Rose Creek Bikeway Project NES

Natural Environment Study

This Natural Environment Study discusses existing vegetation communities, flora, fauna, wetlands, impacts of the Proposed Project, proposed mitigation, and monitoring. The Proposed Project study area encompasses portions of Interstate 5 right-of-way, of Santa Fe Street, Damon Avenue, and Mission Bay Drive in San Diego, San Diego County, California

July 2015

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
District 11/ San Diego

July 2015

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Summary

This Natural Environment Study (NES) was prepared to evaluate the proposed Rose Creek Bikeway project located in the City of San Diego (City).

The proposed project involves construction of a bikeway as part of the Coastal Rail Trail (CRT) system. The project represents Segment 9B of the CRT, and would connect two existing segments of the CRT. The proposed bikeway, located in the City near the communities of Pacific Beach, Clairemont, and La Jolla, would extend a distance of approximately two miles from the northern terminus of Santa Fe Street, passing below Interstate 5 (I-5) and Mission Bay Drive, to the west side of Mission Bay Drive. The alignment of the bikeway includes a combination of on- and off-street configurations. The on-street portion of the bikeway, representing the northern portion of the bikeway, would be located within the existing paved area and western shoulder of Santa Fe Street to the bridge over Rose Creek. The off-street portion would start just north of the Santa Fe bridge over Rose Creek. A new bridge would be constructed over the creek and the southern portion of the bikeway would cross the bridge and extend along the east side of Rose Creek behind existing businesses fronting Santa Fe Street. The bikeway would cross under the existing I-5 freeway bridge constructed over Rose Creek; it would continue along the eastern bank of Rose Creek, pass below the Mission Bay Drive bridge, and connect to the existing Rose Creek Bike Path. The proposed project would fill an approximately two-mile gap in the existing regional bicycle network.

The proposed project occurs within the boundaries of the adopted City Multiple Species Conservation Program (MSCP) Subarea Plan, outside of the Multi-Habitat Planning Area (MHPA). The project alignment is located outside the Coastal Zone (CZ).

Vegetation Communities

The 64.2-acre (ac) Biological Study Area (BSA) includes the following vegetation communities: southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, streambed, Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, and developed land. The BSA was determined by creating a 100-foot (ft)-wide radius around the proposed project limits.

Special Status Species

A total of 15 sensitive plant and 18 sensitive animal species have the potential to occur within the BSA. Two sensitive plant species (San Diego sagewort [*Artemisia palmeri*] and southwestern spiny rush [*Juncus acutus* ssp. *leopoldii*]) were observed within the BSA during surveys. Two

sensitive animal species (yellow warbler [*Setophaga petechia*] and least Bell's vireo [*Vireo bellii pusillus*]) were observed or detected within the BSA during surveys.

Jurisdictional Areas

U.S. Army Corps of Engineers (USACE) jurisdictional areas total approximately 9.40 ac within the BSA that include the proposed project limits plus a 100-ft radius surrounding the project limits. Regional Water Quality Control Board (RWQCB) jurisdiction within the BSA follows the boundaries of USACE jurisdiction, comprising 9.40 ac. California Department of Fish and Wildlife (CDFW) jurisdictional areas total approximately 12.61 ac within the BSA.

Impacts/Mitigation Measures

Temporary impacts would occur to 0.53 ac of southern riparian forest, 0.19 ac of southern willow scrub, 0.14 ac of freshwater marsh, 0.07 ac of non-native riparian, 0.06 ac of streambed, 0.4 ac of Diegan coastal sage scrub, and 0.2 ac of non-native grassland (Table S-1). Permanent impacts would occur to 0.45 ac of southern riparian forest, 0.09 ac of southern willow scrub, 0.05 ac of freshwater marsh, 0.04 ac of non-native riparian, 0.2 ac of Diegan coastal sage scrub, and 0.2 ac of non-native grassland (Table S-1). Temporary impacts to southern riparian forest, southern willow scrub, freshwater marsh, and arundo-dominated riparian would be mitigated at a 1:1 ratio, while permanent impacts to southern riparian forest, southern willow scrub, and freshwater marsh would be mitigated at a 3:1 ratio, resulting in required mitigation of 1.88 ac for southern riparian forest, 0.46 ac for southern willow scrub, and 0.29 ac for freshwater marsh. Temporary impacts to non-native riparian would be mitigated at a 1:1 ratio and permanent impacts to non-native riparian would be mitigated at a 2:1 ratio, resulting in required mitigation of 0.15 ac. No mitigation for temporary impacts to streambed would be required, as the impacts would result only from construction access within an unvegetated, concrete-lined portion of Rose Creek, and would not alter the contours of the creek or otherwise necessitate restoration activities. Temporary and permanent impacts to Diegan coastal sage scrub would be mitigated at a 1:1 ratio resulting in required mitigation of 0.6 ac. Permanent impacts to non-native grassland would be mitigated at a 0.5:1 ratio, resulting in required mitigation of 0.1 ac. No mitigation for temporary impacts to non-native grassland would be required as these areas would be revegetated with a native forb palette as an erosion control measure.

Table S-1 Vegetation Communities Impacts and Mitigation Summary (ac)*

Vegetation Community	Impact Type	Impact	Mitigation Ratio†	Required Mitigation‡
Southern riparian forest	T	0.53	1:1	0.53
Southern riparian forest	P	0.45	3:1	1.35
Southern willow scrub	T	0.19	1:1	0.19
Southern willow scrub	P	0.09	3:1	0.27
Freshwater marsh	T	0.14	1:1	0.14
Freshwater marsh	P	0.05	3:1	0.15
Non-native riparian	T	0.07	1:1	0.07
Non-native riparian	P	0.04	2:1	0.08
Streambed	T	0.06	--**	0.00
Streambed	P	0.00	--**	0.00
Diegan coastal sage scrub	T	0.4	1:1	0.4
Diegan coastal sage scrub	P	0.2	1:1	0.2
Non-native grassland	T	0.2	0.5:1	0.1
Non-native grassland	P	0.2	0.5:1	0.1
	TOTAL	**2.6**	**--**	**3.58**

*Upland habitats are rounded to the nearest 0.1 ac, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

**No permanent impacts would occur and temporary impacts are limited to construction access within an unvegetated, concrete-lined portion of Rose Creek.

T=Temporary impacts; P=Permanent impacts

†Mitigation ratios and required mitigation would be finalized in consultation with the resource agencies.

‡Estimated mitigation acreage based on mitigation ratios described in the text.

Implementation of the proposed project would result in temporary impacts to 0.69 ac and permanent impacts to 0.25 ac of USACE jurisdictional areas. Project implementation would result in temporary impacts to 1.17 ac and permanent impacts to 0.75 ac of CDFW jurisdictional areas. Mitigation ratios are anticipated to range from 1:1 to 3:1, with a total mitigation obligation of approximately 1.24 ac for impacts to USACE jurisdictional areas (waters of the U.S.) and 2.90 ac for impacts to CDFW jurisdictional areas. Final mitigation requirements for impacts to jurisdictional areas would be determined in consultation with the USACE, RWQCB, and CDFW.

Implementation of the proposed project would result in permanent impacts to approximately 114 San Diego sagewort (*Artemisia palmeri*) individuals. Impacts to San Diego sagewort would be mitigated through habitat mitigation for impacts to Diegan coastal sage scrub and southern willow scrub. Although species-specific mitigation is not necessitated due to the low sensitivity status of this species and its relative abundance in the project vicinity, San Diego sagewort would be included in the seed mix for restoration of temporarily impacted areas.

Implementation of the proposed project would result in permanent impacts to habitat of two sensitive animal species observed/detected within the BSA: yellow warbler and least Bell's vireo. Direct effects on habitat for least Bell's vireo and yellow warbler would be mitigated

through mitigation for impacts to southern riparian forest and southern willow scrub, which will be finalized during consultation with the USFWS, CDFW, RWQCB, and USACE. Potential indirect effects resulting from noise during construction would be avoided by conducting pre-construction breeding season surveys and establishing setbacks from active nests. Indirect effects from night lighting would not occur as the only lighting associated with the project is low-voltage safety lighting in the protective railing between the bicycle facility and the creek, which would be selectively placed, shielded, and directed away from the creek.

Permits Required

Impacts to USACE jurisdictional areas would require a Clean Water Act Section 404 Permit from the USACE and a Clean Water Act Section 401 Water Quality Certification from the San Diego RWQCB. Impacts to CDFW jurisdictional areas would require a California Fish and Game Code Section 1602 Streambed Alteration Agreement from CDFW. A Section 7 consultation is required for potential impacts to least Bell's vireo.

