake designated by the Department, or will use material from the streambeds designated by the Department, all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams, and streambeds, *which may have intermittent flows of water*, are hereby designated for such purpose. (Italics added.)

CFGC Sections 2050–2115 – Any proposed impact to state-listed species within or adjacent to the project area would require a permit under CESA. CESA generally parallels the main provisions of FESA and is administered by CDFW. CESA prohibits take of wildlife and plants listed as threatened or endangered by the California Fish and Game Commission. *Take* is defined under the CFGC as any action or attempt to “hunt, pursue, catch, capture, or kill.” Therefore, take under CESA does not include “the taking of habitat alone or the impacts of the taking.”⁴ Rather, the courts have affirmed that, under CESA, “taking involves mortality.”

¹ Title 14 California Code of Regulations (CCR) 1.72 defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.”

² This also includes the habitat upon which they depend for continued viability (California Fish and Game Code Division 5, Chapter 1, Section 45, and Division 2, Chapter 1, Section 711.2[a]).

³ Title 14 CCR 1.56 defines a lake as a feature that “includes lakes or man-made reservoirs.”

⁴ *Environmental Council of Sacramento v. City of Sacramento*, 142 Cal. App. 4th 1018 (2006).

CESA allows exceptions to the take prohibition for take that occurs during otherwise lawful activities. The requirements of an application for an incidental take permit under CESA are described in Section 2081 of the CFGC. Incidental take of state-listed species may be authorized if an applicant submits an approved plan that minimizes and “fully mitigates” the impacts of this take. Therefore, any proposed impact to state-listed species within or adjacent to the project area would require an incidental take permit under CESA.

CFGC Section 2080.1 allows an applicant who has obtained a federal incidental take statement as part of a Biological Opinion pursuant to a FESA Section 7 consultation or an incidental take permit under FESA Section 10(a) to notify the CDFW Director in writing that the applicant has been issued an incidental take statement or permit pursuant to FESA and to submit a copy to the CDFW Director. The CDFW Director then has 30 days to determine whether the incidental take statement or permit is “consistent” with CESA in the form of a written “consistency determination.” If the CDFW Director determines that the incidental take statement or permit is consistent with CESA, the applicant does not need to obtain separate take authorization from CDFW in the form of an incidental take permit under CFGC Section 2081(b) and (c). However, consistency determinations apply only in those situations where the affected species is listed under both FESA and CESA. If the species is listed under CESA only, an applicant must obtain an incidental take permit under CFGC 2081(b) and (c).

CFGC Section 3503 and 3512 – Under CFGC Division 4, Part 2, Chapter 1, Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey), or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto,” where “take” is defined under Division 0.5, Chapter 1, Section 86 as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” In addition, CFGC 3512 also prohibits take of birds and active nests. Construction activities that result in abandonment of an active bird nest in areas adjacent to the disturbance may violate sections of the CFGC.

Porter-Cologne Water Quality Act

Pursuant to Section 13000 et seq. of the California Water Code (the 1969 Porter-Cologne Water Quality Control Act), RWQCB is authorized to regulate any activity that would result in discharges of waste or fill material to waters of the state, including “isolated” waters and wetlands (e.g., vernal pools and seeps). Waters of the state include any surface water or groundwater within the boundaries of the state (California Water Code Section 13050[e]). RWQCB also adopts and implements water quality control plans (basin plans) that recognize and are designed to maintain the unique characteristics of each region with regard to natural water

quality, actual and potential beneficial uses, maintaining water quality, and addressing the water quality problems of that region.

Designated beneficial uses of state waters that may be protected against quality degradation include preservation and enhancement of fish, wildlife, designated biological habitats of special significance, and other aquatic resources or preserves.

3.3 CDFW Species of Concern

In addition to formal listing under FESA and CESA, species receive additional consideration by CDFW and local lead agencies during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern,” developed by CDFW. The list tracks species in California whose numbers, reproductive success, or habitat may be threatened. See Section 3.6 for a discussion of the HCP that addresses other sensitive species in the City of San Diego.

3.4 California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low population numbers, have limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings:

List 1A: Plants presumed extinct in California

List 1B: Plants rare, threatened, or endangered in California and elsewhere

List 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere

List 3: Plants about which we need more information – A Review List

List 4: Plants of limited distribution – A Watch List

3.5 CEQA Significance Criteria

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely on the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would typically be considered significant. Based on these

guidelines, impacts to biological resources would be considered significant if the project would do any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or the U.S. Fish and Wildlife Service (USFWS).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with the provisions of an adopted HCP; Natural Community Conservation Plan; or other approved local, regional, or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. The evaluation of impacts considers direct impacts, indirect impacts, and cumulative impacts, and whether the impact is permanent or temporary.

3.6 Local Programs

The City of San Diego has developed the Multiple Species Conservation Program (MSCP), which is a regional, multijurisdictional HCP that provides a coordinated program issuing “take” authorization for covered species for projects that comply with the MSCP. The MSCP provides for the preservation of a network of habitat and open space, the protection of biodiversity, and the enhancement of the region’s quality of life. The MSCP also provides an economic benefit by reducing constraints on future development and decreasing the costs of compliance with federal and state laws protecting biological resources. The MSCP Plan was developed cooperatively by participating jurisdictions and special districts in partnership with the wildlife agencies, property

owners, and representatives of the development industry and environmental groups. The plan was designed to preserve native vegetation and meet the habitat needs of multiple species, rather than to focus preservation efforts on one species at a time. By identifying priority areas for conservation and other areas for future development, the MSCP streamlines existing permit procedures for development projects that impact habitat.

The ultimate goal of the MSCP is to create a regional habitat preserve system within the Multiple Habitat Planning Area (MHPA) while allowing development projects to occur. The MSCP provides for a streamlined development review system that avoids the traditional project-by-project review by regulatory agencies.

The City of San Diego's MSCP Subarea Plan (City of San Diego 1997a) was prepared pursuant to the general outline developed by USFWS and CDFW to meet the requirements of the California Natural Communities Conservation Planning Act of 1992. The MSCP Subarea Plan forms the basis for the implementing agreement, which is the contract between the City of San Diego and the wildlife agencies to ensure implementation of the MSCP Subarea Plan and thereby allow the City of San Diego to issue take permits at the local level (City of San Diego 1997b).

In addition to the City's MSCP Subarea Plan, other local planning policy documents include the City's Biology Guidelines (2011) and City of San Diego Guidelines for Conducting Biology Surveys (Appendix II of the Biology Guidelines). As described in these guidelines, the City of San Diego established Environmentally Sensitive Lands (ESLs) regulations to ensure protection of resources consistent with CEQA and the City's MSCP. ESLs include lands within the MHPA, wetlands, sensitive vegetation communities, habitat for listed species, lands supporting narrow endemics, and steep slopes. The regulations encourage avoidance and minimization of impacts to ESLs. Biology guidelines have been established that define the survey and impact assessment methodologies and mitigation requirements for unavoidable impacts (City of San Diego 2011).

Sensitive biological resources are defined by the City's Municipal Code (Section I) as:

- Lands that have been included in the MHPA as identified in the City's MSCP Subarea Plan;
- Wetlands (as defined by the Municipal Code, Section 113.0103);
- Lands outside of the MHPA that contain Tier I habitats, Tier II habitats, Tier IIIA habitats, or Tier IIIB habitats as identified in the Biology Guidelines of the Land Development Code;

-
- Lands supporting species or subspecies listed as rare, endangered, or threatened;
 - Lands containing habitats with narrow endemic species as listed in the Biology Guidelines of the Land Development Code; and
 - Lands containing habitats of covered species as listed in the Biology Guidelines of the Land Development Code.

4.0 METHODS

Available information pertaining to the natural resources of the region was reviewed in support of this analysis. This report is based on field-collected data from one survey conducted by AECOM biologists. All references reviewed for this assessment are listed in Section 8.0, References, of this document. The following sources provided additional details about the BSA:

- California Natural Diversity Data Base (CNDDB). Sacramento, California (CDFW 2013)
- Aerial photography of the site (U.S. Geological Survey [USGS] Seamless Data Distribution System 2003)
- Soil Survey of San Diego County, San Diego Area, California. Soil Conservation Service (Soil Conservation Service [SCS] 1973)

AECOM biologists Barbra Calantas, Lance Woolley, and Lanika Cervantes conducted the initial field assessment of the BSA on Monday March 25, 2013. An updated field assessment of the BSA was conducted by AECOM biologist Sundeep Amin on Monday March 12, 2018. Preparer qualifications are provided in Appendix A. Vegetation mapping, a jurisdictional delineation, and general habitat assessment were conducted during the 2013 survey; this information was updated as necessary based on the results of the 2018 survey. The BSA was surveyed on foot to access the proposed activity locations, survey for rare plants and wildlife, observe vegetation communities, and observe soils. A separate, focused rare plant survey was not conducted within the BSA; however, observations of rare plants were documented during the general biological survey. In addition, areas of higher elevation within the BSA were surveyed on foot to provide a view of the entire BSA and all vegetation communities. During the field survey, biologists recorded plant and animal species observed and mapped biological communities. Vegetation classification was based on the Holland scheme (Oberbauer et al. 2008). Vegetation was mapped in the field over ortho-rectified aerial photographs and digitized into a geographic information system (GIS) program. Additional desk-top mapping was conducted using aerial imagery and known adjacent vegetation communities to capture changes in the project footprint and BSA after the initial biological survey had been completed. All mapping was conducted using the GIS database. The biological survey and report were prepared consistent with the City of San Diego's Guidelines for Conducting Biological Surveys described within the City's Land Development Code.

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5.0 RESULTS

5.1 Study Site Location and Description

The BSA is approximately 120.34 acres and is located between Quince Street to the northeast and West Maple Drive to the southwest in the City of San Diego, California. First Avenue passes through the middle of the BSA. The proposed 6- to 9-month construction activities are located within undeveloped land that is predominantly characterized by disturbed and ornamental vegetation. The surrounding land uses are undeveloped open space and residential development. The site is located on the USGS 7.5-minute series Point Loma quadrangle (Figures 1 and 2).

5.2 Physical Characteristics

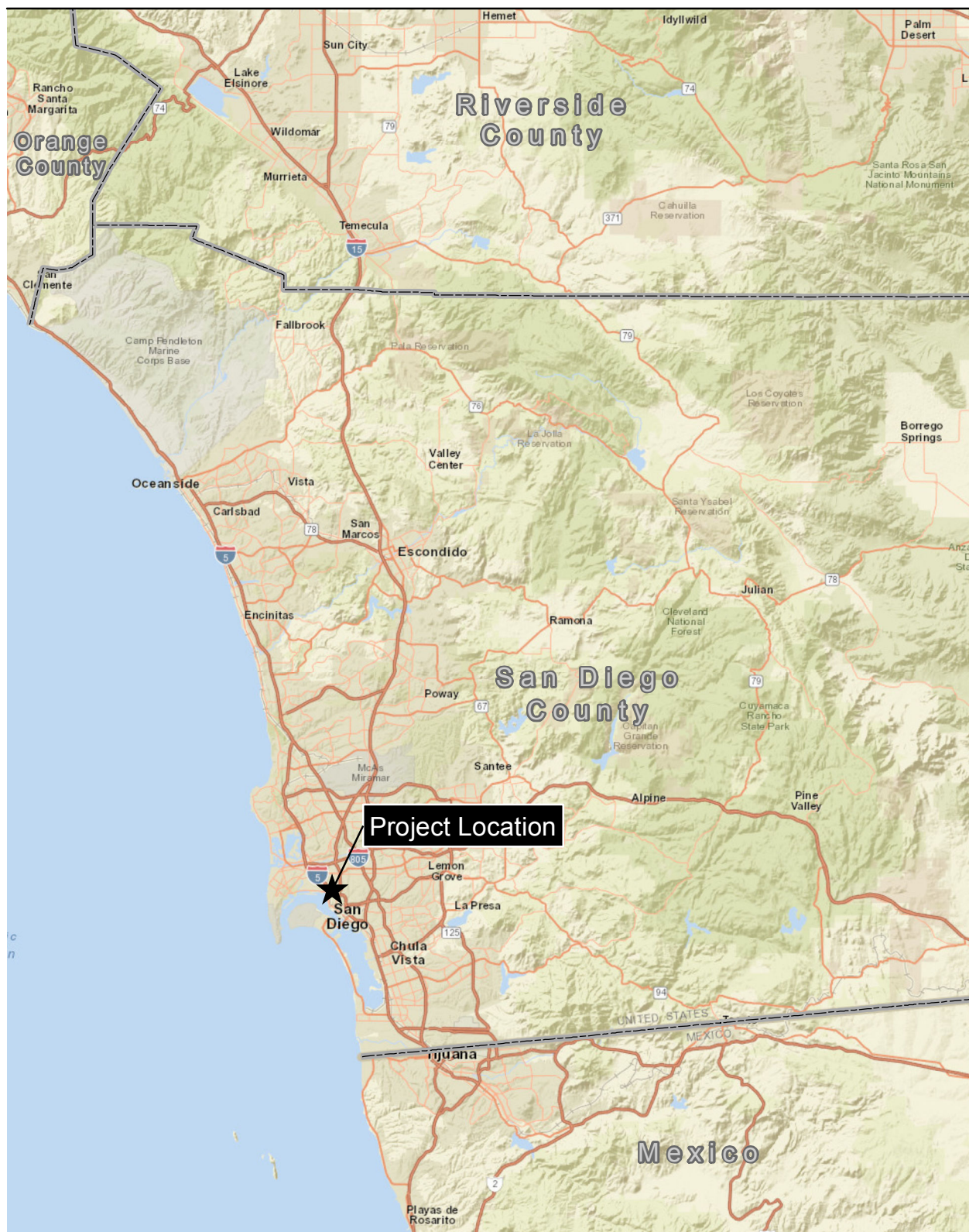
5.2.1 Topography and Drainage

Elevations within the BSA range from 66 to 295 feet. Topography within the BSA is generally steep with a few undulating hills. However, the BSA includes some areas with a gradual slope or flat land. Many of the proposed activities and much of the access road traverse slopes that meet the City of San Diego's definition of "steep slope" (greater than 25% slope and an elevation differential of 50 feet). Additional detail is provided in Section 5.5.3.

5.2.2 Soils

The Natural Resources Conservation Service (NRCS), previously known as the Soil Conservation Service, mapped three soil types within the vicinity of the project site: Gaviota fine sandy loam (GaF) 30 to 50% slopes, Gaviota fine sandy loam (GaF) 9 to 30% slopes, and Terrace Escarpments (TeF). The characteristics of the soil types are described below (Figure 3) (SCS 1973).

- Gaviota fine sandy loam (GaF) 30 to 50% slopes: This soil type occurs within the BSA, outside of any project features. It consists of very shallow or shallow well-drained soils formed in material weathered from hard sandstone or meta-sandstone (SCS 1973).
- Gaviota fine sandy loam (GaF) 9 to 30% slopes: This soil type occurs within the BSA, outside of any project features. It consists of very shallow or shallow well-drained soils formed in material weathered from hard sandstone or meta-sandstone (SCS 1973).



Source: ESRI 2012; SANGIS 2012

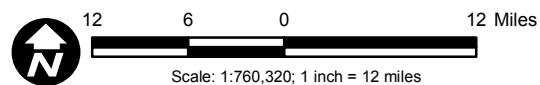
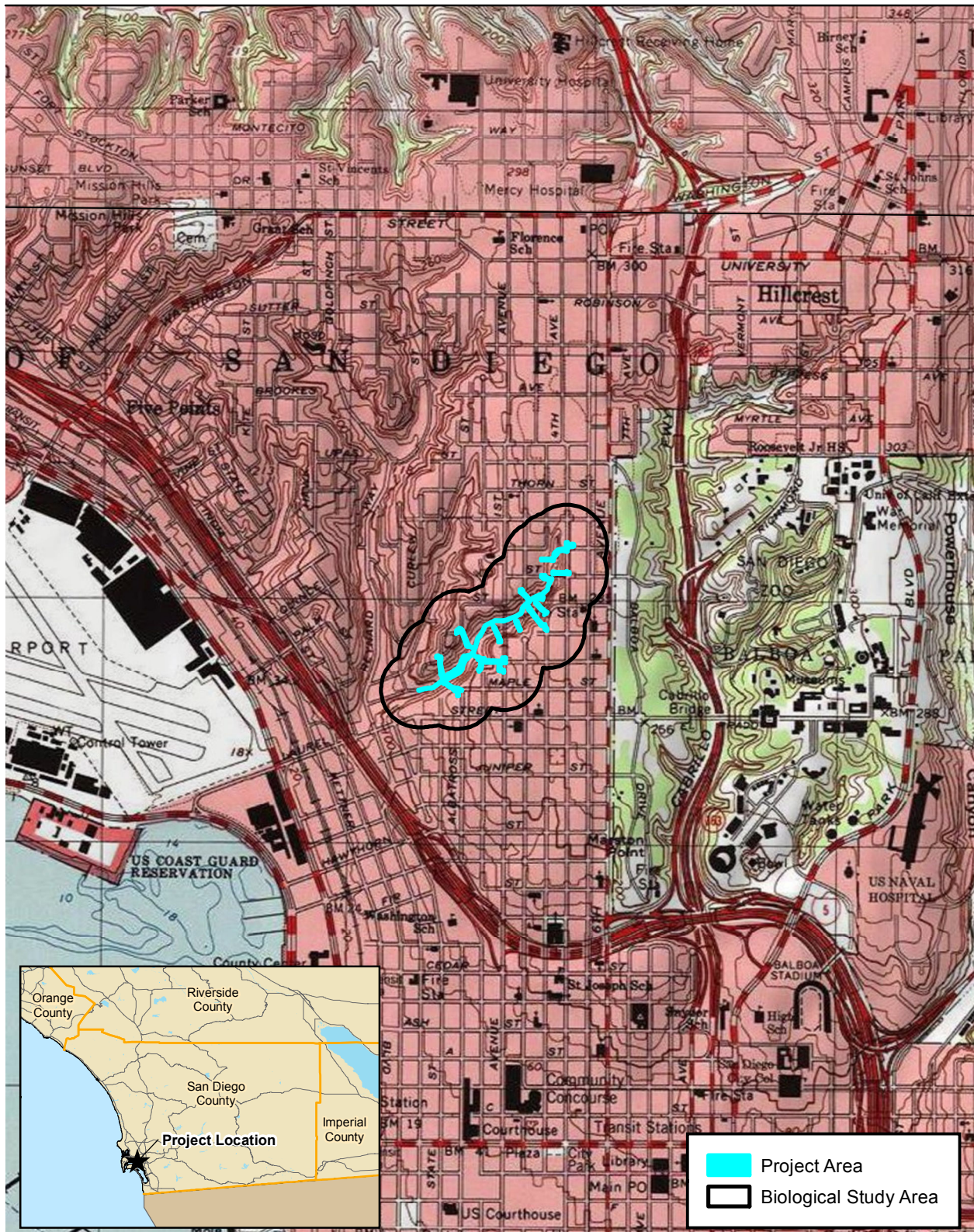


Figure 1
Regional Map

Maple Canyon Storm Drain Project Biological Technical Report

Path: P:\2013\60287621_Maple_Canyon\06GIS\6.3_Layout\Bio_Constraints_Report\Sep_2016\Fig1_Regional_Map.mxd, 9/8/2016, lauren_rizzo



Source: ESRI; USGS Topo 7.5' Quad, La Mesa, CA 1975.