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List of Abbreviated Terms

ac	acre(s)
amsl	above mean sea level
Baja	Baja California, Mexico
dB	decibel
BMPs	Best Management Practices
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Inventory
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
City	City of San Diego
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CP	Control Point
CRPR	California Rare Plank Rank
CRT	Coastal Rail Trail
CWA	Clean Water Act
CZ	Coastal Zone
ESA	Endangered Species Act
ESL	Environmentally Sensitive Lands
FHWA	Federal Highway Administration
ft	foot/feet
GIS	geographic information system
HELIX	HELIX Environmental Planning, Inc.
I-	Interstate
LOSSAN	Los Angeles to San Diego railroad corridor
MBTA	Migratory Bird Treaty Act
MBTRA	Migratory Bird Treaty Reform Act
MHPA	Multi-Habitat Planning Area
mi	mile(s)
MSCP	Multiple Species Conservation Program
MOU	Memorandum of Understanding
NCCP	Natural Communities Conservation Program
NES	Natural Environment Study
NEPA	National Environmental Policy Act
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Science
NWP	Nationwide Permit
RBP	Regional Bike Path
RWQCB	Regional Water Quality Control Board

List of Abbreviated Terms (cont.)

SAA	Streambed Alteration Agreement
SANDAG	San Diego Association of Governments
SDP	Site Development Permit
SR	State Route
TE	Transportation Enhancement
UCSD	University of California, San Diego
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WUS	Waters of the U.S.

Chapter 1. Introduction

The proposed project involves construction of a bikeway as part of the Coastal Rail Trail (CRT) system. The CRT is a 44-mile bikeway extending from the San Luis Rey River Bikeway in the City of Oceanside to the Santa Fe Train Depot in the City of San Diego (City). The proposed bikeway would extend a distance of approximately two miles from the northern terminus of Santa Fe Street to the west side of Mission Bay Drive. The northern portion of the bikeway would be located on existing pavement comprising Santa Fe Street. The southern portion of the bikeway would extend along the east side of Rose Creek after leaving Santa Fe Street via a new bridge constructed over the creek. The purpose of the proposed project is to improve pedestrian and cyclist safety and meet regional goals for constructing segments of the CRT.

1.1. Project History

The Rose Creek Bikeway project is part of the regional CRT, which consists of a 44-mile system of multi-use trails intended to better connect the coastal cities of Oceanside, Del Mar, Carlsbad, Encinitas, Solana Beach, and San Diego. Each city has entered into a Memorandum of Understanding (MOU) to plan, design, and construct segments of the trail within their respective jurisdictions.

The proposed project would fill an approximately two-mile gap in the existing regional bicycle network, and is intended to provide a comfortable, safe bike riding environment for people of all ages and abilities. A number of community workshops were hosted by the San Diego Association of Governments (SANDAG) in 2013 to solicit public input and develop a conceptual design for the project. The project would contribute to the vision of the San Diego Regional Bike Plan, which is to make riding a bicycle a useful form of transportation for everyday travel. This vision includes building a regional system of interconnected bicycle corridors, support facilities, and programs to enable residents to ride with greater safety and convenience within and between major activity centers. The project is expected to provide more transportation options and encourage a more sustainable lifestyle in the region.

The CRT project will result in a number of benefits to regional mobility, including providing a direct north-south connection for bicycles, pedestrians, and joggers, and providing links to regional employment centers in Sorrento Valley, the University of California, San Diego (UCSD), and University City for residential communities to the north and south.

The overall purpose of this project is to continue implementation of the CRT to provide for alternative forms of transportation in the region.

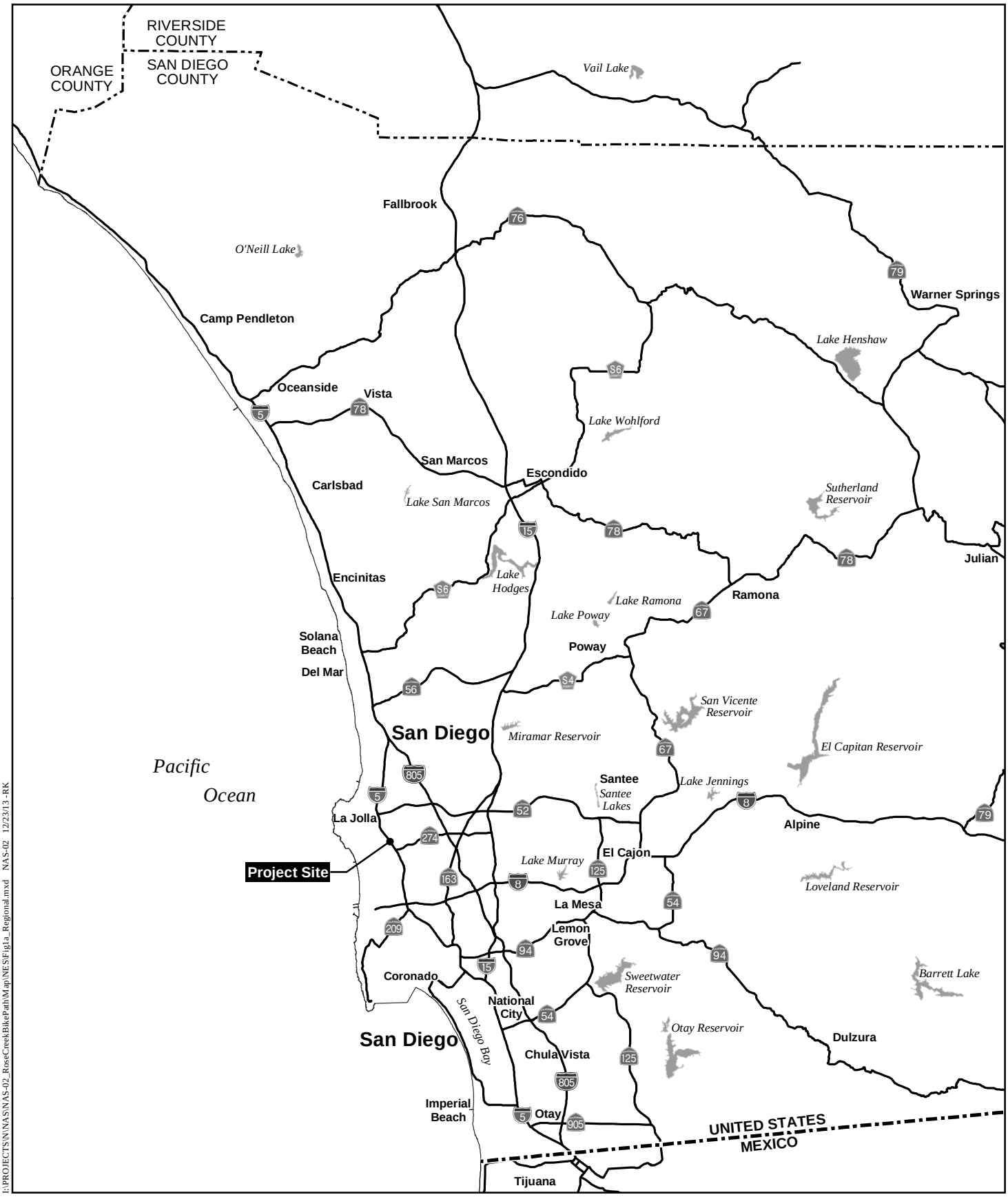
1.2. Project Description

The proposed project represents Segment 9B of the CRT, as identified in the Regional Bike Plan (RBP) and CRT Project Study Report (October 2000). The proposed bikeway, located in the City near the communities of Pacific Beach, Clairemont, and La Jolla (Figure 1a), would extend a distance of approximately two miles from the northern terminus of Santa Fe Street, passing below Interstate (I-) 5 and Mission Bay Drive, to the west side of Mission Bay Drive (Figures 1a and 1b). The project would connect two existing segments of the CRT. Project construction is estimated to occur over an approximately 12-month period, anticipated to begin in October 2016, though construction could start earlier.

The alignment of the bikeway includes a combination of on- and off-street configurations (Figures 2a, 2b, and 2c). Beginning at the northern terminus of Santa Fe Street, the bikeway would be a Class II bikeway located within the existing paved area and western shoulder of Santa Fe Street to the bridge over Rose Creek, a distance of approximately 7,200 linear feet (ft). More specifically, this stretch of the bikeway would consist of a 10-ft-wide cycle-track on the west side of the road to accommodate both directions of travel. The cycle-track would include a two-ft shoulder adjacent to the Caltrans fence and a two-ft raised concrete median between the Santa Fe Street traffic lanes and the cycle track, making a total of 16 ft in width. The cycle-track's footprint includes the unimproved shoulder between Santa Fe Street and the Caltrans right-of-way.