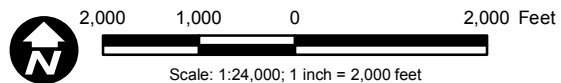
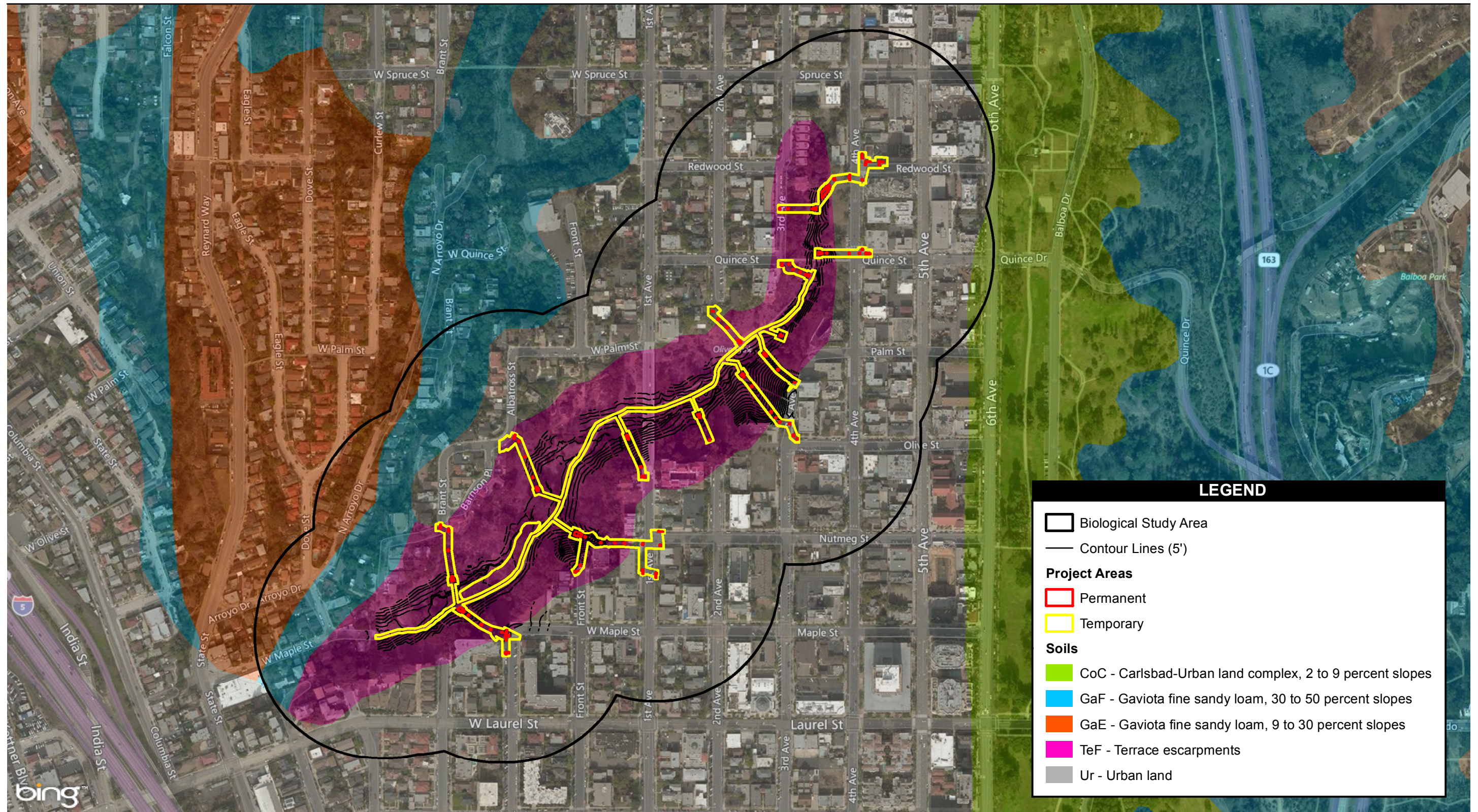


Figure 2
Vicinity Map

Maple Canyon Storm Drain Project Biological Technical Report

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Source: AECOM; ESRI.

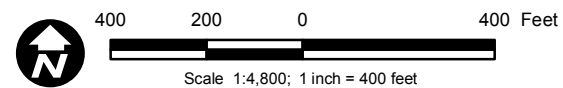


Figure 3
Soils

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-
- Terrace Escarpments (TeF): This soil type occurs within all project features and makes up the majority of the BSA within Maple Canyon. Terrace escarpments consist of long, narrow rocky areas with steep faces composed of soft coastal sandstone, hard shale, or fine-grained sandstone (SCS 1973).

5.3 Biological Resources

The Biology Guidelines categorize vegetation communities into tier levels to represent the sensitivity of these communities. Tier I (rare uplands) categories contain the most sensitive biological resources concerning vegetation communities. Tier II communities consist of uncommon uplands, Tier III communities consist of common uplands, and Tier IV communities are considered “other” uplands. Tier IV sensitivity is minimal, containing vegetation communities that are nonnative, such as eucalyptus woodland. The relative sensitivity of different habitats, including wetlands, is also recognized in the Biology Guidelines by the mitigation ratio required to compensate for habitat losses. Higher habitat tiers require more mitigation than lower habitat tiers (see Table 3 of the Biology Guidelines). The BSA for the project is characterized and dominated by urban/developed cover type, primarily within the 500-foot buffer. Within the proposed project features, the most dominant cover type is eucalyptus woodland (Tier IV). Other vegetation communities within the BSA that were observed less frequently include Diegan coastal sage scrub (Tier II), nonnative grassland (Tier IIIB), and ornamental vegetation (Tier IV) (Figure 4). Each of the vegetation communities, including associated common plant and wildlife species observed or expected to occur within these communities, is described below. Figure 4 shows the distribution of these vegetation communities throughout the BSA. A complete list of the botanical species observed/detected in the BSA during surveys of the site is provided in Appendix B.

5.3.1 Vegetation Communities

As previously noted, vegetation classification for the BSA was based on the Holland scheme (Oberbauer et al. 2008). Acreages for each vegetation community are listed in Table 1. Acreages are provided for the project footprint and 500-foot buffer within the BSA. Acreages within the project footprint are further categorized as permanent or temporary impacts within Section 6.0.

Table 1
Vegetation Communities within the BSA¹

| Vegetation Communities and Other Cover Types (Oberbauer et al. 2008) | MSCP Upland Tier Habitat Type | Project Site (Acres) | Buffer (Acres) | Total BSA (Acres) |
|--|-------------------------------|----------------------|----------------|-------------------|
| Uplands | | 2.26 | 17.33 | 19.59 |
| Coast Live Oak Woodland | Tier I | 0 | 0.09 | 0.09 |
| Diegan Coastal Sage Scrub | Tier II | 0.01 | 0.94 | 0.95 |
| Eucalyptus Woodland | Tier IV | 1.36 | 9.37 | 10.73 |
| Nonnative Grassland | Tier IIIB | 0.89 | 6.93 | 7.82 |
| Other Cover types | | 2.21 | 98.53 | 100.74 |
| Disturbed Habitat | Tier IV | 0.73 | 0.26 | 0.99 |
| Ornamental | Tier IV | 0.48 | 7.13 | 7.61 |
| Urban/Developed | N/A | 1.00 | 91.14 | 92.14 |
| Total¹ | | 4.47 | 115.86 | 120.33 |

¹ All acreages are rounded to the nearest hundredth, which may account for minor rounding error.

Coast Live Oak Woodland (71160) (Tier I)

A small area in the eastern portion of the BSA consists of coast live oak woodland. This community typically occurs on north-facing slopes and shaded ravines.

Within the BSA, this woodland is dominated by coast live oak (*Quercus agrifolia*), an evergreen oak that reaches 32 to 82 feet in height. The shrub layer is poorly developed, and the understory mostly includes nonnative grasses, such as ripgut grass (*Bromus diandrus*), wild oat (*Avena barbata*), and soft chess (*Bromus hordeaceus*). Approximately 0.09 acre of coast live oak woodland occurs within the BSA.

Diegan Coastal Sage Scrub: Coastal Form (32510) (Tier II)

Diegan coastal sage scrub is a localized form of coastal sage scrub composed of low, soft-woody subshrubs, many of which are facultatively drought-deciduous.

Characteristic species found within the BSA include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), and lemonade berry (*Rhus integrifolia*). The shrub layer in this community ranges from a continuous canopy and little understory to a more open canopy with widely spaced shrubs and a well-developed understory. Less commonly occurring species in this association include coast prickly pear (*Opuntia littoralis*), coast cholla (*Cylindropuntia prolifera*), wild cucumber (*Marah macrocarpus*), and deerweed (*Lotus*

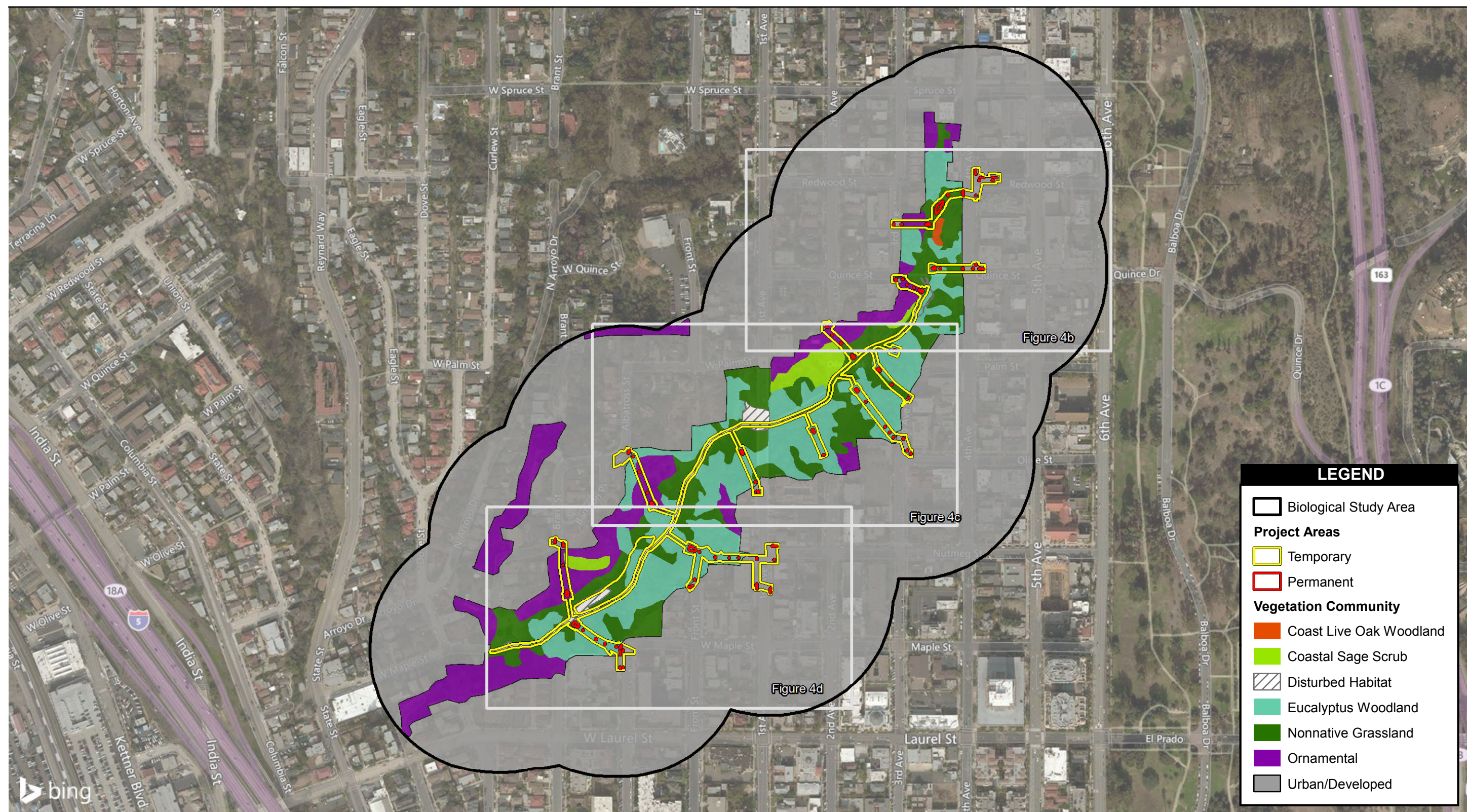


Figure 4a
Vegetation Communities

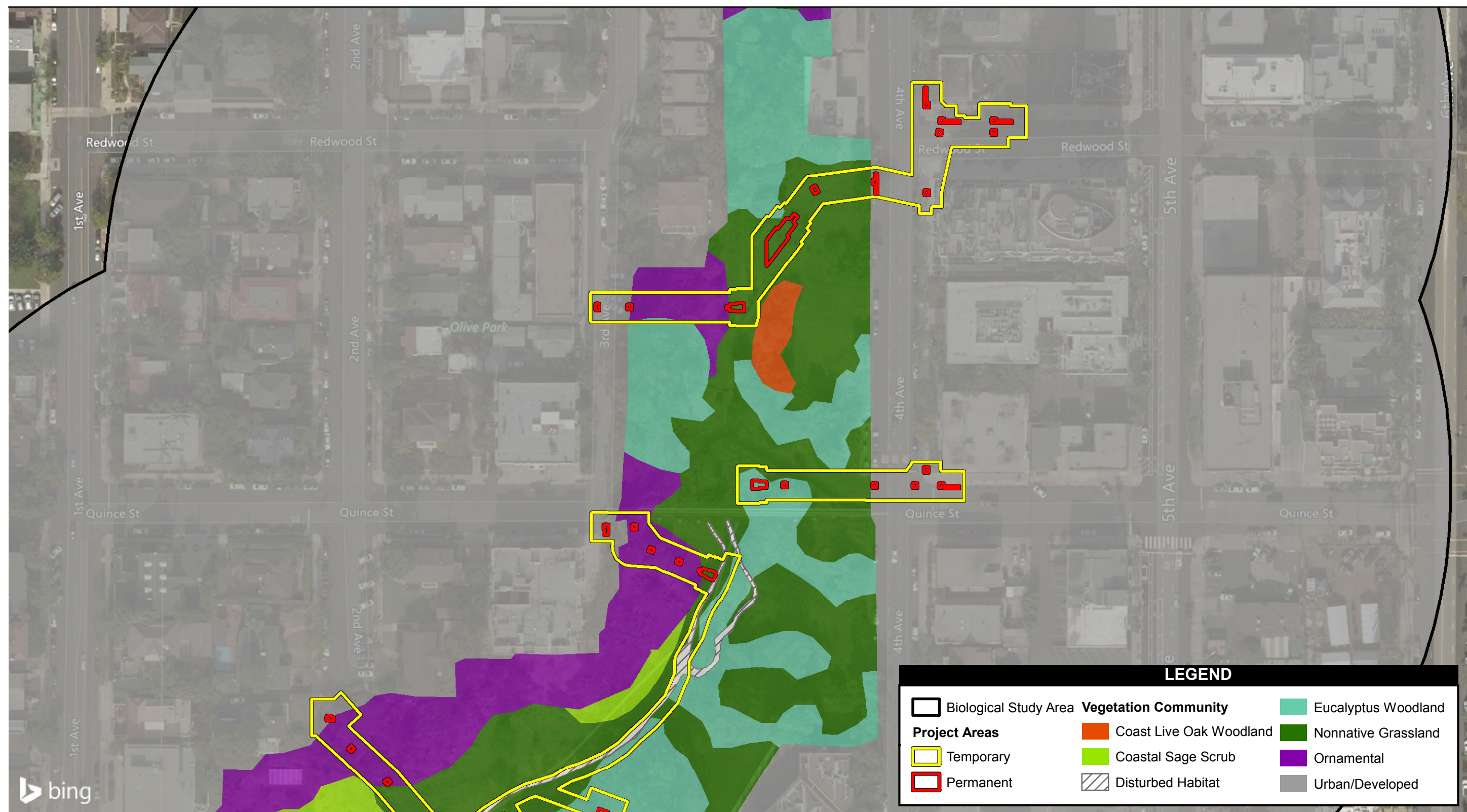
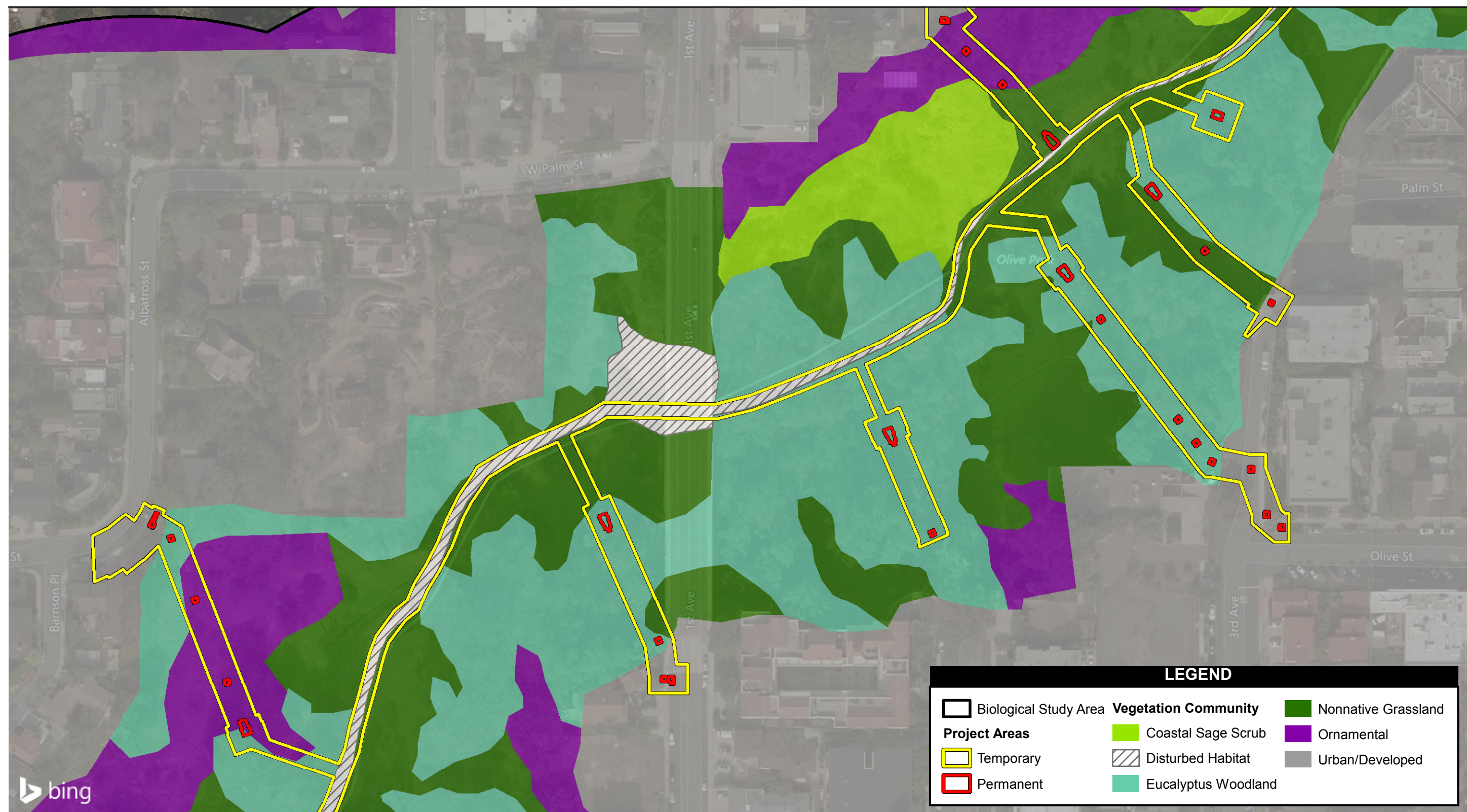


Figure 4b
Vegetation Communities



Source: AECOM; ESRI.

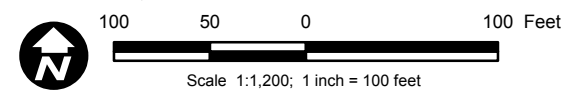
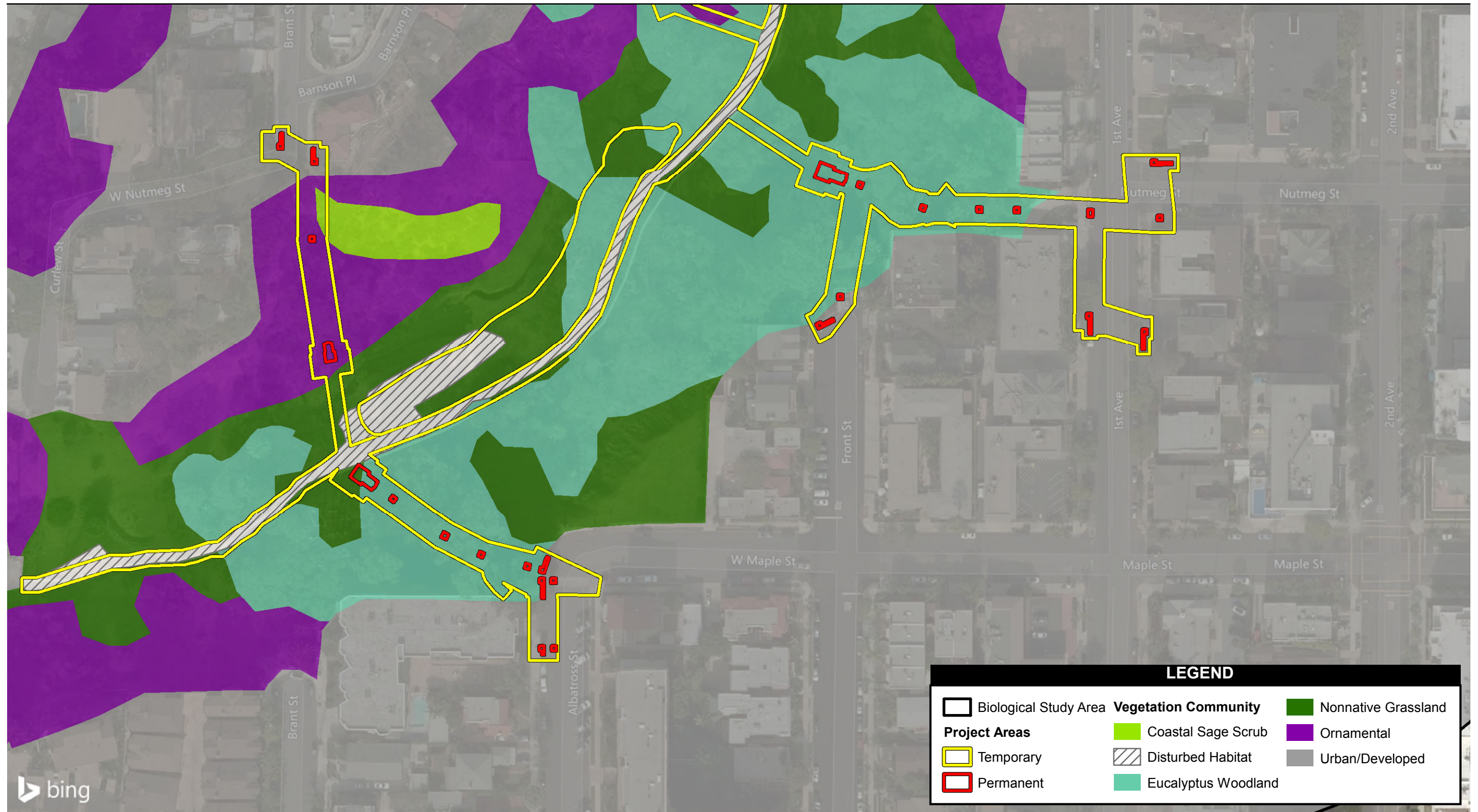


Figure 4c
Vegetation Communities



Source: AECOM; ESRI.



Figure 4d
Vegetation Communities

scoparius). The three special-status plant species detected within the BSA, San Diego sunflower, San Diego barrel cactus, and California box-thorn, occur within the Diegan coastal sage scrub community. Approximately 0.95 acre of coastal sage scrub habitat was mapped within the BSA.

Nonnative Grassland (42200) (Tier IIIB)

Nonnative grassland occurs on fine-textured, often clay soil that is moist during the winter rainy season and very dry during the summer and fall. This community consists of a dense cover of nonnative annual grasses, often associated with some native annual forbs, depending on the level of disturbance.

Characteristic species found within the BSA include ripgut grass, wild oat, soft chess, red brome (*Bromus madritensis* ssp. *rubens*), cheese weed (*Malva parviflora*), nasturtium (*Tropaeolum majus*), crown daisy (*Glebionis coronaria*), wild radish (*Raphanus sativus*), black mustard (*Brassica nigra*), and barley (*Hordeum murinum*). Approximately 7.82 acres of nonnative grassland occurs throughout the BSA.

Eucalyptus Woodland (79100) (Tier IV)

Eucalyptus woodland habitats can be made up of single-species eucalyptus (*Eucalyptus* spp.) thickets with little or no shrubs in the understory, or they can have a well-developed understory. In the majority of eucalyptus woodland communities, species produce dense stands and closed canopies. Eucalyptus will produce a large amount of leaf litter, and characteristics in the leaves limit the ability of other species to grow. Few native species can grow in the overstory when eucalyptus is nearby.

Characteristic species found within the eucalyptus woodland of the BSA include lemon scented gum (*Eucalyptus citriodora*), red gum (*Eucalyptus camaldulensis*), blue gum (*Eucalyptus globulus*), and red iron bark (*Eucalyptus sideroxylon*). Approximately 10.73 acres of eucalyptus woodland was mapped within the BSA.

Disturbed Habitat (11300) (Tier IV)

Disturbed habitat includes areas that have been physically disturbed and are no longer recognizable as a native or naturalized vegetation association, but still retain soil substrate.

The disturbed habitat is represented in the BSA as a dirt access path running through the center of the canyon. Approximately 0.99 acre of disturbed habitat was mapped within the BSA.

Ornamental (11000) (Tier IV)

Ornamental vegetation has been physically disturbed but still retains soil substrate. It is characterized by nonnative species established through human action.

Characteristic species found within the BSA include iceplant (*Carpobrotus chilensis*), crystalline iceplant (*Mesembryanthemum crystallinum*), pride of Madeira (*Echium candicans*), Peruvian pepper tree (*Schinus molle*), jade plant (*Crassula argentea*), lantana (*Lantana camara*), tree tobacco (*Nicotiana glauca*), and cape leadwort (*Plumbago auriculata*). Native species did not occur in this disturbed vegetation within the BSA. Approximately 7.61 acres of ornamental disturbed vegetation was mapped within the BSA.

Urban/Developed (12000)

Developed habitats are areas where construction has occurred. Native vegetation is no longer supported. Developed land is characterized by permanent structures and could include pavement or hardscape.

Within the BSA, developed land includes residential housing and pavement. No native vegetation is present. Approximately 92.14 acres of urban developed land was mapped within the BSA.

5.3.2 Wildlife Resources

Suitable breeding and foraging habitat for sensitive wildlife occurs within the Diegan coastal sage scrub community. Although residential development occurs on surrounding parcels, the property serves as a local linkage for wildlife.

Several species of birds, and the sign of one mammal, were observed or detected during the general biological survey for the proposed project. These birds reflect an assemblage of typical species encountered in urban canyons and disturbed areas. Two butterfly species and 14 species of birds were observed during the general biological survey (Appendix C). Sensitive wildlife observed or with the potential to occur within the BSA is discussed in Section 5.4.2.

5.4 Rare, Threatened, Endangered, Narrow Endemic, Sensitive, and MSCP Species

Special-status species are plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of

relatively limited distribution, and may require specialized habitat conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under CESA or FESA
- Protected under other regulations (e.g., MBTA)
- CDFW Species of Special Concern
- Listed as a species of concern by CNPS or USFWS
- Receive consideration during environmental review under CEQA

Special-status species considered for this analysis were based on queries of the CNDDDB for the areas within a nine-quad search of the site, CNPS literature, and field survey results. The following criteria were used to determine the potential for occurrence on the site for each special-status plant species evaluated:

- Present: Species is known to occur, based on CNDDDB or other records, and/or was observed on-site during the winter site visit.
- High potential: Species is known to occur near the site (based on CNDDDB or other records within the nine-quad search of the site or based on professional expertise specific to the site or species), and there is highly suitable habitat on-site. The plant is likely to be found if rare plant surveys are done during the spring or fall flowering season, depending on the species.
- Moderate potential: Species is known to occur in the vicinity of the site; however, there is marginal habitat on the site or the entire site has not been surveyed fully based on the winter site visit. A focused, spring survey needs to be done to confirm presence or absence.
- Low potential: Species is not known to occur on or in the vicinity of the site, and there is no suitable habitat for the species within the site.
- Unlikely: Species is outside of its elevational range, so potential for occurrence is extremely low.

Only those species known to be present or that have a high to moderate potential for occurrence will be discussed further (Table 2).

Table 2
Potential and Observed Special-Status Plant Species Occurring within the Biological Study Area

| Common Name | Scientific Name | Status ¹ | General Habitat Description ² | Microhabitat Description ³ | Habitat Present/Absent | Rationale |
|---------------------|-----------------------------|---|--|---|------------------------|---|
| Plants | | | | | | |
| California adolphia | <i>Adolphia californica</i> | CNPS: 2.1 | Clay soils, chaparral, coastal scrub, and valley and foothill grassland. Elevation 148–2428 feet. Perennial deciduous shrub. Blooms December–May. | Peripheral chaparral habitat with Diegan sage scrub, particularly near hillsides and next to creeks. Associated with California buckwheat and California sagebrush. | Present | Low to moderate potential to occur within the BSA. This species was not detected during the spring rare plant surveys. |
| San Diego ambrosia | <i>Ambrosia pumila</i> | USFWS: Endangered CNPS 1B.1 MSCP: Covered | Sandy loam or clay, often in disturbed areas, sometimes alkaline chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elevation 66–1362 feet. Perennial rhizomatous herb. Blooms April–October. | Creek beds, seasonally dry drainages, floodplains, on the periphery of willow woodland. Soils include sandy alluvium. | Present | Low potential to occur on-site. San Diego ambrosia was not found during the spring rare plant surveys. |
| San Diego sagewort | <i>Artemisia palmeri</i> | CNPS: 4.2 | Sandy, mesic soils, chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland. Elevation 49–3002 feet. Perennial deciduous shrub. Blooms February–September. | Found along creeks and drainages near the coast. Found in rocky, sandy loams. Grows commonly in shaded understory beneath willow, sycamore, and cottonwood. | Present | Low to moderate potential to occur within the BSA. This plant is only found near drainages, along creeks, or in some type of riparian habitat. This species was not detected during spring rare plant surveys. |
| San Diego sunflower | <i>Bahiopsis laciniata</i> | CNPS 4.2 | Chaparral, coastal scrub Elevation 197–2460 feet. Perennial shrub. Blooms February–August. | Arid Diegan sage scrub. San Diego sunflower occurs with California sagebrush. Shrub cover is open and mesic. Occurs in a variety of soil types. | Present | Present. San Diego sunflower was found within the BSA during spring rare plant surveys. |

| Common Name | Scientific Name | Status ¹ | General Habitat Description ² | Microhabitat Description ³ | Habitat Present/Absent | Rationale |
|-------------------------|---|----------------------------|--|---|------------------------|--|
| wart-stemmed ceanothus | <i>Ceanothus verrucosus</i> | CNPS: 2.2 MSCP: Covered | Chaparral. Elevation 3–1247 feet. Perennial evergreen shrub. Blooms December–May. | Coastal chaparral intermixed with chamise. Soils consist of Exchequer rocky silt loams and San Miguel-Exchequer rocky silt loams. | Absent | Low to potential to occur. This species was not detected during spring rare plant surveys. |
| San Diego barrel cactus | <i>Ferocactus viridescens</i> | CNPS: 2.1 MSCP: Covered | Chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elevation 10–1476 feet. Perennial stem succulent. Blooms May–June. | Diegan sage scrub hillsides, often at the crest of slopes and growing in cobbles, occasionally found on the periphery of vernal pools and mima mounds. Soil types include San Miguel-Exchequer rocky silt loams and Redding gravelly loams. | Present | Present. San Diego barrel cactus was found within the BSA during spring rare plant surveys. |
| Palmer’s grapplinghook | <i>Harpagonella palmeri</i> | CNPS: 4.2 | Clay habitat, chaparral, coastal scrub, and valley and foothill grassland. Elevation 66–3133 feet. Annual herb. Blooms March–May. | Clay vertisols with open grassy slopes and open Diegan sage scrub. Diablo clays are favored on the coast. | Present | Low potential to occur on-site. This annual herb was not detected during spring rare plant surveys. |
| San Diego marsh-elder | <i>Iva hayesiana</i> | CNPS: 2.2 | Marshes, swamps, and playas. Elevation 33–1640 feet. Perennial herb. Blooms April–October. | Creeks and intermittent streambeds, open riparian canopy allowing substantial sunlight. | Absent | Low potential to occur on-site. San Diego marsh-elder occurs next to marshes, swamps, playas, creeks, and streambeds. This species was not detected during spring rare plant surveys. |
| Robinson’s pepper-grass | <i>Lepidium virginicum</i> var. <i>robinsonii</i> | CNPS 1B.2 | Chaparral and coastal scrub. Elevation 3–885 feet. Annual herb. Blooms February–July. | Openings in chaparral and sage scrub, usually found in foothill elevations. Sites are dry, exposed locales. | Present | Low to moderate potential to occur. Robinson’s pepper-grass was not detected during spring rare plant surveys. |

| Common Name | Scientific Name | Status ¹ | General Habitat Description ² | Microhabitat Description ³ | Habitat Present/Absent | Rationale |
|----------------------|----------------------------|---------------------|---|--|------------------------|---|
| California box-thorn | <i>Lycium californicum</i> | CNPS 4.2 | Coastal sage scrub and coastal bluff scrub. Elevation 16-492 feet. Perennial shrub. Blooms March–August. | Exposed sites on southwestern-facing slopes. | Present | Present. This species was detected within the BSA. |
| Nuttall’s scrub oak | <i>Quercus dumosa</i> | CNPS 1B.1 | Sandy and clay loam habitat. Elevation 49–1312 feet. Perennial evergreen shrub. Blooms February–August. | Coastal chaparral with a relatively open canopy cover and relatively flat terrain. | Present | Low to potential to occur. This species was not detected during spring rare plant surveys. |

1. Federal
Other

U.S. Fish and Wildlife Service (USFWS)

California Native Plant Society (CNPS):

1B: Plants rare, threatened, or endangered in California and elsewhere

2: Plants rare, threatened, or endangered in California, but more common elsewhere

3: Plants more information is needed for

4: Plants of limited distribution – a watch list

CNPS R-E-D Code -

R (Rarity): 1 = Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time;

2 = Occurrence confined to several populations or to one extended population; 3 = Occurrence limited to one or a few highly restricted populations, or present in such numbers that it is seldom reported

E (Endangerment): 1 = Not endangered; 2 = Endangered in a portion of its range; 3 = Endangered throughout its range

D (Distribution): 1 = More or less widespread outside California; 2 = Rare outside California; 3 = Endemic to California

MSCP: Included on the San Diego Multiple Species Conservation Program (MSCP) covered plant species list (1997)

2. California Native Plant Society’s Inventory of Rare and Endangered Plants of California. August 2001.

3. Microhabitat Description: Reiser, Craig. 1994. Rare plants of San Diego County. Available at <http://sandiego.sierraclub.org/rareplants/003.html>.

5.4.1 Special-Status Plants

Table 2 (provided at the end of this subsection) includes the common and scientific names for each special-status plant species evaluated, regulatory status (federal, state, local, CNPS), habitat descriptions, and potential for occurrence within the BSA. Based on field observations and literature review specific to the special-status plants listed in Table 2, the potential for occurrence has been determined for each species. Based on these analyses, 60 species were eliminated from further consideration and were determined to be absent, not likely to occur, or have no potential to occur on the project site.

Species That Are Present or Have Potential to Occur

Three sensitive plant species are known to occur within the BSA and eight additional sensitive plant species have some potential to occur within the BSA. These 11 sensitive plant species are described below.

California adolphia (*Adolphia californica*) is a small shrub in the Rhamnaceae family. California adolphia is found in clay soils, coastal scrub communities, valley and foothill grassland, and chaparral. This species has low to moderate potential to occur in the coastal sage scrub community within the BSA; however, it was not detected during general surveys conducted throughout the BSA.

San Diego ambrosia (*Ambrosia pumila*) is a perennial rhizomatous herb in the Asteraceae family. San Diego ambrosia has low potential to occur within the BSA. Suitable clay soils for this species are found within the BSA; however, the BSA has a high level of weed invasion. San Diego ambrosia was not detected during general surveys conducted throughout the BSA.

San Diego sagewort (*Artemisia palmeri*) is a perennial deciduous shrub in the Asteraceae family. San Diego sagewort has low to moderate potential to occur within the BSA. This species is found in riparian woodland and scrub. Suitable habitat for San Diego sagewort occurs throughout the BSA; however, habitat in the BSA is very degraded due to the high level of weed invasion. This species was not detected during general surveys conducted throughout the BSA.