The off-street portion of the bikeway would consist of a Class I[1] shared-use path consisting of 10 ft of paved surface with two-ft shoulders for a total of 14 ft in width. The off-street portion would encompass approximately 4,000 linear ft. The off-street portion would start north of the Santa Fe bridge over Rose Creek. At this point, the bikeway would be located on a bridge which would parallel the existing Santa Fe Street bridge. The proposed bridge would include one central column in the creek to support the bridge. Once across the creek, the bikeway would be located on a bench, constructed along the eastern bank of Rose Creek behind existing businesses fronting Santa Fe Street. The bench would be created by a cut along the east edge and a short retaining wall located along the west side. The maximum width of the bench would be 14 ft to accommodate the bikeway (paved 10-ft-wide cycle track with two-ft shoulders). Ten ft is the recommended width of Class I facilities per the Caltrans Highway Design Manual (Section 1003.1), with eight ft as the minimum width. Where heavy volumes are anticipated and/or significant pedestrian traffic is expected, the paved width should range from 10 to 12 ft. The bikeway is anticipated to be heavily used and, therefore, the eight-ft width is too narrow to

[1] Class I Bike paths are bikeways that are physically separated from vehicular traffic. Also termed shared-use paths, bike paths accommodate bicycle, pedestrian, and other non-motorized travel. Paths can be constructed in roadway right-of-way or independent right-of-way. Bike paths provide critical connections in the region where roadways are absent or are not conducive to bicycle travel.



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Regional Location Map

ROSE CREEK BIKEWAY PROJECT

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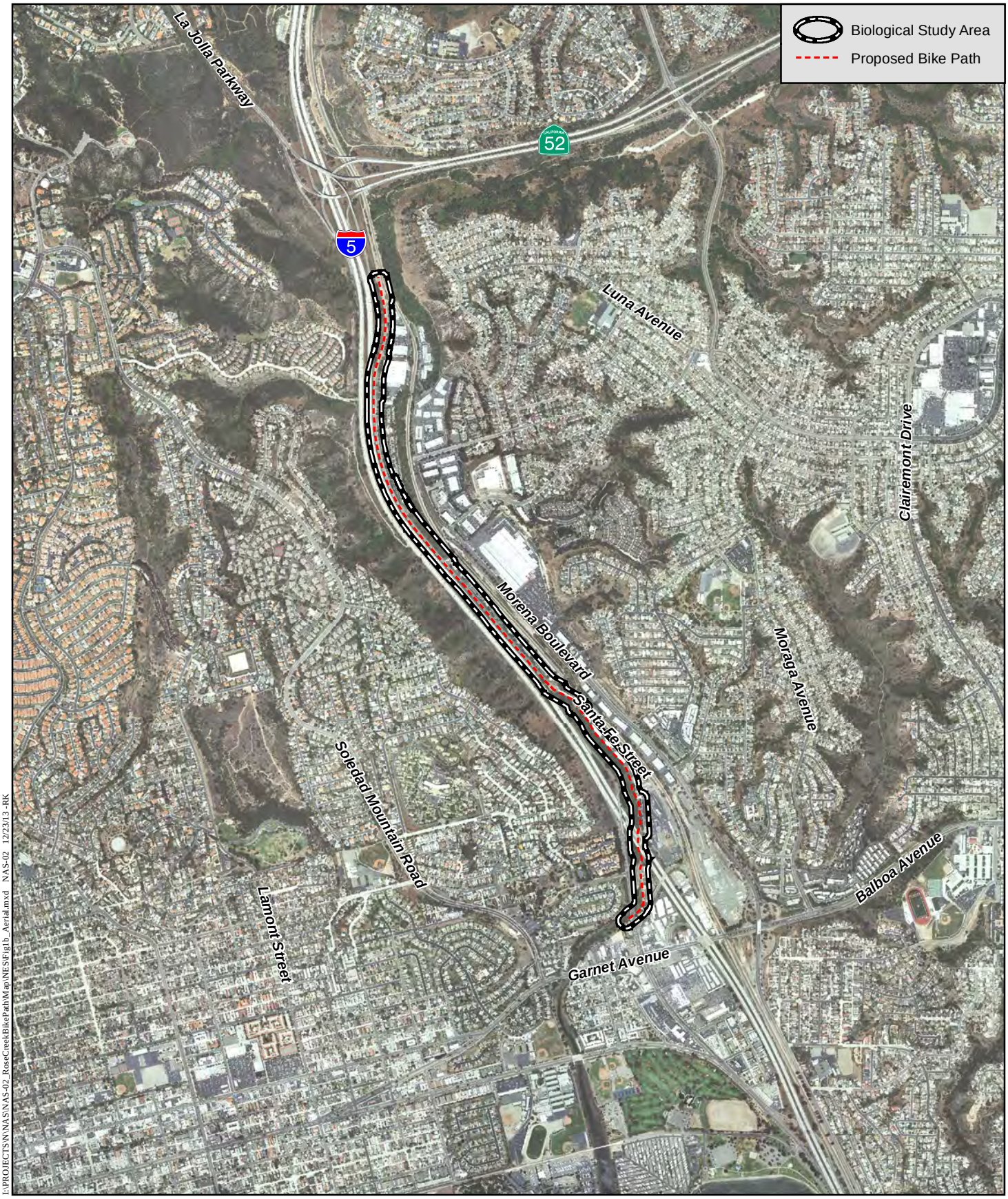
0 8 Miles

Figure 1a



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Project Vicinity Map (Aerial Photograph)

ROSE CREEK BIKEWAY PROJECT

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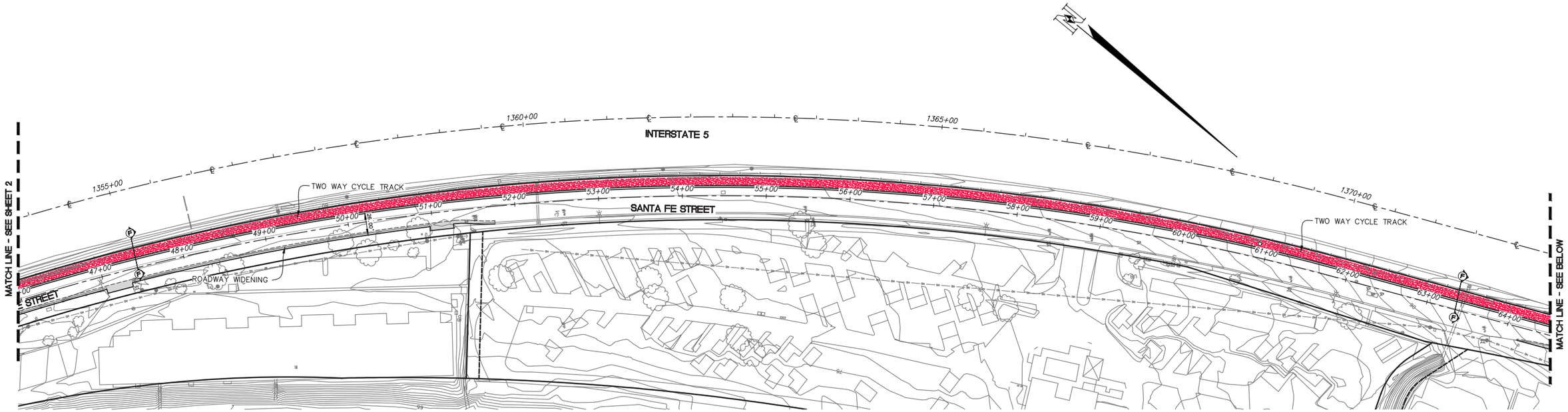
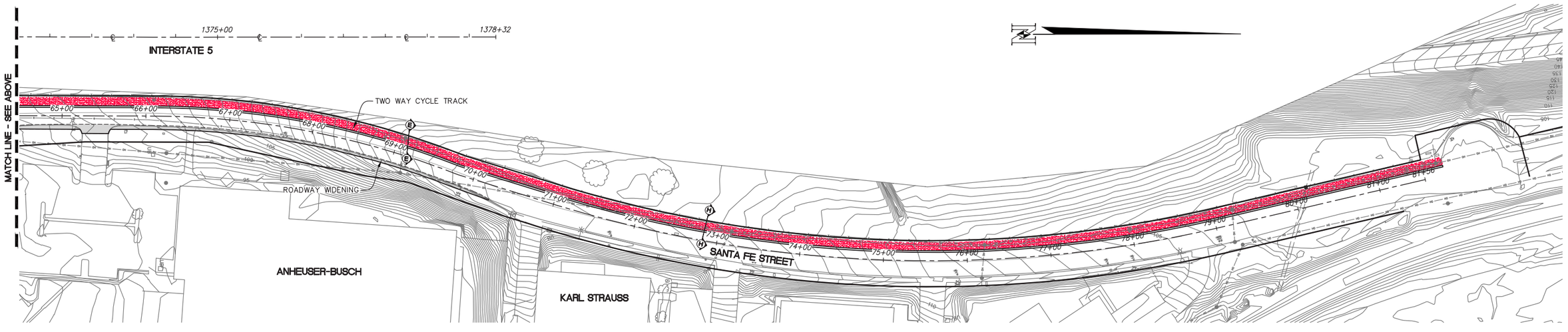
N 0 2,000 Feet

Figure 1b





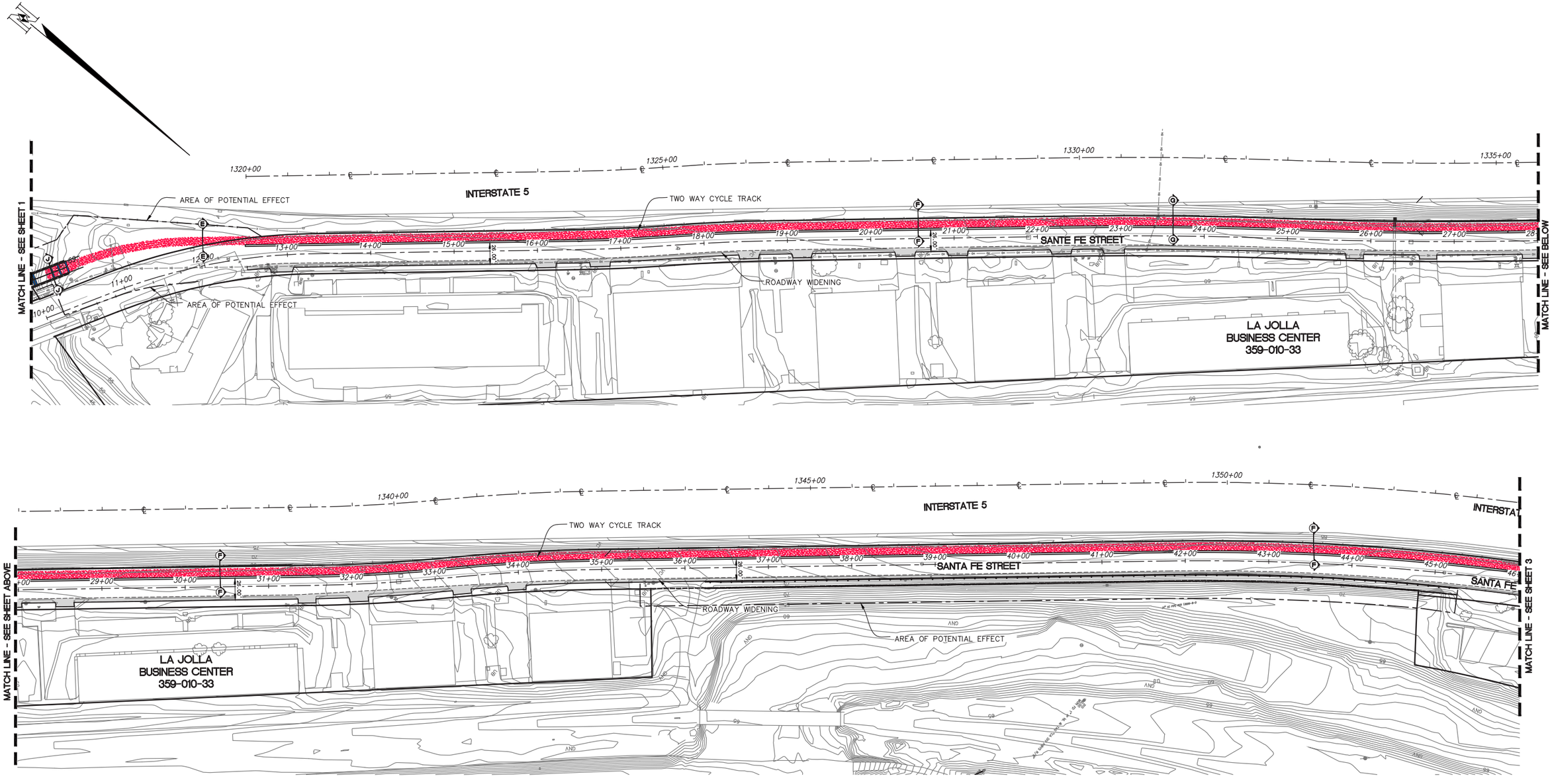
Source: Nasland Engineering 2014

Site Plan

ROSE CREEK BIKEWAY PROJECT

Figure 2a

HELIX Environmental Planning



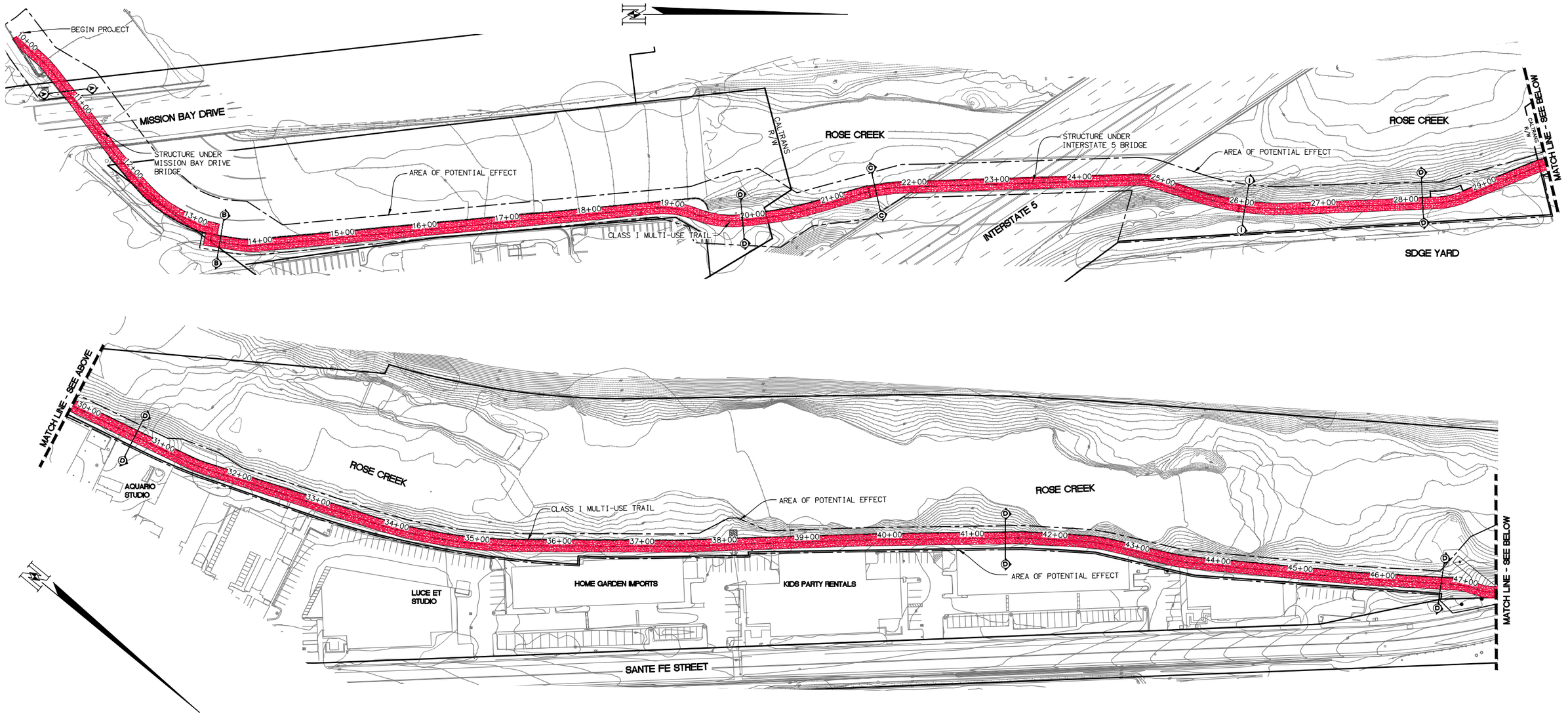
Source: Nasland Engineering 2014

Site Plan

ROSE CREEK BIKEWAY PROJECT

Figure 2b

HELIX Environmental Planning



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Source: Nasland Engineering 2014

Site Plan

ROSE CREEK BIKEWAY PROJECT

Figure 2c

HELIX Environmental Planning

support the expected bicycle and pedestrian traffic. Additionally, the bikeway must also be sufficiently wide to allow for emergency/police and maintenance vehicle access.