San Diego sunflower (*Bahiopsis laciniata*) is a perennial shrub in the Asteraceae family. San Diego sunflower was detected underneath the 1st Avenue Bridge in the coastal sage scrub community within the BSA (Figure 5).

Wart-stemmed ceanothus (*Ceanothus verrucosus*) is an evergreen shrub in the Rhamnaceae family. This species typically occurs on north-facing slopes within coastal chaparral. Wart-stemmed ceanothus has a low potential to occur within the BSA due to the degraded habitat within the BSA. This species was not detected during general surveys conducted throughout the BSA.

San Diego barrel cactus (*Ferocactus viridescens*) is a perennial stem succulent in the Cactaceae family. San Diego barrel cactus was detected east of the 1st Avenue Bridge in the coastal sage scrub community within the BSA (Figure 5).

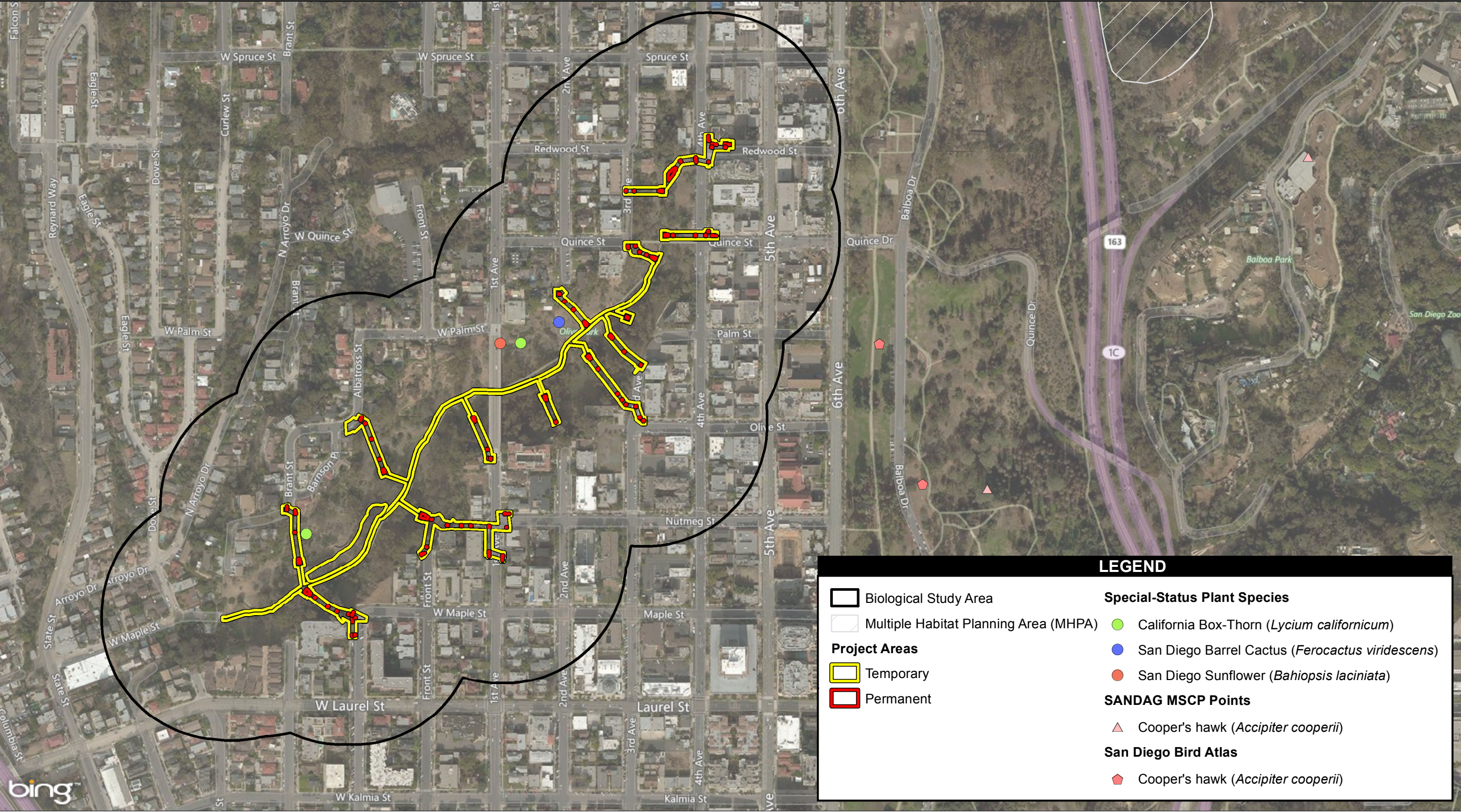
Palmer's grapplinghook (*Harpagonella palmeri*) is an annual herb in the Boraginaceae family. Palmer's grapplinghook has low potential to occur within the BSA. Suitable habitat with clay soils occurs within the BSA; however, it is very degraded with a high level of weed invasion. This species was not detected during general surveys conducted throughout the BSA.

San Diego marsh-elder (*Iva hayesiana*) is a perennial herb within the Asteraceae family. This species typically occurs along the banks of creeks or intermittent streams. Suitable habitat for this species is not present within the BSA; however, the potential for this species to be present is low due to the high level of weed invasion. San Diego marsh-elder was not detected during general surveys conducted throughout the BSA.

Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) is an annual herb in the Brassicaceae family. Robinson's pepper-grass has low to moderate potential to occur within the BSA. It is found in coastal sage scrub openings. Suitable habitat for this species is limited in the BSA and highly degraded. Robinson's pepper-grass was not detected during general surveys conducted throughout the BSA.

California box-thorn (*Lycium californicum*) is a perennial shrub in the Solanaceae family. This species was detected in the coastal sage scrub community within the BSA. California box-thorn occurs in the northwestern portion of the BSA and immediately northeast of the 1st Avenue Bridge (Figure 5).

Nuttall's scrub oak (*Quercus dumosa*) is a perennial evergreen shrub in the Fagaceae family. Nuttall's scrub oak has a low potential to occur within the BSA due to degraded habitat within the BSA. This species was not detected during general surveys conducted throughout the BSA.



Source: SanBIOS (SanGIS); SD Natural History Museum; AECOM; ESRI.

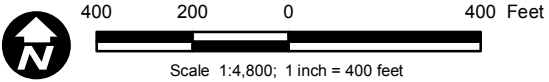


Figure 5
Sensitive Biological Resources
and MHPA Boundary

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5.4.2 Special-Status Wildlife

Table 3 (provided at the end of this subsection) includes the common name and scientific name for each special-status wildlife species that was evaluated, regulatory status (federal, state, local), habitat descriptions, and potential for occurrence within the BSA. The BSA supports suitable nesting and foraging habitat for seven federally, state, or locally sensitive species (Table 3). Based on the analyses conducted, 57 species were eliminated from further consideration and were determined to be absent or not likely to occur on the project site.

Species That Are Present or May Occur

The following species discussion focuses on the seven sensitive species with potential to occur within the BSA; all species have a low or high potential to occur based on suitable habitat present.

Orange-throated whiptail

Orange-throated whiptail (*Aspidoscelis hyperythra*) is a small lizard species strongly associated with coastal sage scrub habitat. This species is found throughout Southern California and northern Baja California. Orange-throated whiptail may occur in coastal sage scrub, chaparral, edges of riparian woodlands, and washes, and in weedy, disturbed areas adjacent to these habitats. Orange-throated whiptails emerge from hibernation in February and March, but some populations may be active throughout the year. Mating may take place May through July, and females deposit two to three eggs. Hatchlings are observed in August.

Suitable habitat for orange-throated whiptail occurs within the BSA. There is low potential for this species to occur within the BSA (Stebbins 2003).

Northern red-diamond rattlesnake

Northern red-diamond rattlesnake (*Crotalus ruber ruber*) is restricted to Southern California and Baja California. It is often found in chaparral and coastal sage scrub, along creek banks, and in granite rock outcrops or piles of debris. When inactive, the northern red-diamond rattlesnake occurs in rock crevices, animal burrows, brush piles, or similar micro-habitats. Northern red-diamond rattlesnakes are crepuscular and are generally active from mid-spring to mid-fall. Prey includes small mammals such as ground squirrels, mice, and rabbits, as well as lizards,

Table 3
Potential and Observed Special-Status Wildlife Species Occurring within the Biological Study Area

| Scientific Name | Common Name | Federal Status | State Status | MSCP | General Habitat | Potential for Occurrence |
|---|----------------------------------|----------------|--------------|------|---|---|
| REPTILES | | | | | | |
| <i>Aspidoscelis hyperythra</i> | Orange-throated whiptail | None | CSC | X | Low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food, termites. | Low potential to occur; marginally suitable habitat exists. |
| <i>Crotalus ruber ruber</i> | Northern red-diamond rattlesnake | None | CSC | | Coastal sage scrub and grasslands. Occurs in rocky areas and dense vegetation with rodent burrows, cracks in rocks, or surface cover objects. | Low potential to occur; marginally suitable habitat exists. |
| <i>Phrynosoma coronatum blainvillei</i> | Coast (San Diego) horned lizard | None | CSC | X | Coastal sage scrub and chaparral. | Low potential to occur; marginally suitable habitat is found on-site. |
| BIRDS | | | | | | |
| <i>Accipiter cooperi</i> | Cooper's hawk | None | WL | X | Usually in oak woodlands, but occasionally in willow or eucalyptus woodlands. | High potential; suitable habitat is present on-site and this species is known to occur within 1,000 feet (in Balboa Park). |
| <i>Campylorhynchus brunneicapillus sandiegensis</i> | Coastal (San Diego) cactus wren | None | CSC | X | Coastal sage scrub usually with abundant cactus patches. | Low potential to occur; marginally suitable habitat exists. |
| <i>Poliophtila californica californica</i> | Coastal California gnatcatcher | FT | CSC | X | Coastal sage scrub below 1,500 feet in elevation. Low coastal sage scrub, in arid washes, on mesas and slopes. | Low potential to occur; marginally suitable habitat exists. |
| MAMMALS | | | | | | |
| <i>Choeronycteris mexicana</i> | Mexican long-tongued bat | None | CSC | | Canyons, caves, mines, and rock fissures in desert, montane, and riparian habitats. Also known to occur in urban environments with abundant nectar sources, such as hummingbird feeders. | Low potential to occur; suitable roosting habitat on-site is marginal. |

Status Abbreviations: FT – federally threatened; CSC – California species of special concern; WL – Watch List

birds, and other snakes (Klauber 1972; Stebbins 2003). There is low potential for this species to occur within the BSA.

San Diego (coast) horned lizard

San Diego horned lizard (*Phrynosoma coronatum blainvillei*) is a subspecies of horned lizard that is endemic to extreme southwestern California, from Los Angeles County into Baja California (Stebbins 2003). It is relatively widespread in San Diego County, and locally common from the coast to the western edge of the desert (SDHS 1980). This species occurs from sea level to over 8,000 feet in elevation, in sandy or friable soil within a variety of habitats, from sage scrub to chaparral to coniferous and broadleaf woodlands (Stebbins 2003). San Diego horned lizard requires open areas for sunning, bushes for cover, and fine loose soil for rapid mobility. There is low potential for this species to occur within the BSA.

Cooper's hawk

The range of the Cooper's hawk (*Accipiter cooperi*) is year-round throughout most of the United States; its wintering range extends south to Central America, and its breeding range extends north to southern Canada (Rosenfeld and Bielefeldt 1993). It is a common breeder in both natural and urban environments, mainly breeding in oak and willow riparian woodlands, but also in eucalyptus trees (Unitt 2004). Breeding occurs from March through July. This hawk forages primarily on medium-sized birds, but is also known to eat small mammals such as chipmunks and other rodents (Rosenfeld and Bielefeldt 1993). The decline of this species had been caused by urbanization and loss of habitat; however, during the last 20 years, Cooper's hawk has apparently adapted to city living (Unitt 2004). Based on the presence of suitable habitat and proximity of known locations (Figure 5), it has a high potential to occur within the BSA.

Coastal (San Diego) cactus wren

Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) occurs in coastal sage scrub and maritime succulent scrub. This species nests almost exclusively in prickly pear (*Opuntia littoralis* and *Opuntia oricola*) and coastal cholla (*Cylindropuntia prolifera*) (Unitt 2004). Marginally suitable habitat for coastal cactus wren occurs within patches of *Opuntia* in the coastal sage scrub and maritime succulent scrub habitats within the BSA. Due to the marginal nature of habitat, this species has low potential to occur within the BSA.

Coastal California gnatcatcher

Coastal California gnatcatcher (*Polioptila californica californica*) is a small songbird that occurs in coastal sage scrub habitat in Southern California and Baja California. The primary cause of this species' decline is the cumulative loss of coastal sage scrub vegetation to urban and agricultural development (USFWS 1991). Gnatcatchers generally inhabit Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush and flat-topped buckwheat, generally below 1,500 feet in elevation along the coastal slope. This species typically avoids slopes greater than 25% with dense, tall vegetation when nesting. Marginally suitable habitat for coastal California gnatcatcher occurs in the coastal sage scrub habitat within the BSA. Due to the marginal quality of habitat, there is low potential for this species to occur within the BSA.

Mexican long-tongued bat

Mexican long-tongued bat (*Choeronycteris mexicana*) is known in California only from San Diego County as a summer resident in mostly urban habitat (Arroyo-Cabrales 1999; Olson 1947). In New Mexico and Arizona, these bats have been found from sea level to 25,833 feet, in desert and montane riparian, desert succulent shrub, desert scrub, and pinyon-juniper habitats. This species uses caves, mines, and buildings to roost during the day. As a nectar feeder, although known to eat fruits on occasion and insects rarely, the Mexican long-tongue bat migrates to follow flowering food plants, particularly agave and yucca (Arroyo-Cabrales 1999). These bats can be found as solitary individuals or in groups of up to several dozen. Suitable roosting habitat within the BSA is marginal. This species has low potential to occur within the BSA.

5.5 Other Sensitive Resources

Other sensitive resources include habitats that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the CFGC, and/or Sections 401 and 404 of the CWA. Other sensitive resources include wildlife migration corridors that provide for species movement.

5.5.1 Jurisdictional Resources

This section presents a summary of the findings of the formal delineation completed by AECOM staff on March 25, 2013. The project site was also previously delineated by Merkel & Associates

(Merkel & Associates 2012); this delineation was used as a baseline and revised based on the field survey completed by AECOM.

Table 4 presents the amount and type of potential jurisdictional waters that occur within the BSA; also refer to Figure 6 for locations of all jurisdictional waters. As presented in Table 4, three stream features (labeled Stream A, Stream B, and Stream C) were delineated within the BSA totaling 1.63 acres of potential jurisdictional waters of the U.S.⁵ and state⁶. Of the 1.63 acres, 1.08 acres is potential waters under the jurisdictional purview of USACE, RWQCB, and CDFW; and 0.55 acre is exclusively potential waters under the purview of CDFW⁷.

Stream A is a large unvegetated channel that begins at the outlet of a storm drain and continues along the canyon bottom before terminating at a basin bounded by a riprap berm. As of March 2018, this basin was completely full of sediment. When full, it appears that the water overflows out of the basin, down a small channel, onto Maple Avenue, and into the City storm drain system eventually emptying into the harbor/Pacific Ocean. In the Merkel & Associates delineation conducted in 2012, the downstream area was delineated as an emergent wetland, identifying curly dock (*Rumex crispus*), a facultative (FAC) species, as dominate. However, due to additional sediment accumulation over the past year, ripgut brome and crown daisy, both non-indicator (NI) upland species, have become dominate. This area no longer meets the hydrophytic vegetation indicator; therefore, it is no longer considered an emergent wetland, but was delineated as a non-wetland water of the U.S. and state.

Stream B is a tributary to Stream A. This stream was most likely created by the storm drain outlet located at the top of the mesa. The upstream portion is a highly eroded feature and was not delineated; however, as the feature travels downstream, the feature begins to stabilize slightly and develop ordinary high water mark (OHWM) indicators. At this point, the feature was delineated as a water of the U.S. and state.

⁵ Jurisdictional waters of the U.S. include jurisdictional waters of the state.

⁶ U.S. Army Corps of Engineers' and Regional Water Quality Board's lateral limits consist of the ordinary high water mark (OHWM) and may be extended to the outer limit of a three-parameter wetland if wetlands exist adjacent to the drainage. However, CDFW's limits of these drainages begin at the outer lateral extent of the OHWM and continue out to the "drip line" of the associated riparian vegetation, if present, or channel bank (the portion of the channel beginning at the OHWM and continuing to the top of the bank). Therefore, CDFW jurisdiction often exceeds, in lateral extent and area, federal jurisdiction.

⁷ Jurisdictional waters acreage of the survey area was determined by using ArcGIS. All acreages are rounded to the nearest thousandth if the areas of the potentially jurisdictional features were less than 0.01 acre (which may account for minor rounding error).