The bikeway would cross under the existing I-5 freeway bridge constructed over Rose Creek. Beneath the bridge, the bikeway would be constructed on a structural slab over a lightweight cellular concrete and would abut the existing bridge wall with a seismic expansion joint.

On the other side of the I-5 bridge, the bikeway would return to a bench cut into the top of the east bank of Rose Creek and an existing service road behind existing businesses. It would cross beneath the Mission Bay Drive bridge over Rose Creek, on a structure similar to the one beneath the I-5 bridge, and connect with an existing Class I bikeway (Rose Creek Bike Path) near the intersection of Mission Bay Drive and Damon Avenue.

Construction staging would be located in disturbed or developed areas within and directly adjacent to Santa Fe Street, to the north and south of the existing Santa Fe Street bridge. Additional staging areas, comprised entirely of disturbed or developed sites, may be used in other locations in the project vicinity.

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Chapter 2. Study Methods

This chapter discusses the methods used to document general biological resources and special status species and their habitats potentially occurring within the Biological Study Area (BSA) that was determined by creating a 100-ft-wide radius around the proposed project limits.

2.1. Regulatory Requirements

Biological resources within the BSA are subject to regulatory administration by the federal and state governments. The federal government administers non-marine plant- and wildlife-related issues through the U.S. Fish and Wildlife Service (USFWS), while waters of the U.S. (WUS; including wetlands) are administered by the U.S. Army Corps of Engineers (USACE). California law relating to wetland, water-related, and wildlife issues is administered by the California Department of Fish and Wildlife (CDFW). SANDAG is the lead agency for the California Environmental Quality Act (CEQA) environmental review process in accordance with state law. The City is a Responsible Agency.

2.1.1. Federal

The Federal Highway Administration (FHWA) has published a technical guidance for assessment of environmental impacts (including impacts to biological resources) in compliance with National Environmental Policy Act (NEPA), the federal Endangered Species Act (ESA) and Clean Water Act (CWA), and other federal environmental regulations. This Natural Environment Study (NES) has been prepared in compliance with FHWA guidelines, as the project will receive Transportation Enhancement (TE) funding from the FHWA. While federal guidance does not include specific impact criteria or significance thresholds, adverse impacts are identified and mitigation measures are recommended where appropriate.

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

Sections 10(a) and 7 of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 10(a) allows issuance of permits for incidental take of endangered or

threatened species. The term "incidental" applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. A habitat conservation plan demonstrating how the taking would be minimized and what steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A Biological Assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion, issued by the USFWS for non-marine related listed species issues.

The USFWS identifies endangered and threatened species critical habitat, which are areas of land considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat so they can be removed from the threatened/endangered species list. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any project they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat.

The USACE regulates impacts to Waters of the U.S. (WUS) under Section 404 of the Clean Water Act (CWA; 33 U.S.C. 401 et seq.; 33 U.S.C. 1344; U.S.C. 1413; and Department of Defense, Department of the Army, Corps of Engineers 33 CFR Part 323). The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all WUS. A federal CWA Section 404 Permit would be required for a project to place fill in WUS. Projects impacting WUS could be permitted on an individual basis or be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than one year) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions. Linear transportation projects may be authorized under CWA Section 404 Nationwide Permit (NWP) 14, which does not place a limit on impacts to linear feet of WUS. A CWA Section 401 Water Quality Certification administered by the Regional Water Quality Control Board (RWQCB) must be issued prior to issuance of a Section 404 Permit.

All migratory bird species native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act (MBTRA) of 2004 (FR Doc. 05-5127; USFWS 2004). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 15 to August 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

When a transportation project proposes to use resources (including but not limited to public park and recreation lands, wildlife and waterfowl refuges, and historic sites) protected by Section 4(f) of the Department of Transportation Act of 1966, an evaluation must be prepared discussing the significance of the resource, as well as impact avoidance and minimization methods.

2.1.2. State of California

The California Department of Transportation (Caltrans) has published technical guidance similar to that of the FHWA. Significance thresholds are not listed by Caltrans.

The State CEQA Guidelines have been developed by the Office of Planning and Research pursuant to direction by the State Legislature. The State CEQA Guidelines consist of a set of mandatory and/or advisory regulations intended to provide guidance and interpretation for implementing the CEQA Statutes. The Environmental Checklist Form in Appendix G of the State CEQA Guidelines lists the following as potential CEQA issues: substantial adverse effects to a candidate, sensitive, or special status species of animal or plant; substantial adverse effects to riparian, wetland, or other sensitive natural communities; substantial interference with the movement of any resident or migratory fish or wildlife species; and conflict with local policies or ordinances or the provisions of an adopted habitat conservation plan.

Under most circumstances, significant impacts under CEQA are assessed to any impact to wildlife species listed by federal or state agencies as threatened or endangered. Significant impacts to listed species could be direct (e.g., the loss of a species) or indirect (e.g., affecting the species' habitat), with impacts to rare or uncommon (sensitive) habitats also considered significant based on their level of sensitivity and magnitude of their projected impact. The significance of impact to any habitat is based on the area affected, on-site species diversity, integrity of habitat or level of disturbance, connection of the site to areas with habitat value, and its regional context and extent and significance of impact.

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The California Endangered Species Act (CESA) followed and is similar to the NPPA in that it provides a process by which sensitive species are listed. It is a process by which plants and animals can be recognized as being endangered or threatened with extinction (plants listed as rare under the NPPA were designated threatened under the CESA).

The ESA Section 4(d) special rule for interim take of coastal California gnatcatchers was promulgated in response to California's Natural Communities Conservation Program (NCCP) Act of 1991 and the initiation of NCCP Plans targeting coastal sage scrub (gnatcatcher habitat).

The NCCP Act authorized the state to engage in regional multiple species conservation planning with local jurisdictions and property owners. The NCCP Plans focus on conserving natural communities in linked regional preserve systems that protect target and other species that are either listed under the federal or state ESAs or which could become listed if populations continue to decline. Approval of NCCP subarea plans provides a jurisdiction with take authorization for all species covered by the plan and institutes mitigation measures that conform to the ESAs which are intended to guarantee the survival of the covered species in the areas covered by the plan.

All projects within an NCCP enrolled jurisdiction that occur in low-value habitat, as well as projects in medium-value habitat located outside identified preserve planning areas that cause the loss of less than 0.4 ha (1.0 ac) of coastal sage scrub habitat not occupied by the coastal California gnatcatcher and would not otherwise preclude design of the reserve system, are considered *de minimis* and are exempt from the 4(d) rule approval process. Mitigation for these projects is, however, still required to conform to all underlying resource protection requirements of the local jurisdiction and/or the NCCP guidelines (USFWS and CDFW 1995).

The CDFW regulates alterations or impacts to streambeds or lakes under Section 1602 of the California Fish and Game Code. The CDFW requires a Streambed Alteration Agreement (SAA) for projects that would divert or obstruct the natural flow of water; change the bed, channel, or bank of any stream; or use any material from a streambed. The SAA is a contract between the applicant and CDFW stating what activities can occur in the riparian zone and stream course.

Although the proposed project is outside the Coastal Zone (CZ), the CZ boundary line is on/near Garnet Avenue, approximately 500 ft to the south of the project site. Needed staging/storage areas and construction activities will be sited to avoid the CZ, but in the event that such activities are necessary in the CZ, appropriate permitting from the City of San Diego or California Coastal Commission, as determined by jurisdiction, will be obtained.

2.1.3. City of San Diego

In accordance with the Land Development Code, the City's Environmentally Sensitive Lands (ESL) regulations defines sensitive biological resources as those lands included within the Multi-Habitat Planning Area (MHPA) as identified in the City's Multiple Species Conservation Program (MSCP) Subarea Plan (1997) and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA or IIIB; and habitat for rare, endangered, or threatened species, or narrow endemic species. Each tier, as listed above, is based on rarity and ecological importance (the first includes the most sensitive habitat, the fourth includes the least sensitive habitat). Impacts to ESL typically require a Site Development Permit

(SDP). City Biology Guidelines (2012) aid implementation and interpretation of the ESL regulations, which also serve as standards for the determination of impacts and mitigation under CEQA.

2.2. Studies Required

The following studies were conducted within the BSA: vegetation mapping; general botanical and zoological surveys; rare plant survey; jurisdictional delineation; and coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and southwestern willow flycatcher (*Empidonax traillii extimus*) focused surveys. All surveys were conducted by biologists from HELIX Environmental Planning, Inc. (HELIX) and subcontractor John Konecny (Konecny Biological Services).

2.2.1. Literature and Biological Database Review

In addition to conducting biological surveys, a review of existing literature and biological databases was conducted. The City's MSCP documents and biological resource maps were also reviewed to determine the locations of sensitive habitats, species, and the MHPA with respect to the BSA. A search of the CDFW California Natural Diversity Database (CNDDB; CDFW 2015) was performed for information regarding sensitive species known to occur within the vicinity of the BSA.

Nomenclature for this report is from Baldwin et al. (2012), the California Native Plant Society (CNPS; 2015), Holland (1986) and Oberbauer (2008) for vegetation communities; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2014) for birds; and Baker et al. (2003) for mammals. Sensitive plant species status is taken from CNPS (2014). Sensitive animal species status is taken from CDFW's CNDDB (2015).

2.2.2. General Biological Survey and Vegetation Mapping

A general biological survey of the BSA was conducted on May 3, 2011 and April 3, 2013. The BSA was defined by creating a 100-ft-wide radius around the proposed project limits. Data collected in 2011 was associated with the Control Point (CP) Elvira to CP Morena Double Track project, whose survey area overlapped with the northern half of the Rose Creek Bikeway BSA. The 2011 and 2013 surveys covered the entire BSA. Vegetation was mapped on a 1"=200'-scale aerial photograph. The BSA was surveyed on foot with the aid of binoculars, and all observed or detected plant and animal species were recorded in field notes and/or on the aerial photograph. Animal identifications were made in the field by direct, visual observation, or indirectly by detection of calls, burrows, tracks, or scat. All plant identifications were made in the field or in

the lab through comparison with voucher specimens or photographs. Vegetation was classified and mapped consistent with the City's biological resource mapping requirements (Holland 1986, as revised by Oberbauer et al. 2008). Data from the field maps were digitized into a geographic information system (GIS) using ArcGIS 9.2.

2.2.3. Rare Plant Survey

A rare plant survey was conducted on April 3, 2014 during the spring blooming period of sensitive plants with potential to occur within the BSA. Rare plants were also looked for opportunistically during other biological surveys. Areas with potential to support rare plants were determined by reviewing previous biological survey reports and CNDDB records. The BSA was surveyed on foot and focused on vegetated areas or areas with soils most likely to support rare plants.

2.2.4. Jurisdictional Delineation

A jurisdictional delineation was conducted within the BSA on May 11 and May 31, 2011 in the northern portion of the BSA, and on April 3, 2013 in the southern portion of the BSA. Data collected in 2011 was associated with the CP Elvira to CP Morena Double Track project, whose survey area overlapped with the northern half of the Rose Creek Bikeway BSA. Biological conditions within this reach of the BSA were verified during field work conducted in 2013. The combined 2011 and 2013 jurisdictional delineations covered the entire BSA. Prior to beginning fieldwork, aerial photographs (1"=200' scale), topographic maps (1"=200' scale), and previous vegetation mapping were reviewed to determine the location of potential jurisdictional areas that may be affected by the proposed project.

All areas with depressions or drainage channels were evaluated for the presence of WUS, including jurisdictional wetlands. If an area was suspected of being a wetland, vegetation and hydrology indicators were noted, and a soil pit was excavated and described. The area was then determined to be a federal wetland if it satisfied the three wetland criteria (hydrophytic vegetation, wetland hydrology, and hydric soil) described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Areas were determined to be non-wetland WUS if there was evidence of regular surface flow (e.g., bed and bank) but the vegetation and/or soils criterion were not met. Non-wetland areas encompassed by the ordinary high water mark were measured and vegetation (if present) was noted. All non-wetland WUS were measured and mapped in the field.

The CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow (bed and bank). Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream. The CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream.

Wetland affiliations of plant species follow the USFWS's National List of Plant Species that Occur in Wetlands: California (Reed 1988) for data collected in 2011, and the National Wetland Plant List (Lichvar 2012) for data collected in 2013. For data collected in 2011, species suspected of being wetland plants but that were not listed by Reed (1988) were evaluated using the indicator status provided in the draft North American Digital Flora: National Wetland Plant List (Lichvar and Kartesz 2009). Soils information was taken from the Natural Resources Conservation Service (NRCS; 2014) and Bowman (1973). Soil chromas were identified according to Munsell's Soil Color Charts (Kollmorgen 1994).

2.2.5. Coastal California Gnatcatcher Surveys

The USFWS protocol surveys for the federally listed threatened coastal California gnatcatcher were conducted within the Diegan coastal sage scrub that occurs within the BSA. In 2014, three surveys were conducted in potential coastal California gnatcatcher habitat within the BSA according to 1997 USFWS protocol. Three surveys are considered acceptable for projects occurring within a NCCP planning area with an approved subarea plan (such as the MSCP).

Three protocol surveys were conducted in 2014 within all areas of sage scrub mapped in the BSA (Table 1). Approximately 2.4 ac of potential gnatcatcher habitat were surveyed on foot with the aid of binoculars. Each survey was conducted by walking through and along the edges of habitat. Birds were viewed with the aid of binoculars, where necessary. Taped gnatcatcher vocalizations were played when gnatcatchers were not readily heard or observed.

2.2.6. Least Bell's Vireo Surveys

Due to the presence of potentially suitable habitat (southern riparian forest, southern willow scrub, non-native riparian, mule fat scrub, freshwater marsh, and tamarisk scrub) within the BSA and the potential for noise impacts from construction of the proposed project, USFWS protocol surveys for the federally and state listed endangered least Bell's vireo were deemed necessary. Eight protocol surveys were conducted in 2014 (Table 1). Approximately 9.9 ac of potential

vireo habitat were surveyed on foot with the aid of binoculars. The surveys covered all areas of potential habitat within the BSA.

2.2.7. Southwestern Willow Flycatcher Surveys

Due to the presence of potentially suitable habitat (southern riparian forest, southern willow scrub, non-native riparian, mule fat scrub, freshwater marsh, and tamarisk scrub) within the BSA and the potential for noise impacts from construction of the proposed project, USFWS protocol surveys for the federally and state listed endangered southwestern willow flycatcher were deemed necessary. Five protocol surveys were conducted in 2014 (Table 1). Approximately 9.9 ac of potential flycatcher habitat were surveyed on foot with the aid of binoculars. The surveys covered all areas of potential habitat within the BSA.

Table 1: Survey Information

Survey Date(s)	Personnel	Purpose
2011		
May 3	L. Sward	General biological survey, vegetation mapping
May 11	L. Sward and S. Nigro	Jurisdictional delineation
May 31	L. Sward	Jurisdictional delineation
2013		
April 3	S. Nigro and G. Aldridge	General biological survey, jurisdictional delineation
2014		
April 2	J. Kurnow†	Coastal California gnatcatcher survey #1 of 3
April 3	S. Nigro and B. Rosenbaum	Rare plant survey #1 of 1
April 9	J. Kurnow	Coastal California gnatcatcher survey #2 of 3
April 16	J. Kurnow	Coastal California gnatcatcher survey #3 of 3
April 22	B. Rosenbaum	Least Bell's vireo #1 of 8
May 2	B. Rosenbaum	Least Bell's vireo #2 of 8
May 20	J. Konecny‡	Least Bell's vireo #3 of 8 Southwestern willow flycatcher #1 of 5
June 2	J. Konecny	Least Bell's vireo #4 of 8 Southwestern willow flycatcher #2 of 5
June 14	J. Konecny	Least Bell's vireo #5 of 8 Southwestern willow flycatcher #3 of 5
June 26	J. Konecny	Least Bell's vireo #6 of 8 Southwestern willow flycatcher #4 of 5
July 12	J. Konecny	Least Bell's vireo #7 of 8 Southwestern willow flycatcher #5 of 5
July 22	T. Baxter	Least Bell's vireo #8 of 8

†USFWS permitted individual (TE778195)
‡ USFWS permitted individual (TE837308-6)

2.3. Personnel and Survey Dates

Personnel and surveys dates conducted within the BSA are summarized in Table 1.