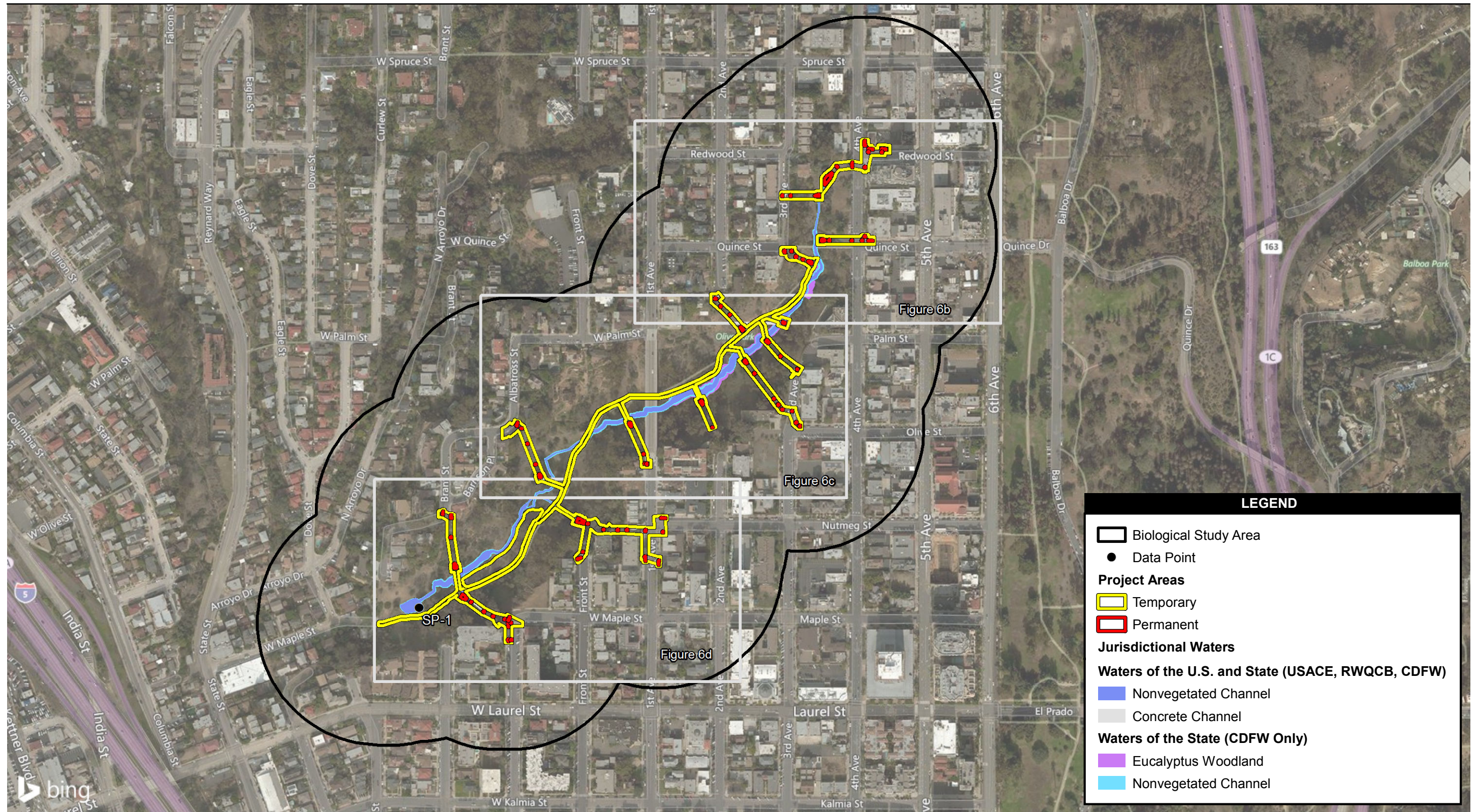
Table 4
Jurisdictional Waters within the BSA

| Feature I.D. | Type of Jurisdictional Waters | Type of Habitat (Holland 1986) | Type of Habitat (Cowardin et al. 1979) | Area of Aquatic Resource in the BSA (acres/linear feet) ^{a,b} | Regulatory Authority |
|--|-------------------------------|--------------------------------|--|--|------------------------|
| Potential Jurisdictional Waters under the purview of USACE, RWQCB, and CDFW | | | | | |
| A | Other Waters | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | 1.0/2,895 | CDFW, RWQCB, and USACE |
| B | Other Waters | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | 0.05/292 | CDFW, RWQCB, and USACE |
| C | Other Waters | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | 0.02/139 | CDFW, RWQCB, and USACE |
| C | Other Waters | Concrete Channel | N/A: Concrete V-ditch | 0.01/68 | CDFW, RWQCB, and USACE |
| Subtotal Jurisdictional Waters under the purview of USACE, RWQCB, and CDFW | | | | 1.08/3,394 | |
| Jurisdictional Waters under the purview of CDFW exclusively | | | | | |
| A | Other Waters ^c | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | 0.52 | CDFW |
| B | Other Waters ^c | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | 0.03 | CDFW |
| C | Other Waters ^c | Nonvegetated Channel (64200) | Riverine; Intermittent; Intermittently Flooded Streambed, Cobble Gravel, Fresh | <0.01 | CDFW |
| Subtotal Jurisdictional Waters under the purview of CDFW exclusively | | | | 0.55 | |
| Grand Total Jurisdictional Waters | | | | 1.63/3,394 | |

^a Jurisdictional waters acreage within the project area was determined by using ArcGIS. All acreages are rounded to the nearest thousandth, which may account for minor rounding error.

^b USACE only uses the measurement of linear feet for impacts to stream/riverine features. Therefore, only stream features will have acreage *and* linear feet provided as a component of measurement for established features and potential projected impacts occurring within the project boundary.

^c The limits of CDFW jurisdiction are defined in CFGC Section 1600 et seq. as the “bed, channel, or bank of any river, stream, or lake designated by CDFW in which there is, at any time, an existing fish or wildlife resource or from which these resources derive benefit.” However, in practice, CDFW usually extends its jurisdictional limit and assertion to the top of a bank of a stream, the bank of a lake, or outer edge of the riparian vegetation, whichever is wider. Therefore, the additional stream acreage for features A, B, and C account for the area between the ordinary high water mark and the top of bank, and are only under the jurisdictional purview of CDFW.



Source: AECOM; ESRI.

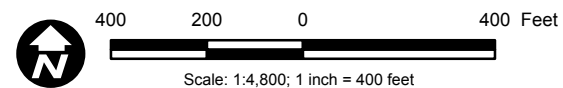
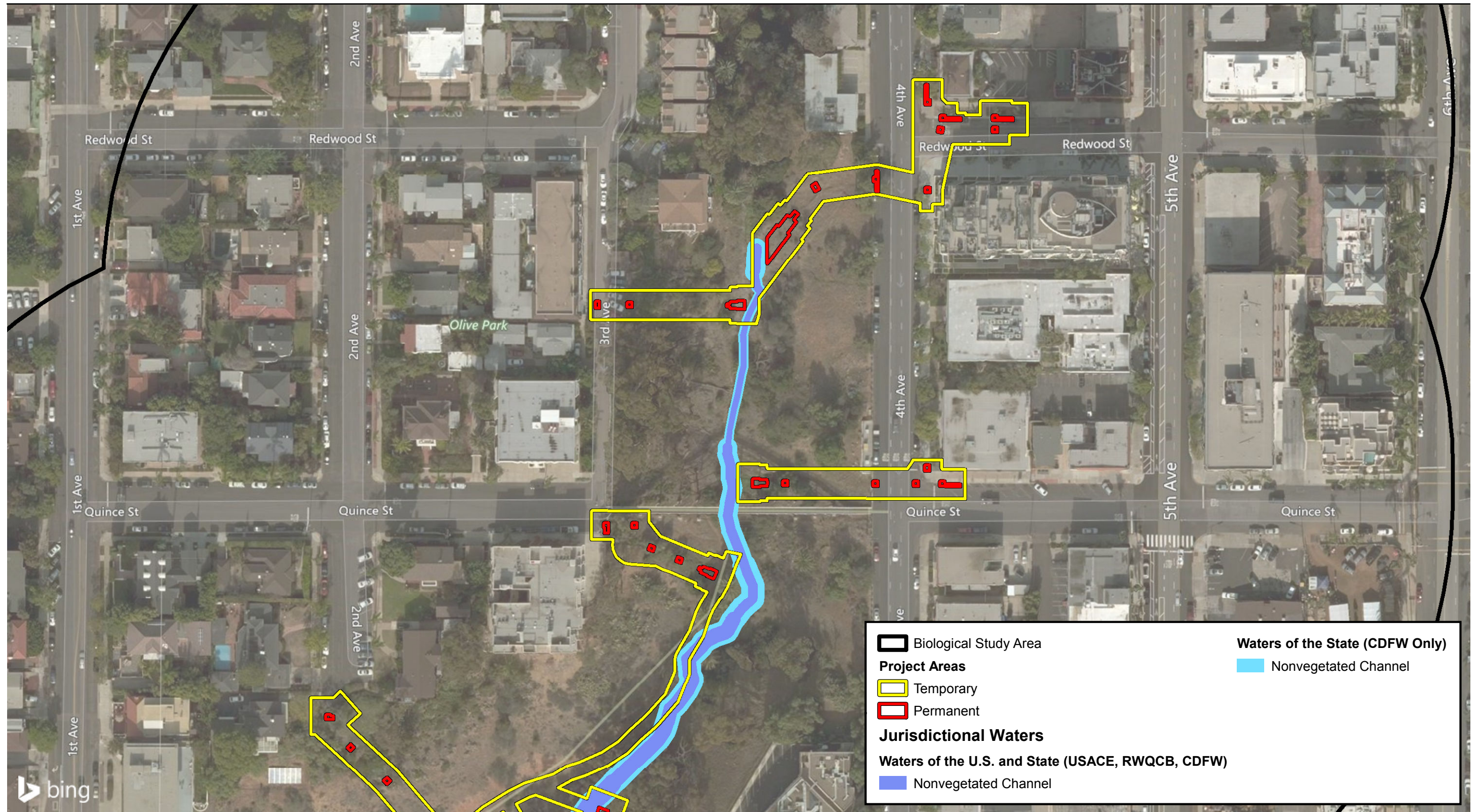
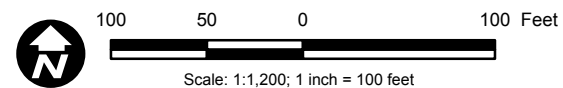


Figure 6a
Potential Jurisdictional Waters
of the U.S. and State



Source: Merkel 2012; San Diego 2012



Waters of the State (CDFW Only)
 Nonvegetated Channel

Biological Study Area

Project Areas

Temporary

Permanent

Jurisdictional Waters

Waters of the U.S. and State (USACE, RWQCB, CDFW)

Nonvegetated Channel

Figure 6b
Potential Jurisdictional Waters
of the U.S. and State



Source: Merkel 2012; San Diego 2012

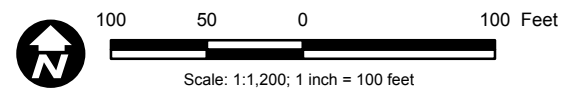


Figure 6c
Potential Jurisdictional Waters
of the U.S. and State



Source: Merkel 2012; San Diego 2012

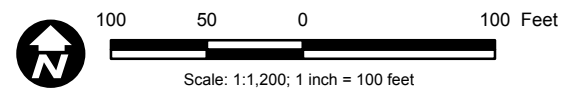


Figure 6d
Potential Jurisdictional Waters
of the U.S. and State

Stream C is a tributary to Stream A. This stream is a concrete v-ditch for approximately 65 linear feet before becoming a natural bottom nonvegetated channel.

Multiple storm drains outlet into the canyon, creating large erosional features that contribute surface flow to Stream A. However, the majority of these features are highly eroded features and do not support an OHWM. Therefore, they were determined not to be waters of the U.S. or state.

Disturbed wetland (0.18 acre) was delineated along the western (downstream) portion of Stream A in 2013. This community was composed of an overstory of a few individuals of tamarisk (*Tamarix* spp.; FAC), eucalyptus (*Eucalyptus* spp.; NI), Canary Island date palm (*Phoenix canariensis*; NI), washingtonia (*Washingtonia robusta*; Facultative Wetland [FACW]), Bermuda grass (*Cynodon dactylon*; Facultative Upland [FACU]), castor bean (*Ricinus communis*; FACU), and pampas grass (*Cortaderia* spp.; FACU). The understory was composed of nonnative grasses. These areas were outside of the banks of Stream A, lacked wetland hydrology indicators, and were composed of a mixture of wetland and upland species; therefore, this habitat is not considered wetland waters of the U.S. However, based on the City's Biology Guidelines (City of San Diego 2011, this habitat is considered a hydrophytic community and a potential City wetland. In addition, because this habitat is associated with Stream A, it is also considered jurisdictional under the purview of CDFW. Based on observations made during the 2018 survey, this area is dominated by ripgut brome and crown daisy, both non-indicator (NI) upland species. This area no longer meets the hydrophytic vegetation indicator and no longer qualifies as a City wetland or jurisdiction under purview of CDFW, and the disturbed wetland has been removed from all tables and figures.

Eucalyptus woodland (0.21 acre) was delineated along portions of Stream A in 2013. Only areas that appeared to function as riparian habitat (multiple individuals directly adjacent to the stream feature) and that, if impacted, may substantially alter the flow, bed, channel, or bank of the stream feature, were delineated as under the purview of CDFW. However, for portions of Stream A, eucalyptus trees are located farther away from the channel banks along the hillsides and did not appear to be functioning as riparian habitat. If impacted, they would not result in impacts to the stream feature; therefore, these areas were not delineated as under the jurisdictional purview of CDFW. This area does not meet the City's definition of a wetland and is therefore not considered a City wetland. As of 2018, a number of eucalyptus trees immediately along the creek have fallen due to rains and associated erosion. Based on the significant number of fallen trees, and current lack of a dense enough grouping of trees to qualify as associated riparian habitat, this area has also been removed from all tables and figures.

5.5.2 Wildlife Migration Corridors

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features whose primary wildlife function is to connect at least two significant habitat areas (Beier and Loe 1992). Other definitions of corridors and linkages are as follows:

1. A corridor is a specific route that is used for movement and migration of species. A corridor may be different from a “linkage” because it represents a smaller or narrower avenue for movement. “Linkage” means an area of land that supports or contributes to the long-term movement of wildlife and genetic material.
2. A linkage is a habitat area that provides connectivity between habitat patches, and year-round foraging, reproduction, and dispersal habitat for resident plants and animals.

Wildlife corridors and linkages are important features in the landscape, and the viability and quality of a corridor or linkage are dependent on site-specific factors. Topography and vegetative cover are important factors for corridors and linkages, and should provide cover for both predator and prey species. Wildlife corridors and linkages should direct animals to areas of contiguous open space or resources and away from humans and development. The corridor or linkage should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals) associated with developed areas that have caused habitat fragmentation (Schweiger et al. 2000). Wildlife corridors and linkages may function at various levels depending on these factors and, as such, the most successful of wildlife corridors and linkages accommodate all or most of the necessary life requirements of predator and prey species.

Width and connectivity are assumed the primary factors of a “good” corridor (Forman 1987); “stepping stone reserves” for pollinators, seed dispersers, and other flying species such as birds, bats, and insects should also be included as “good” factors (Soulé 2003). The level of connectivity needed to maintain a population of a particular species will vary with the demography of the population, including population size, survival and birth rates, and genetic factors such as the level of inbreeding and genetic variance (Rosenberg et al. 1997). Areas not considered as functional wildlife dispersal corridors or linkages are typically obstructed or isolated by concentrated development and heavily traveled roads, known as “chokepoints.” One of the worst scenarios for dispersing wildlife occurs when a large block of habitat leads animals into “cul-de-sacs” of habitat surrounded by development. These habitat cul-de-sacs frequently result in adverse human/animal interface.

The BSA occurs within an open space surrounded by urban development. The area is primarily undeveloped and contains a designated nature trail, which is frequented daily by joggers and hikers. The proposed project location is surrounded by residential development on all sides. The project site provides refuge for wildlife and may act as a local linkage, but does not function as a wildlife corridor. The BSA occurs outside of San Diego's MHPA.

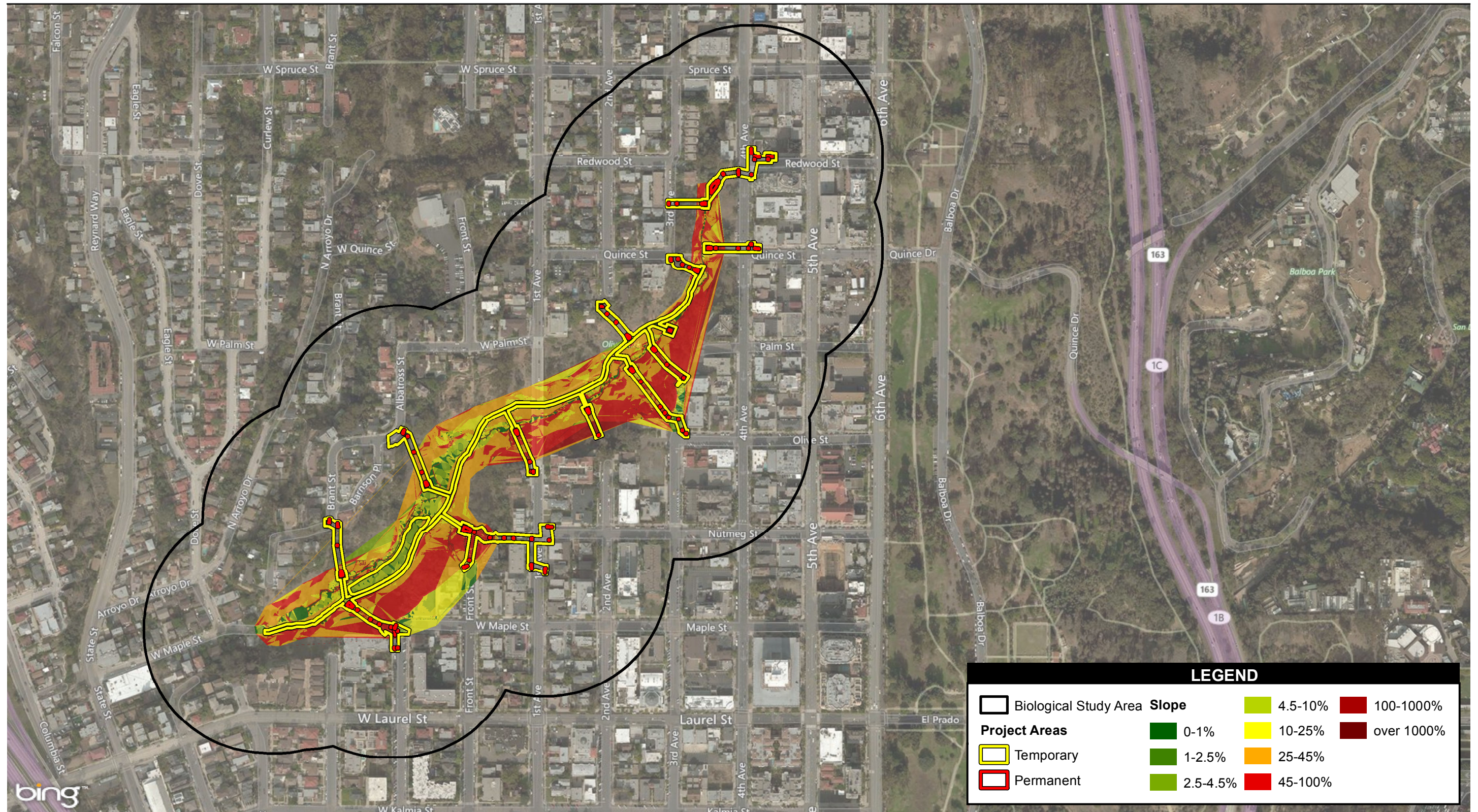
5.5.3 Steep Slopes

The City of San Diego's ESL regulations define steep slopes as a sensitive resource. Steep slopes are defined as those areas with greater than 25% slope with a height differential of more than 50 feet. Nearly all of the proposed project features meet this definition (see Figure 7). Any work conducted within steep slopes will require compliance with Steep Hillside Guidelines, the ESL ordinance, and the Landscape Standards, including provisions for erosion control and post-construction revegetation (City of San Diego 2011).

5.5.4 MSCP Consistency

The proposed project occurs outside of the MHPA as delineated within the City's MSCP Subarea Plan (Figure 5). Because the project site is designated as an ESL, the project would need to demonstrate compliance with ESL regulations to address potential indirect effects to an ESL through features incorporated into the project and/or permit conditions. The project would be required to comply with the MSCP general management directives and specific management policies and directives.

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Source: AECOM; ESRI.

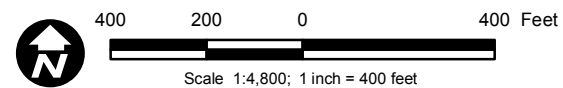


Figure 7
Steep Slopes Analysis

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6.0 PROJECT IMPACTS

This section addresses impacts to the site's biological resources. Direct, indirect, and cumulative impacts were analyzed and quantified by overlaying the limits of development on the Vegetation Community Map (Figure 4 and Figure 8).

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

Direct: Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include clearing vegetation, encroaching into wetlands, diverting surface water flows, and the loss of individual species and/or their habitats.

Indirect: As a result of project-related activities, biological resources may also be affected in a manner that is not direct. Examples include elevated noise and dust levels, soil compaction, increased human activity, decreased water quality, and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Permanent: All impacts that result in the irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.

Temporary: Any impacts considered to have reversible effects on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction; or removal of vegetation for underground pipeline trenching activities, and allowing the natural vegetation to recolonize the impact area.

Under City guidelines and the CEQA Guidelines, impacts to biological resources will be considered significant if any of the following occur:

1. A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in the MSCP or other local or regional plans, policies, or regulations, or by CDFW or USFWS; A substantial adverse impact on any Tier I habitats, Tier II habitats, Tier IIIA habitats, or Tier IIIB habitats as identified in the City of San Diego Biology Guidelines or other

sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

2. A substantial adverse impact on wetlands (including marsh, vernal pool, riparian) through direct removal, filling, hydrological interruption, or other means;
3. Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites;
4. A conflict with the provisions of an adopted HCP; Natural Conservation Community Plan; or other approved local, regional, or state habitat conservation plan, either within the MSCP Plan area or in the surrounding region;
5. Introducing land use within an area adjacent to the MHPA that would result in adverse edge effects;
6. A conflict with any local policies or ordinances protecting biological resources; and/or
7. An introduction of invasive species of plants into a natural open space area.

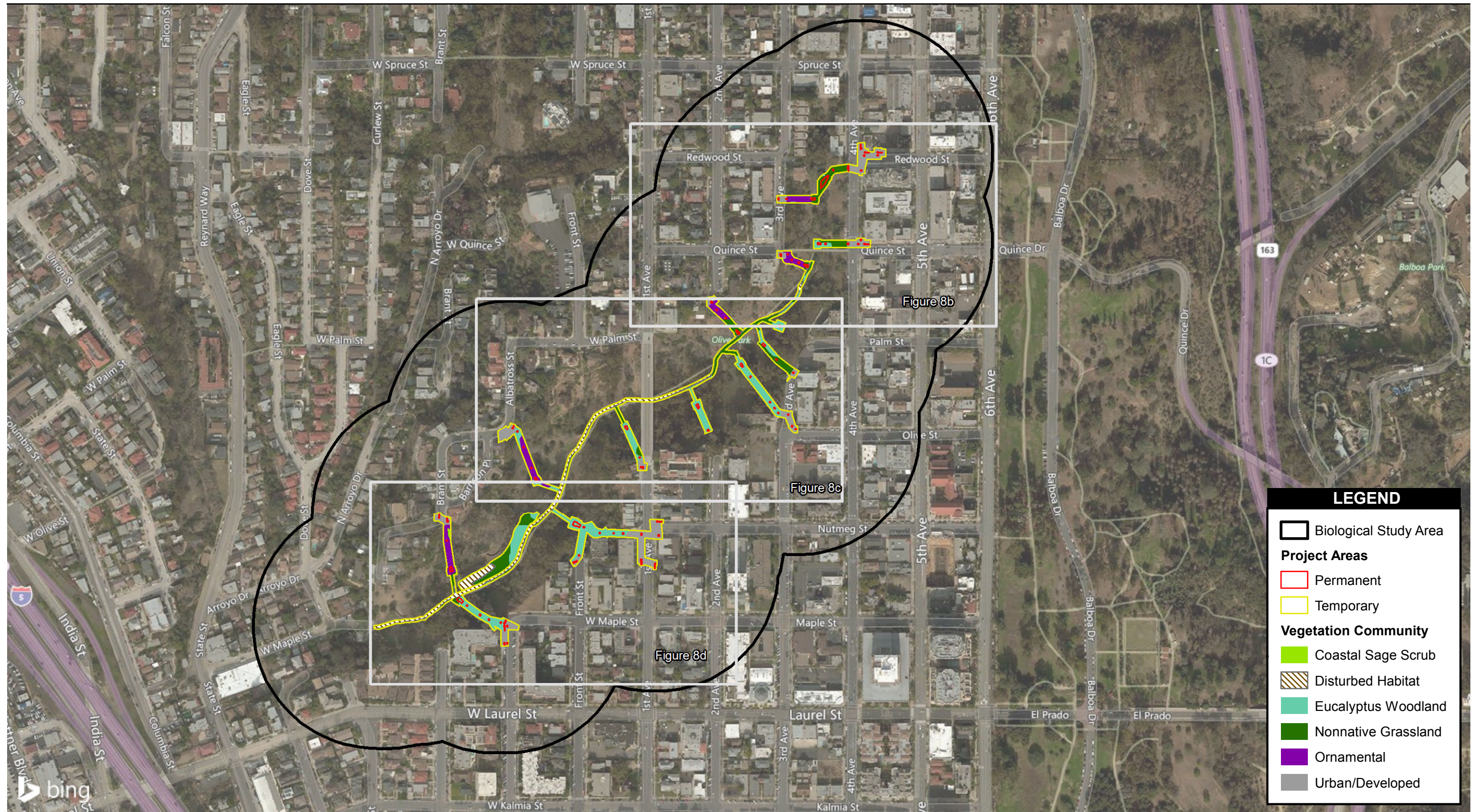
The following impact analysis is based on the assumption that all proposed activities would be contained in the property footprint shown in Figure 8.

6.1 Direct Impacts

6.1.1 Sensitive Vegetation Communities

The proposed project would result in permanent direct impacts from the extension of the storm drains, the creation of new headwalls, and the placement of the energy dissipaters and the riprap; and temporary direct impacts from the construction phase of the proposed storm drain and the use of a staging yard during construction. Table 5 details the type of impacts (permanent vs. temporary) of these activities on vegetation communities and other land cover types.

Of the seven vegetation communities located within the survey area, three upland communities are considered sensitive (Tiers I – IIIB): coast live oak woodland, Diegan coastal sage scrub, and nonnative grassland.



Source: AECOM; ESRI.

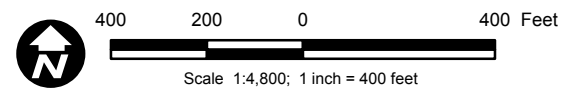


Figure 8a
Vegetation Impacts



Source: AECOM; ESRI.

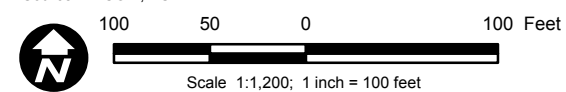
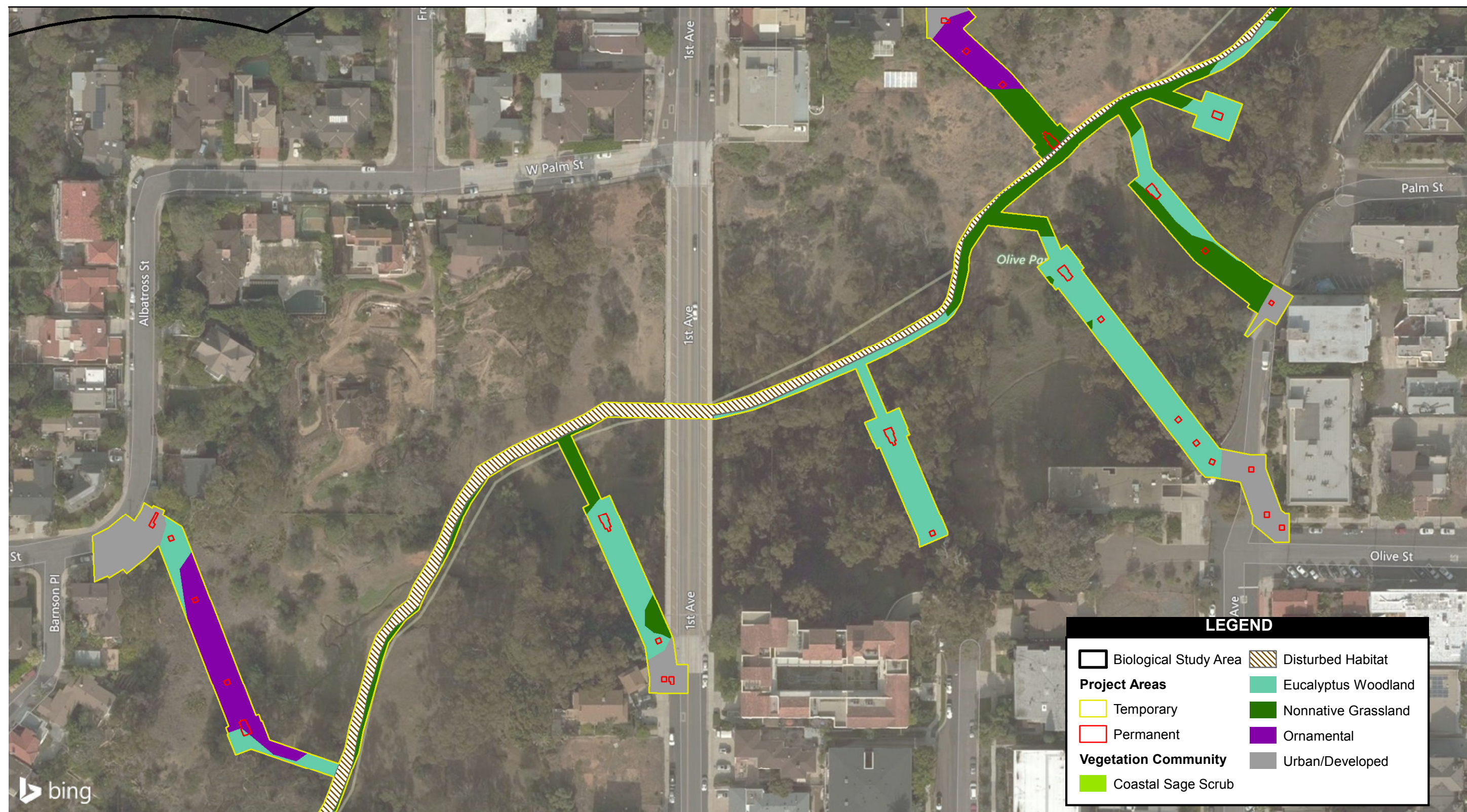


Figure 8b
Vegetation Impacts



Source: AECOM; ESRI.

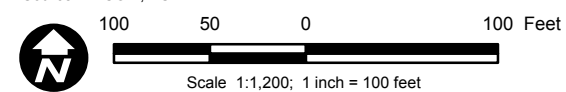


Figure 8c
Vegetation Impacts



Source: AECOM; ESRI.

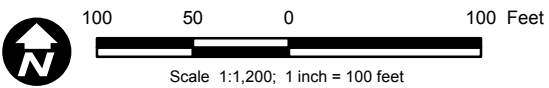


Figure 8d
Vegetation Impacts

Table 5
Permanent and Temporary Direct Impacts to Vegetation Communities

| Vegetation/Land Cover Type | Upland Tier Value | Permanent | Temporary | Total |
|-----------------------------------|--------------------------|------------------|------------------|--------------|
| Uplands | | 0.07 | 2.19 | 2.26 |
| Coast Live Oak Woodland | I | - | - | - |
| Diegan Coastal Sage Scrub | II | - | 0.01 | 0.01 |
| Eucalyptus Woodland | IV | 0.04 | 1.32 | 1.36 |
| Nonnative Grassland | IIIB | 0.03 | 0.86 | 0.89 |
| Other Cover Types | | 0.04 | 2.17 | 2.21 |
| Disturbed Habitat | IV | <0.01 | 0.73 | 0.73 |
| Ornamental | IV | 0.01 | 0.47 | 0.48 |
| Urban/Developed | N/A | 0.03 | 0.97 | 1.00 |
| Grand Total¹ | | 0.11 | 4.36 | 4.47 |

¹ All acreages are rounded to the nearest hundredth, which may account for minor rounding error.

6.1.2 Special-Status Plant Species

Eleven federally, state, or locally sensitive botanical species have the potential to occur within the survey area. Of these, three were observed on-site during the biological survey: California box-thorn, San Diego barrel cactus (MSCP covered), and San Diego sunflower (Table 2 and Figure 5). These species were documented outside the limits of temporary and permanent impacts; therefore, project implementation would not result in direct impacts to these species and mitigation would not be required.

6.1.3 Special-Status Wildlife Species

The survey area supports suitable habitat for one special-status species, Cooper's hawk. The project would temporarily and permanently impact suitable habitat (eucalyptus woodland) for this species. Significant impacts to this species would require mitigation.

6.1.4 Jurisdictional Resources

Jurisdictional waters under the jurisdictional purview of USACE, RWQCB, CDFW, and City occur within the survey area. Project implementation would result in permanent and temporary direct impacts to these areas (Tables 6 and 7, Figure 9). Permanent impacts would result from the installation of new storm water features such as access points and outlet features within areas mapped as jurisdictional waters. Temporary impacts would result from clearing and trenching to bury pipes within areas mapped as jurisdictional waters. Temporarily impacted areas would be

returned to pre-disturbance conditions once construction is completed. Significant impacts to jurisdictional areas would require mitigation.

Table 6
Permanent Impacts to Jurisdictional Waters

| Project Survey Area | Type of Waters | Type of Habitat (Oberbauer et al. 2008) | Type of Habitat (Cowardin et al. 1979) | Acres/ Linear Feet within Survey Area ^{a,b} |
|---|----------------|---|---|--|
| Jurisdictional Waters under the purview of USACE, RWQCB, and CDFW | | | | |
| Dissipaters and Riprap | Other Waters | Unvegetated Channel (64200) | Riverine; Intermittently Flooded Streambed, Sand, Fresh | 0.005/27 |
| Jurisdictional Waters under the purview of CDFW Exclusively | | | | |
| Dissipaters and Riprap | Other Waters | Unvegetated Channel (64200) | Riverine; Intermittently Flooded Streambed, Sand, Fresh | 0.003 |
| Total Impacts | | | | 0.008/27 |

^a Jurisdictional waters acreage within the survey area was determined by using ArcGIS. All acreages are rounded to the nearest thousandth.

^b USACE only uses the measurement of linear feet for impacts to stream/riverine features. Therefore, only stream features will have acreage *and* linear feet provided as a component of measurement for established features and potential projected impacts occurring within the project boundary.

Table 7
Temporary Impacts to Jurisdictional Waters

| Project Survey Area | Type of Waters | Type of Habitat (Oberbauer et al. 2008) | Type of Habitat (Cowardin et al. 1979) | Acres/ Linear Feet within Survey Area ^{a,b} |
|---|----------------|---|---|--|
| Jurisdictional Waters under the purview of USACE, RWQCB, and CDFW | | | | |
| Dissipaters and Riprap | Other Waters | Unvegetated Channel (64200) and Urban/Developed (12000) | Riverine; Intermittently Flooded Streambed, Sand, Fresh | 0.153/140 |
| Jurisdictional Waters under the purview of CDFW Exclusively | | | | |
| Pipe, Access Road, Dissipaters and Riprap | Other Waters | Unvegetated Channel (64200) | Riverine; Intermittently Flooded Streambed, Sand, Fresh | 0.079 |
| Total Impacts | | | | 0.232/140 |

^a Jurisdictional waters acreage within the survey area was determined by using ArcGIS. All acreages are rounded to the nearest thousandth.

^b USACE only uses the measurement of linear feet for impacts to stream/riverine features. Therefore, only stream features will have acreage *and* linear feet provided as a component of measurement for established features and potential projected impacts occurring within the project boundary.