2.4. Agency Coordination and Professional Contacts

A site visit to review the proposed project location and discuss project design was conducted on February 27, 2015. The following persons were in attendance: Chris Carterette and Lauren Washington (SANDAG), Larry Thornburgh and Jennifer Smith (Nasland Engineering), Sally Brown (USFWS), Meris Guerrero (USACE), Mike Porter (San Diego RWQCB), Kevin Hovey (Caltrans), and Bruce McIntyre and Stacy Nigro (HELIX). An additional site visit was conducted on March 9, 2015 by representatives from SANDAG (Chris Carterette and Lauren Washington) and Tim Dillingham (CDFW).

A meeting was held on May 11, 2015 with Chris Carterette and Lauren Washington (SANDAG), Larry Thornburgh (Nasland Engineering), and Mike Porter (RWQCB) to discuss possible design alternatives.

A conference call was held on May 27, 2015 with Chris Carterette and Lauren Washington (SANDAG) and Mike Porter (RWQCB) to further discuss project design.

A site visit to verify the jurisdictional delineation was conducted on May 28, 2015 by USACE Project Manager Rose Galer and CDFW Senior Environmental Specialist Tim Dillingham.

2.5. Limitations That May Influence Results

There are no limitations or constraints identified at this time that could have influenced the results of surveys.

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Chapter 3. Results: Environmental Setting

3.1. Description of the Existing Biological and Physical Conditions

The following discussion addresses the existing topography, soils, vegetation, watercourses, and level of disturbance within the BSA.

3.1.1. Biological Study Area

The BSA is located north of Mission Bay near I-5 between Garnet Avenue and State Route (SR) 52 in the City of San Diego, San Diego County, California (Figures 1a and 1b). It is within unsectioned lands in the Pueblo Land Grant of the U.S. Geological Survey (USGS) 7.5-minute La Jolla quadrangle (Figure 4). The BSA is located outside of the CZ and the City's MHPA (Figure 3).

General land use within the BSA includes commercial and industrial development, roads/transportation corridors, and portions of Rose Creek. General land uses surrounding the BSA include residential development and roads, including I-5 to the west, commercial and industrial development to the north, south, and east, and a portion of the Los Angeles to San Diego (LOSSAN) railroad corridor to the east.

3.1.2. Physical Conditions

The BSA lies within the coastal plains and experiences warm dry summers and mild winters. Annual precipitation is approximately 13 inches (Bowman 1973). Elevations within the BSA range from approximately eight ft above mean sea level (amsl) to approximately 56 ft amsl, with the lowest elevations occurring within Rose Creek and the highest elevations occurring along I-5.

Four soil types are mapped within the BSA: Corralitos loamy sand, 0 to 5 percent slopes; Huerhuero loam, 15 to 30 percent slopes, eroded; Huerhuero-Urban land complex, 2 to 9 percent slopes; and Made Land (NRCS 2014). Made land comprises the vast majority of the mapped soils, with Corralitos sandy loam mapped at the southern tip of the BSA, west of Mission Bay Drive, Huerhuero-Urban land complex mapped at the southern end near Damon Avenue, and Huerhuero loam mapped in the northern portion of the BSA adjacent to Santa Fe Street.

The BSA is located at the west end of the Rose Creek watershed in the Peñasquitos Hydrologic Unit. The reach of Rose Creek beginning at the Santa Fe Street bridge south to just downstream

of Mission Bay Drive is the only watercourse occurring within the BSA. Downstream receiving waters include Rose Creek and Mission Bay.

3.1.3. Biological Conditions in the Biological Study Area

Many of the developed areas of the BSA are covered with paved surfaces, including I-5, Santa Fe Street, Damon Avenue, and Mission Bay Drive, in addition to entrance ways and parking lots associated with multiple businesses. Non-native landscaping also is present along portions of the roadways and businesses. Native vegetation communities within the BSA are associated primarily with Rose Creek, which supports a mosaic of disturbed native and non-native habitats within a mostly developed corridor adjacent to I-5. Rose Creek is channelized between I-5 and Mission Bay Drive. Human disturbance is apparent within the creek corridor, with evidence of homeless encampments and other human activity throughout the area. This includes piles of clothing and other belongings, shopping carts, flattened cardboard boxes, and a variety of discarded items and trash in and adjacent to the creek, including near the Santa Fe Street bridge and adjacent to and underneath the I-5 bridge over Rose Creek. Graffiti is prevalent on the walls of the I-5 bridge.

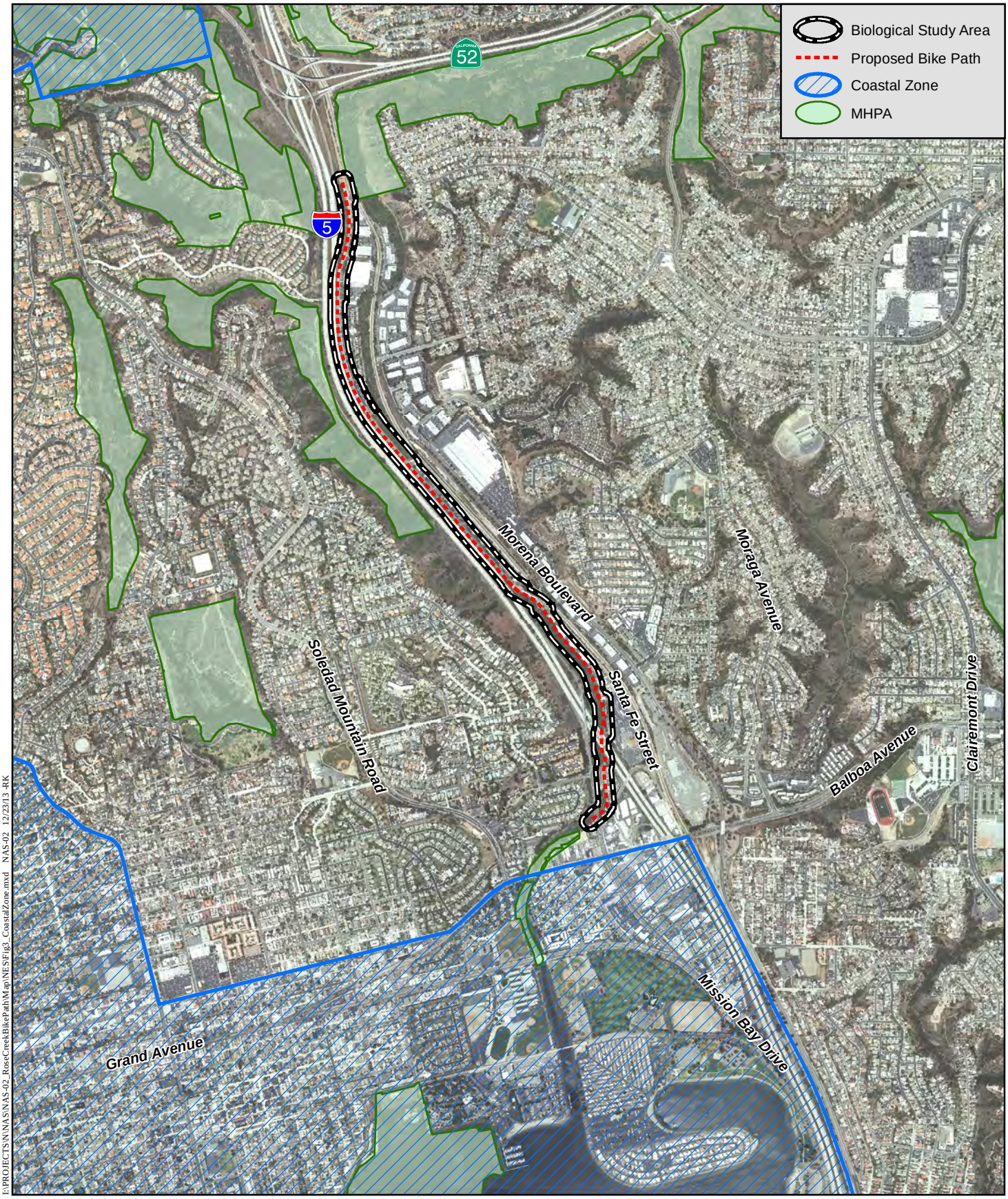
3.1.3.1. VEGETATION COMMUNITIES

Seven wetland/riparian and six upland vegetation communities or land use types occur in the BSA. Wetland/riparian habitats include southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, and streambed (Figures 5a through 5c). Upland habitats include Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, and developed land (Figures 5a through 5c).

Southern Riparian Forest

Southern riparian forest is composed of winter-deciduous trees that require water near the soil surface. Willow (*Salix* sp.), cottonwood (*Populus* sp.), and western sycamore form a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mule fat, stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*; Beauchamp 1986).