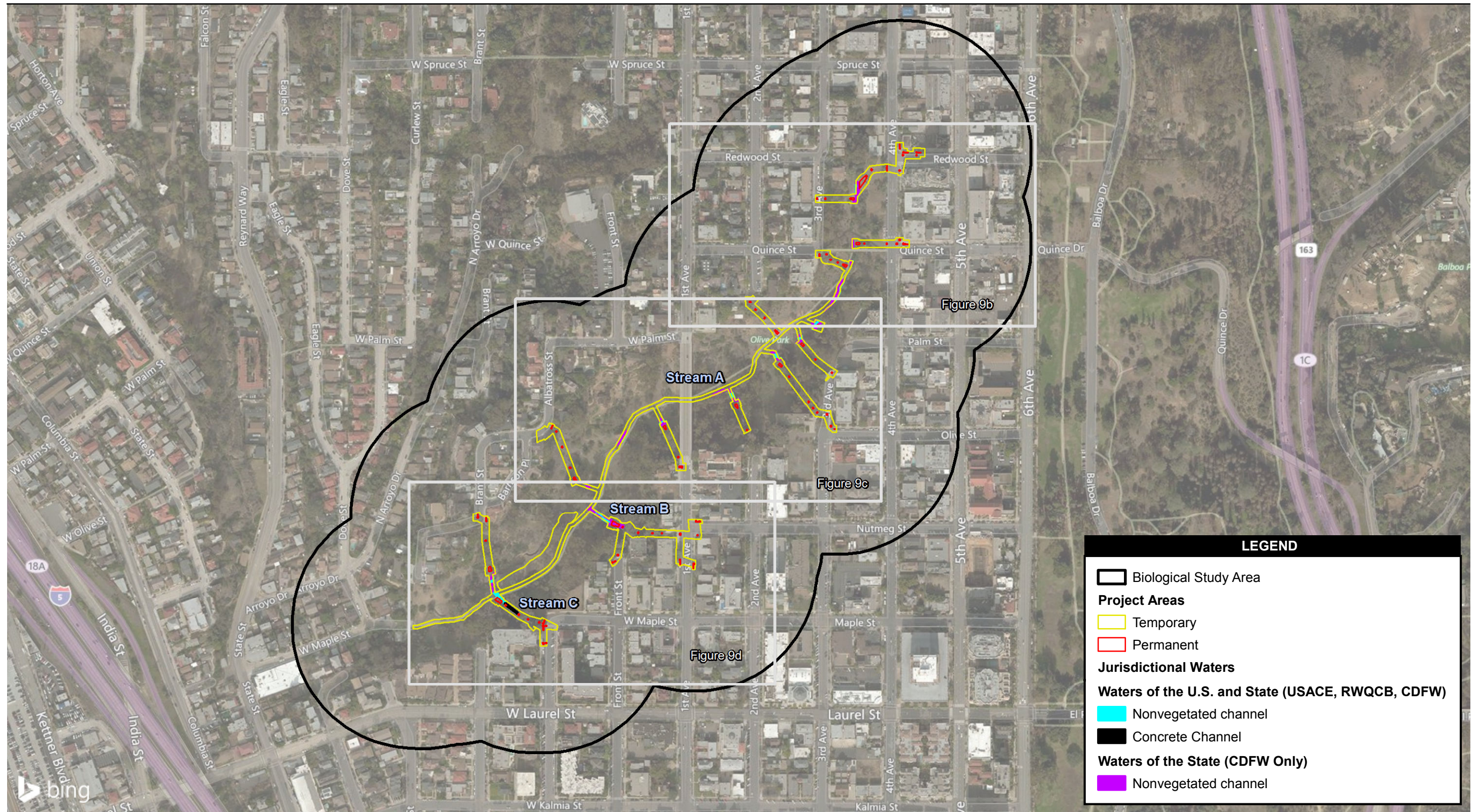
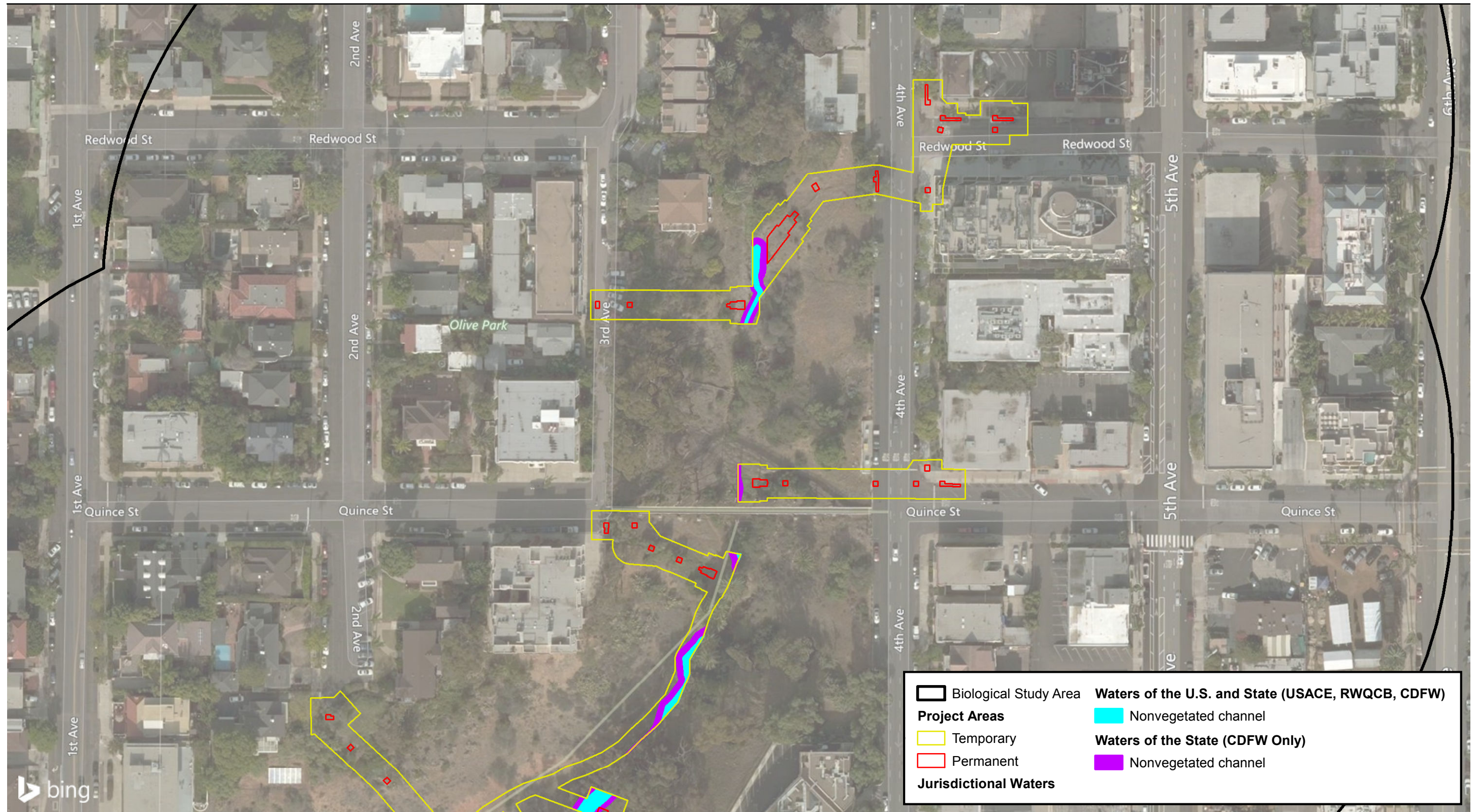


Figure 9a
USACE and CDFW Jurisdictional Area Impacts



Source: AECOM; ESRI.

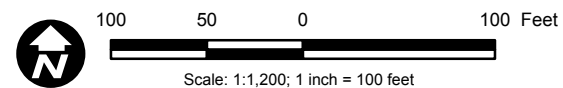


Figure 9b
USACE and CDFW Jurisdictional Area Impacts



Source: AECOM; ESRI.

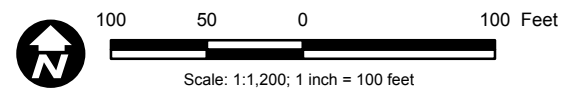
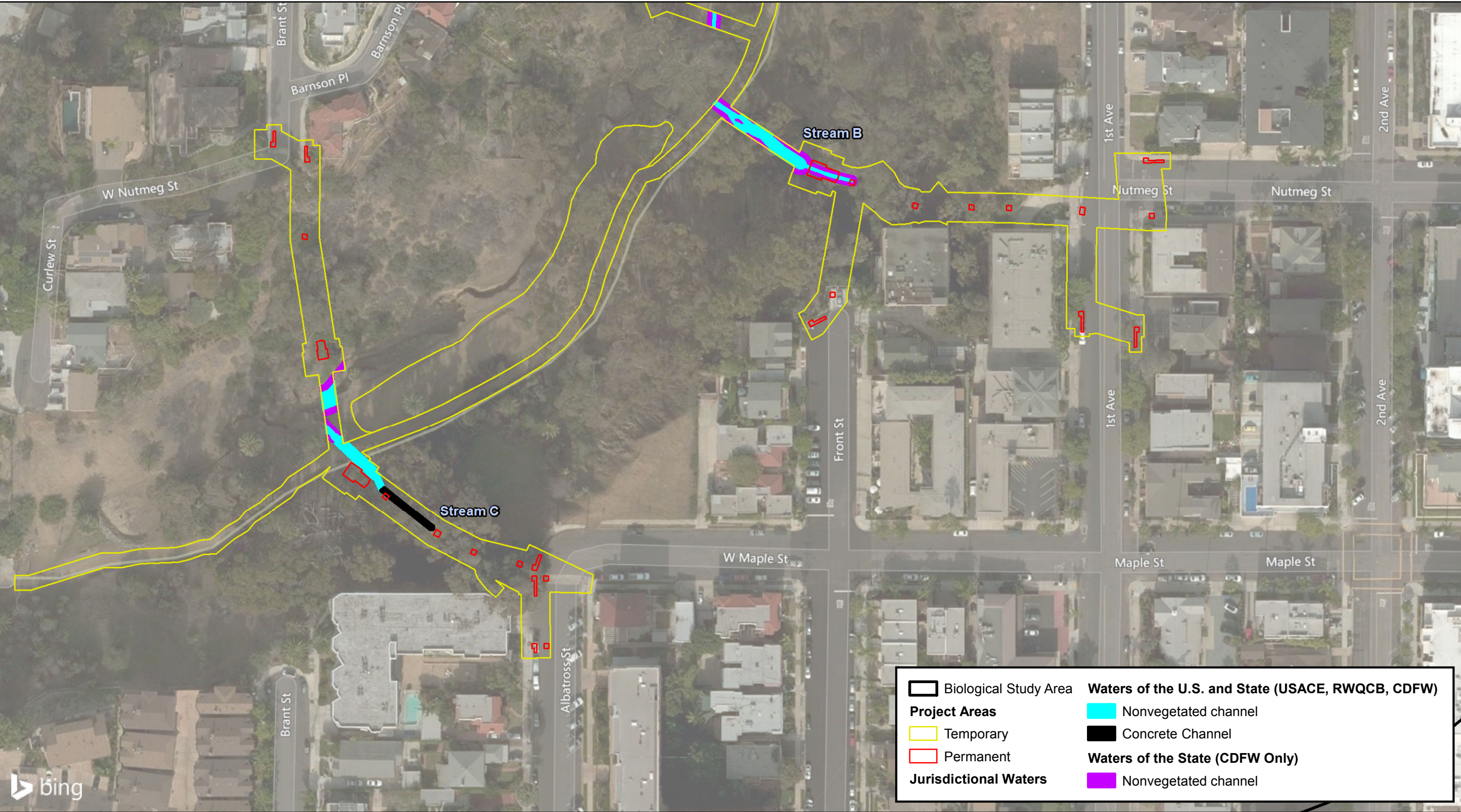


Figure 9c
USACE and CDFW Jurisdictional Area Impacts



Source: AECOM; ESRI.

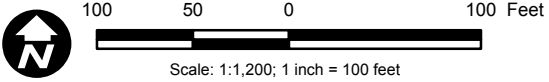


Figure 9d
USACE and CDFW Jurisdictional Area Impacts

Table 6 presents the amount and type of jurisdictional waters that would be impacted permanently by the project. As seen in this table, a total of 0.008 acre of jurisdictional waters would be permanently impacted by energy dissipaters and riprap. Of the 0.008 acre of permanent impacts, 0.005 acre of jurisdictional waters is composed of unvegetated channel under the jurisdictional purview of USACE, RWQCB, and CDFW, and 0.003 acre is jurisdictional waters under the purview of CDFW exclusively, composed of unvegetated channel and eucalyptus woodland. Table 7 presents the amount and type of jurisdictional waters of the U.S. and state that would be impacted temporarily by the project. As seen in this table, a total of 0.232 acre of jurisdictional waters would be temporarily impacted by pipe removal/installation, and energy dissipaters and riprap. Of the 0.232 acre of temporary impacts, 0.153 acre of jurisdictional waters is composed of unvegetated channel under the jurisdictional purview of USACE, RWQCB, and CDFW; and, 0.079 acre is jurisdictional waters under the purview of CDFW exclusively, composed of unvegetated channel.

6.1.5 Wildlife Dispersal Corridors and Linkages

The proposed project does not occur within a habitat linkage or wildlife corridor. Therefore, construction of the project would not result in impacts to a habitat linkage or wildlife corridor.

6.1.6 MSCP Consistency

The proposed project is not within the MHPA as delineated within the City's MSCP Subarea Plan (Figure 5). The project occurs within the urban area of the MSCP. The project would comply with the MSCP general management directives and specific management policies and directives for the urban habitat area.

6.1.7 Cumulative Impacts

CEQA Guidelines Section 15355 define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts refer to the incremental impacts from two or more projects when considered together. When analyzed separately, the impacts are minor; however, when analyzed together, they are considered significant over a period of time.

Direct and indirect impacts resulting from the proposed project would not be considered cumulative if project mitigation measures were implemented and comply with the City's MSCP Subarea Plan and the Biology Guidelines.

6.2 Indirect Impacts

6.2.1 Sensitive Vegetation Communities

Implementation of the proposed project occurs within and adjacent to the following sensitive upland vegetation communities: coast live oak woodland, Diegan coastal sage scrub, and nonnative grassland. Indirect impacts to these vegetation communities may occur from the construction and operation of these project features, including fugitive dust, increased human presence in the area with the potential for trampling, vehicle tracks off the access road, and soil compaction. Indirect impacts to these communities require mitigation.

6.2.2 Special-Status Plant Species

California box-thorn, San Diego barrel cactus (MSCP covered), and San Diego sunflower occur outside of the limits of temporary and permanent impacts. The limits of construction would be delineated with orange fencing and no work would occur outside of these limits. No construction would occur outside of the limits of impact; therefore, project implementation would not result in indirect impacts to California box-thorn, San Diego barrel cactus (MSCP covered), and San Diego sunflower and mitigation would not be required.

6.2.3 Special-Status Wildlife Species

Sensitive wildlife species, such as Cooper's hawk, have the potential to occur within the project area. Potentially suitable habitat for other sensitive species (Table 3) occurs within or adjacent to the proposed project. Should construction of the proposed project occur within the breeding season, the proposed project would potentially result in indirect impacts (i.e., noise, light, erosion, dust, etc.) to Cooper's hawk and other special-status wildlife species. Indirect impacts to these species would require mitigation.

6.2.4 Jurisdictional Resources

USACE, CDFW, and City of San Diego jurisdictional areas occur within and adjacent to the project area. Water quality in jurisdictional areas can be adversely affected by surface water runoff and sedimentation during construction. The use of petroleum products (e.g., fuels, oils, and lubricants) and erosion of cleared land during construction could potentially impact surface water. Potential indirect impacts to water quality may occur and preventative mitigation is required.

6.3 Essential Public Project

The City of San Diego's Land Development Code describes conditions under which a project can deviate from wetland requirements. Section 143.0510 says that a project that is essential in both location and need, and has no alternatives that avoid ESLs can be considered an Essential Public Project (EPP).

To qualify under the EPP option, the project must meet the following criteria in order to obtain a deviation from wetland regulations:

- The proposed project and all biological alternatives, both practicable and impracticable, shall be fully described and analyzed in an appropriate CEQA document. Alternatives must include the following: (1) a no project alternative; (2) a wetlands avoidance alternative, including an analysis of alternative sites irrespective of ownership; and (3) an appropriate range of substantive wetland impact minimization alternatives.
- The potential impacts to wetland resources shall be minimized to the maximum extent practicable and the project shall be the least environmentally damaging practicable biological alternative considering all the technical constraints of the project. A sufficient wetland buffer shall be maintained, as appropriate, to protect resource functions/values. The project applicant will solicit input from the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife (e.g., Wildlife Agencies) prior to the first public hearing.
- All impacts shall be mitigated according to the requirements of the mitigation ratios and requirements in Table 2a of the City's Biology Guidelines (City of San Diego 2012) and the project shall not have a significant adverse impact to the MSCP.

This project would be considered an EPP (i.e., circulation element road, trunk sewer, water main) that will service the community at large and not just a single development project or property pursuant to Land Development Code Section 143.0150 (d)(1)A(ii). The project has been designed to minimize impacts while meeting the criteria to be designated an EPP Option. Specifically, the project qualifies as a linear storm water conveyance system where no feasible alternative exists to avoid impacts to jurisdictional features. This project proposes to replace and improve upon existing storm water drainage by replacing 14 existing storm drains (12- and 18-inch-diameter) in-place with new RCP, extending each storm drain to the bottom of the canyon, and constructing new headwalls and dissipaters. Replacement and extension of the 14 storm drains would result in 1,500 total linear feet of RCP installation. As depicted in the figures, the proposed alignment for this project has been selected because it addresses the erosion caused

by existing storm drain facilities, which are necessary to protect private residences on both sides of the canyon.

The construction of the proposed storm drain alignment will allow for the repair and stabilization of this eroded slope, restoration and protection of native habitat, and the reduction of sediment being discharged downstream. The slope repair will also reduce possible slope and storm drain failures in the future, prolonging the life of the proposed storm drain and preventing potential damage to homes adjacent to this feature. These actions would prevent further erosion of the hillside and property damage and are essential in both location and need, and therefore meet EPP qualifications. The proposed alignment has undergone extensive analysis to minimize impacts to the greatest extent feasible. The “no project” alternative is not feasible due to the ongoing erosion resulting from the current inadequate storm drain conveyance system and potential for damage to homes above the existing facilities.

7.0 MITIGATION

Mitigation is defined in CEQA Guidelines Section 15370 (Title 14, Chapter 3, Article 20) as:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

According to the Biology Guidelines (City of San Diego 2011), mitigation is the process of reducing significant impacts to below a level of significance. The process of identifying biological mitigation under the ESL and CEQA consists of two parts:

- The identification of significant biological impacts, and
- The identification of the corresponding mitigation requirements to reduce the impacts to below a level of significance.

Mitigation will be required for any impacts that cannot be avoided or minimized. Mitigation measures are typically driven primarily by set agency standards. Neither utility owners nor agencies typically like mitigation to be placed above utility infrastructure due to necessary maintenance and repair work that may further impact the mitigation area in the future; therefore, possibilities for mitigation within the project footprint are not feasible.

The following sections describe recommendations that would reduce biological impacts to sensitive vegetation communities, special-status wildlife, and jurisdictional areas to levels below significance under CEQA and the City's MSCP Subarea Plan.

7.1 Direct Impacts

7.1.1 Sensitive Vegetation Communities

The project would result in permanent and temporary impacts to sensitive vegetation communities. According to the City's Significance Threshold guidelines, impacts of more than 0.1 acre to upland habitats (Tiers I–IIIB) are considered significant and require mitigation. Permanent and temporary impacts to upland habitats (Tiers I–IIIB) total 2.26 acres and therefore require mitigation (Table 8).

Table 8
Mitigation for Impacts to Sensitive Vegetation Communities

| Vegetation Community | Impacts (acres)¹ | Ratios | Mitigation Required | Proposed Mitigation |
|-----------------------------|------------------------------------|--|----------------------------|----------------------------|
| Uplands | | | | |
| Diegan Coastal Sage Scrub | 0.010 | 1:1 (impact outside MHPA, mitigation inside MHPA) | 0.010 | 0.010 |
| Eucalyptus Woodland | 1.363 | n/a | 0.000 | 0.000 |
| Nonnative Grassland | 0.886 | 0.5:1 (impact outside MHPA, mitigation inside MHPA) | 0.443 | 0.443 |
| Other Cover Types | | | | |
| Disturbed Habitat | 0.730 | n/a | n/a | 0.000 |
| Ornamental | 0.480 | n/a | n/a | 0.000 |
| Urban/Developed | 1.000 | n/a | n/a | n/a |
| Total | 4.469 | n/a | 0.453 | 0.453 |

¹ Impact totals include both temporary and permanent impacts.

Mitigation Measures

- To compensate for the loss of 0.01 acre of Diegan coastal sage scrub (Tier II), located outside the MHPA, and the potential plant and wildlife habitat it provided, impacts would be mitigated through payment to the City of San Diego's Habitat Acquisition Fund, which preserves habitat within the MHPA. Payment will be provided for 0.01 acre to achieve the required 1:1 ratio.
- To compensate for the loss of 0.886 acre of nonnative grassland (Tier IIIB) located outside the MHPA, and the potential plant and wildlife habitat it provided, impacts would

be mitigated through payment to the City of San Diego's Habitat Acquisition Fund. Payment will be provided for 0.443 acre to achieve the required 0.5:1 ratio.

Revegetation of Temporary Impacts

Temporary impacts to 3.39 acres of upland habitat (0.47 acre of ornamental vegetation, 1.32 acres of eucalyptus woodland, 0.73 acre of disturbed habitat, 0.86 acre of nonnative grassland, and 0.01 acre of Diegan coastal sage scrub) would be revegetated with native upland vegetation. The impacted upland habitat would be restored with Diegan coastal sage scrub vegetation with intent to meet the erosion control requirements in the Landscape Standards. The restored habitat would provide a higher-value habitat than the impacted habitat. Detailed plans for the revegetation of temporary impacts would be prepared following approval of this conceptual strategy. The restoration and revegetation plan would include a 25-month maintenance and monitoring plan, planting/restoration measures, and success criteria as required by the Landscape Standards.

7.1.2 Special-Status Wildlife Species

For impacts to suitable Cooper's hawk habitat, the following mitigation would be required:

- Construction should take place outside of the raptor breeding season (February 1 through September 15). If construction cannot avoid the raptor breeding season, a pre-construction survey for Cooper's hawk nests should be conducted to determine whether Cooper's hawks are nesting on-site. If a Cooper's hawk nest is identified within the study area, then a 300-foot avoidance area from the Cooper's hawk nest site should be established and monitored by a qualified biologist throughout project construction activity or until the young have fledged.

The following area specific management directives (ASMDs) would be implemented for impacts to MSCP covered species (with moderate to high potential to occur) in order for the species to be considered "covered" by the MSCP:

- Cooper's hawk – This species was not observed within the survey area but is known to occur within 1,000 feet of the site. The ASMDs for this species include instituting a 300-foot impact avoidance area around any active nests and minimizing disturbance in oak woodland and oak riparian forests. Oak woodland and oak riparian forest habitat is not present on-site. Construction should take place outside of the migratory bird breeding season (February 1 through September 15). If construction cannot avoid the bird breeding

season, a pre-construction survey for Cooper's hawk nests should be conducted to determine whether this species is nesting on-site. If an active Cooper's hawk nest is identified within the study area, then a 300-foot avoidance area from the Cooper's hawk nest site should be established and monitored by a qualified biologist throughout project construction activity or until the young have fledged.

7.1.3 Jurisdictional Areas

Permanent direct impacts to USACE and CDFW jurisdictional areas would occur as a result of the construction activities. The City of San Diego will avoid and minimize impacts to waters of the U.S. and state through replacing existing pipes with pipes that have a similar footprint, thereby reducing the additional amount of permanent impacts to undisturbed jurisdictional waters. Dissipaters and riprap placement and quantities have been designed to accommodate the least impactful footprint necessary to accommodate flows and reduce the potential for erosion.

Total permanent impacts to jurisdictional areas total 0.008 acre (Table 6). Permanent impacts will result in no loss of aquatic area (unvegetated streambed) and minimal to no loss of aquatic function. Temporary impact areas will be restored with native habitat, which will increase overall aquatic function over current conditions, resulting in a net increase in aquatic function as a result of the project.

Temporary direct impacts to 0.232 acre of jurisdictional waters (Table 6) would be revegetated with native vegetation and will be recontoured to allow the area to continue to function as a jurisdictional water. Due to the extensive amount of erosion that has occurred within the project site, post-construction contours and elevation of the channel would be altered to allow for the construction of a stabilized channel through use of native fill (i.e., no riprap or hardscape material is proposed) and therefore the channel would not match pre-construction contours and elevations, and no mitigation will be required for these temporary impacts. Although the channel may be redesigned in some areas to prevent erosion and sedimentation, all jurisdictional areas that are considered temporarily impacted will continue to function as a jurisdictional water.

Temporary disturbances to ephemeral stream channel and open channel will be restored to pre-construction contours and conditions following construction. Habitat restoration and erosion control treatments will be installed within temporary disturbance areas, in accordance with the City's Biology Guidelines and Landscape Regulations (City of San Diego 2011). A Revegetation Plan will be prepared by a qualified Biological or Restoration Specialist. Habitat restoration will feature native species that are typical of the area, and erosion control features will include silt fence and straw fiber rolls, where appropriate. Revegetation areas associated with temporary

impacts to jurisdictional resources will be monitored and maintained for 5 years to ensure adequate establishment and sustainability of the plantings/seedlings.

7.2 Indirect Impacts

7.2.1 Sensitive Vegetation Communities

Implementation of the following measures would prevent indirect impacts to sensitive vegetation communities:

- A biological monitor will be on-site for overseeing compliance with protective measures for the biological resources during clearing and work activities within and adjacent to areas of native habitat. The biological monitor will be familiar with local habitats, plants, and wildlife and will maintain communications with the contractor to ensure that issues relating to biological resources are appropriately and lawfully managed. Biological monitoring will occur within designated areas during critical times such as vegetation removal, the installation of best management practices (BMPs), and fencing to protect native species, and to ensure that all avoidance and minimization measures are properly constructed and followed. BMPs could include but are not limited to straw wattles, silt fencing, sediment traps, and barriers and would be implemented and maintained in accordance with the approved Storm Water Pollution Prevention Plan (SWPPP). The project biologist would provide a final report documenting compliance with avoidance and minimization measures within 60 days of the completion of work.
- Project employees and contractors on-site will complete a worker-awareness training conducted by the biological monitor. The training will advise workers of potential impacts to the sensitive habitat and species and the potential penalties for impacts to such habitat and species. At a minimum, the program will include the following topics: occurrences of the listed and sensitive species in the area, a physical description and their general ecology, sensitivity of the species to human activities, legal protection afforded these species, and work features designed to reduce the impacts to these species; and to the extent practicable, promote continued successful occupation of areas adjacent to the work footprint. Employees and contractors will be instructed to immediately notify the biological monitor of any incidents, such as construction vehicles that move outside of the work area boundary. The biological monitor will be responsible for notifying the City within 72 hours of any similar incident.
- Orange construction fencing will be placed along the perimeter of the identified construction areas. Staging areas, including laydown areas and equipment storage areas,

will also be fenced with orange construction fencing. No work activities, materials, or equipment storage or access will be permitted outside of the work area.

- BMPs will be implemented during construction to prevent impacts to water quality of the adjacent drainage and to preclude impacts to biological resources.
- Spill prevention and cleanup measures shall be practiced on-site. Fuel and equipment shall be stored at least 100 feet from jurisdictional resources.
- Prior to construction mobilization, the project contractor will prepare a SWPPP (in accordance with the State's General Construction Storm Water Permit – 99-08-DWQ) and implement the plan during construction. Specific measures to be incorporated into the SWPPP include but are not limited to the following:
 - a) All equipment will be maintained in accordance with manufacturer's recommendations and requirements.
 - b) Equipment and containers will be inspected daily for leaks.
 - c) Contractor will utilize off-site maintenance and repair shops as much as possible for maintenance and repair of equipment.
 - d) If maintenance of equipment occurs on-site, within all areas, fuel/oil pans, absorbent pads, or appropriate containment will be used to capture spills/leaks.
- Firearms and pets will be prohibited within the project area to minimize harassment or killing of wildlife and to prevent the introduction of destructive domestic animal diseases to native wildlife populations.
- All food-related trash such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and/or closed trash bags and regularly removed from the project site. Feeding of wildlife will be strictly prohibited.

7.2.2 Special-Status Plants

Special-status plant species are located outside the limits of work. Therefore, a dedicated biological monitor is not required for protection of special-status plant species resulting from construction activities (including grubbing or thinning of vegetation). Construction fencing and flagging should be placed at the edge of the sensitive resources to avoid indirect impacts from construction activities.

7.2.3 Special-Status Wildlife

Indirect impacts to special-status wildlife species would be mitigated through implementation of the following measures:

- A pre-construction nest survey for Cooper's hawk should be conducted within 300 feet of the construction area if construction is to occur during the avian breeding season (February 1–September 15).
- A pre-construction nest survey should be conducted in areas where vegetation will be removed if vegetation removal takes place between February 1 and September 15. Surveys will take place no more than 3 days prior to construction. If work has stopped for more than 3 work days, another nest survey will be conducted to ensure no new nests have been built prior to reinitiation of construction activities.
- If vegetation is to be removed between February 1 and September 15, a biological monitor will be present on-site during construction activities. The biological monitor's responsibilities will include conducting pre-construction nest surveys and monitoring active nests found while construction activities are ongoing during the breeding season.
- Project design does not propose the addition of lighting. Should project design change, lighting of all developed areas would be directed away from nesting bird habitat.

7.2.4 Jurisdictional Areas

USACE, CDFW, and City jurisdictional areas occur within and adjacent to the project area. The general mitigation measures described under Section 7.2.1, Sensitive Vegetation Communities are applicable and should be implemented as related to jurisdictional areas (e.g., construction limits fencing). The project contractor should implement BMPs identified in the SWPPP in addition to the general preventative mitigation measures identified in Section 7.2.1.

- During construction, silt fencing and sandbags should be placed in the impacted portion of the drainages to prevent runoff from construction activities from entering the drainage. Installation of riprap beneath the dissipater box would decrease the flow velocity of stormwater emptying from the new pipes into the drainage. The dissipater box and riprap combination would minimize erosion downstream.

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- During construction, the contractor should install construction BMPs (silt fencing, sandbags, etc.) to prevent potentially toxic substances from entering the drainages.

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APPENDIX A
PREPARER QUALIFICATIONS

APPENDIX A

PREPARER QUALIFICATIONS

Sundee Amin is a senior biologist with over 14 years of professional experience working as a biologist, restoration ecologist, environmental compliance specialist, project manager, and/or project crew supervisor on a variety of projects throughout Southern and Central California, including projects in Nevada and Arizona. His main areas of expertise include habitat restoration, biological constraints analyses, and leading and conducting sensitive species surveys (floral and faunal). Mr. Amin is also experienced in mitigation monitoring, botanical surveys, jurisdictional delineations, technical report writing, client/agency interaction, and project management. He has worked on projects for a variety of clients including all branches of the military, private developers, private energy clients, utility companies, and local, State, and Federal agencies. He is experienced with State and Federal regulations such as the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal and California Endangered Species Acts (FESA and CESA), Migratory Bird Treaty Act (MBTA), Natural Community Conservation Plans (NCCP), and various state energy commission requirements.

Barbra Calantas has 10 years of experience as an environmental consultant and wildlife biologist. Her responsibilities also include project and task management on large projects and on-call projects; Endangered Species Act consultation; general and focused wildlife field surveys; document quality assurance and quality control for data collection procedures; wildlife tracking studies; sensitive species mapping; and preparation of a variety of biological technical reports, including sections for National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) documents. Ms. Calantas is experienced in performing protocol-level surveys for federally and state-threatened and endangered species, including listed branchiopod species, Quino checkerspot butterfly, arroyo toad, desert tortoise, least Bell's vireo, and Pacific pocket mouse. She holds a state scientific collecting permit and a federal Endangered Species Act 10(a)(1)(A) independent permit to perform listed vernal pool branchiopods, Quino checkerspot butterfly, and coastal California gnatcatcher surveys.

Lanika Cervantes has 3.5 years of experience as a biologist and regulatory project manager. She is currently finalizing her master's degree in biology at California State University, San Marcos where her thesis focuses on the effects of urban runoff on riparian habitat along a variety of streams within San Diego County. She completed her undergraduate degree from California State University, San Marcos where her focus was on ecology. She has specialized experience with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

Lance Woolley has more than 5 years of professional experience as a botanist. Mr. Woolley has conducted ecological and botanical field studies for various projects in California. His expertise includes rare plant and floristic surveys, vegetation classification and mapping, and monitoring of vernal pool habitat. He has conducted surveys on more than 11,000 acres of desert habitat and over 3,000 acres of vernal pool and associated grassland habitat. Mr. Woolley has also conducted rare plant surveys for plants restricted to serpentine soils on more than 2,000 acres of Shasta-Trinity National Forest.

APPENDIX B
**BOTANICAL SPECIES OBSERVED/
DETECTED IN THE BSA**

APPENDIX B

MAPLE CANYON PLANT LIST

| Family | Scientific Name | Common Name |
|------------------------|--|-------------------------|
| Aizoaceae | <i>Carpobrotus edulis</i> | freeway iceplant* |
| | <i>Mesembryanthemum crystallinum</i> | crystalline iceplant* |
| | <i>Mesembryanthemum nodiflorum</i> | slender-leaved iceplan* |
| Amaranthaceae | <i>Amaranthus albus</i> | tumbleweed* |
| Anacardiaceae | <i>Malosma laurina</i> | laurel sumac |
| | <i>Rhus integrifolia</i> | lemonade berry |
| | <i>Schinus molle</i> | pepper tree* |
| | <i>Schinus terebinthifolius</i> | Brazilian pepper tree* |
| Areaceae | <i>Phoenix canariensis</i> | Canary Island palm* |
| | <i>Washingtonia robusta</i> | Mexican fan palm* |
| Asteraceae | <i>Artemisia californica</i> | California sagebrush |
| | <i>Bahiopsis laciniata</i> | San Diego viguiera |
| | <i>Encelia californica</i> | California encelia |
| | <i>Glebionis coronaria</i> | crown daisy* |
| | <i>Hedypnois cretica</i> | Crete weed* |
| | <i>Heterotheca grandiflora</i> | telegraph weed |
| | <i>Hypochaeris glabra</i> | smooth cat's-ear* |
| | <i>Matricaria discoidea</i> | pineapple weed* |
| | <i>Pseudognaphalium californicum</i> | gnaphalium |
| | <i>Silybum marianum</i> | milk thistle* |
| | <i>Sonchus asper</i> ssp. <i>asper</i> | prickly sow thistle* |
| | <i>Sonchus oleraceus</i> | common sow thistle* |
| | <i>Xanthium strumarium</i> | cocklebur |
| Boraginaceae | <i>Echium candicans</i> | pride of Madeira* |
| Brassicaceae | <i>Raphanus sativus</i> | radish* |
| | <i>Sisymbrium altissimum</i> | tumble mustard* |
| Cactaceae | <i>Cylindropuntia prolifera</i> | coast cholla |
| | <i>Ferocactus viridescens</i> | San Diego barrel cactus |
| | <i>Opuntia ficus-indica</i> | mission prickly-pear |
| | <i>Opuntia littoralis</i> | coast opuntia |
| Caryophyllaceae | <i>Silene gallica</i> | small-flower catchfly* |
| Chenopodiaceae | <i>Atriplex semibaccata</i> | Australian saltbush* |
| | <i>Salsola tragus</i> | Russian thistle* |
| Crassulaceae | <i>Crassula ovata</i> | jade plant* |
| | <i>Dudleya pulverulenta</i> | chalk dudleya |
| Cucurbitaceae | <i>Marah macrocarpa</i> | chilicothe* |
| Euphorbiaceae | <i>Euphorbia peplus</i> | petty spurge* |
| | <i>Ricinus communis</i> | castor bean* |

| Family | Scientific Name | Common Name |
|-----------------------|--|------------------------------|
| Fabaceae | <i>Acacia cyclops</i> | western coastal wattle* |
| | <i>Acacia redolens</i> | vanilla-scented wattle* |
| | <i>Acmispon glaber</i> | deerweed |
| | <i>Lupinus truncatus</i> | lupine |
| | <i>Spartium junceum</i> | Spanish broom* |
| | <i>Vicia benghalensis</i> | purple vetch* |
| Fagaceae | <i>Quercus agrifolia</i> | coast live oak |
| Geraniaceae | <i>Erodium botrys</i> | storksbill* |
| | <i>Erodium brachycarpum</i> | storksbill* |
| | <i>Erodium cicutarium</i> | redstem filaree* |
| | <i>Pelargonium ×hortorum</i> | fish geranium* |
| Lamiaceae | <i>Salvia mellifera</i> | black sage |
| Malvaceae | <i>Malva parviflora</i> | cheeseweed* |
| Myrsinaceae | <i>Anagallis arvensis</i> | scarlet pimpernel* |
| Myrtaceae | <i>Eucalyptus camaldulensis</i> | river red gum* |
| | <i>Eucalyptus citriodora</i> | lemon-scented gum* |
| | <i>Eucalyptus globulus</i> | blue gum* |
| | <i>Eucalyptus polyanthemus</i> | silver dollar gum* |
| | <i>Eucalyptus sideroxylon</i> | red iron bark* |
| Oxalidaceae | <i>Oxalis pes-caprae</i> | Bermuda buttercup* |
| Plantaginaceae | <i>Antirrhinum nuttallianum</i> | antirrhinum |
| Plumbaginaceae | <i>Plumbago auriculata</i> | cape leadwort* |
| Poaceae | <i>Avena barbata</i> | slender wild oat* |
| | <i>Brachypodium distachyon</i> | false brome* |
| | <i>Cortaderia selloana</i> | pampas grass* |
| | <i>Ehrharta erecta</i> | panic veldt grass* |
| | <i>Festuca myuros</i> | rat-tail fescue* |
| | <i>Hordeum marinum</i> ssp. <i>gussoneanum</i> | Mediterranean barley* |
| | <i>Hordeum murinum</i> | wall barley* |
| | <i>Lamarckia aurea</i> | golden top grass* |
| | <i>Pennisetum setaceum</i> | crimson fountain grass* |
| Polygonaceae | <i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i> | coastal California buckwheat |
| | <i>Rumex crispus</i> | curly dock* |
| | <i>Rumex salicifolius</i> | willow dock |
| Solanaceae | <i>Lycium californicum</i> | California box-thorn |
| Themidaceae | <i>Dichelostemma capitatum</i> | blue dicks |
| Tropaeolaceae | <i>Tropaeolum majus</i> | garden nasturtium* |
| Ulmaceae | <i>Ulmus parvifolia</i> | Chinese elm* |
| Verbenaceae | <i>Lantana camara</i> | lantana* |

* Non-native

APPENDIX C
**WILDLIFE SPECIES OBSERVED/
DETECTED IN THE BSA**

APPENDIX C

WILDLIFE SPECIES OBSERVED/DETECTED IN THE BSA

| Order | Family | Scientific Name | Common Name |
|--------------------|---------------|--------------------------------|-----------------------|
| Butterflies | | | |
| Lepidoptera | Pieridae | <i>Pieris rapae</i> | Cabbage White |
| Lepidoptera | Hesperiidae | <i>Erynnis funerealis</i> | Funereal Duskywing |
| Birds | | | |
| Apodiformes | Trochilidae | <i>Calypte anna</i> | Anna's Hummingbird |
| Columbiformes | Columbidae | <i>Zenaida macroura</i> | Mourning Dove |
| Passeriformes | Corvidae | <i>Corvus corax</i> | Common Raven |
| Passeriformes | Emberizidae | <i>Melospiza crissalis</i> | California Towhee |
| Passeriformes | Emberizidae | <i>Pipilo maculatus</i> | Spotted Towhee |
| Passeriformes | Emberizidae | <i>Zonotrichia leucophrys</i> | White-crowned Sparrow |
| Passeriformes | Fringillidae | <i>Haemorhous mexicanus</i> | House Finch |
| Passeriformes | Fringillidae | <i>Spinus psaltria</i> | Lesser Goldfinch |
| Passeriformes | Mimidae | <i>Mimus polyglottos</i> | Northern Mockingbird |
| Passeriformes | Parulidae | <i>Setophaga coronata</i> | Yellow-rumped Warbler |
| Passeriformes | Picidae | <i>Melanerpes formicivorus</i> | Acorn woodpecker |
| Passeriformes | Troglodytidae | <i>Thryomanes bewickii</i> | Bewick's Wren |
| Passeriformes | Tyrannidae | <i>Sayornis nigricans</i> | Black Phoebe |
| Passeriformes | Tyrannidae | <i>Tyrannus verticalis</i> | Western Kingbird |