Species present in this habitat in the BSA include red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), mule fat (*Baccharis salicifolia*), and western sycamore (*Platanus racemosa*). Poison-oak (*Toxicodendron diversilobum*) is prevalent in portions of the understory. Areas within or directly adjacent to the creek support scattered cattails (*Typha* sp.), spike-sedge (*Eleocharis* sp.), water-cress (*Rorippa nasturtium-aquaticum*),



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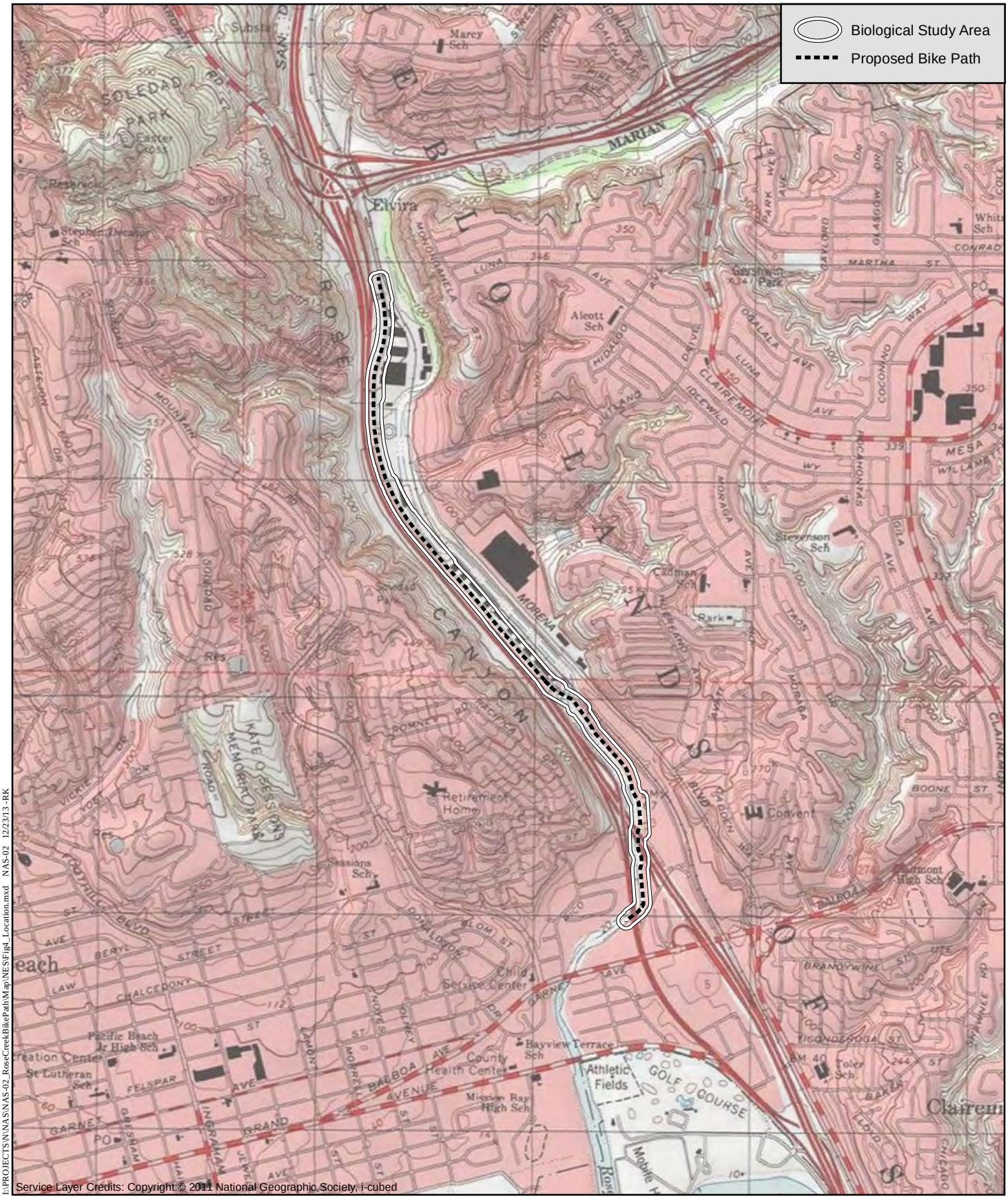
Coastal Zone/Multi-Habitat Planning Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 2,000 Feet

Figure 3



Project Vicinity Map (USGS Topography)

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 2,000 Feet

Figure 4

I:\PROJECTS\N\NAS\NAS-02_RoseCreekBikePath\Map\MXD\Fig5a-c_Vegetation.mxd NAS-02 01/21/14 -RK

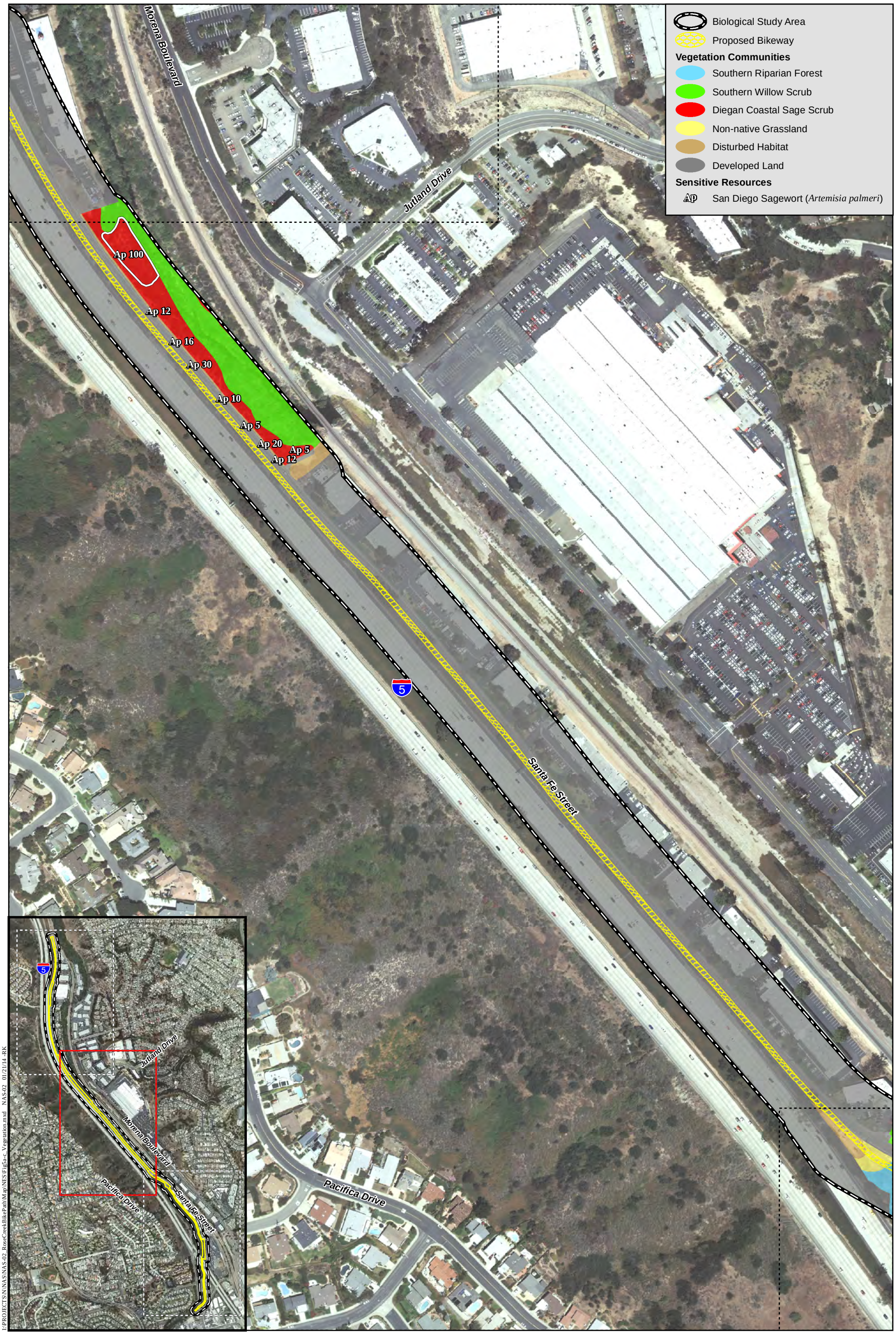
Vegetation and Sensitive Resources in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 5a



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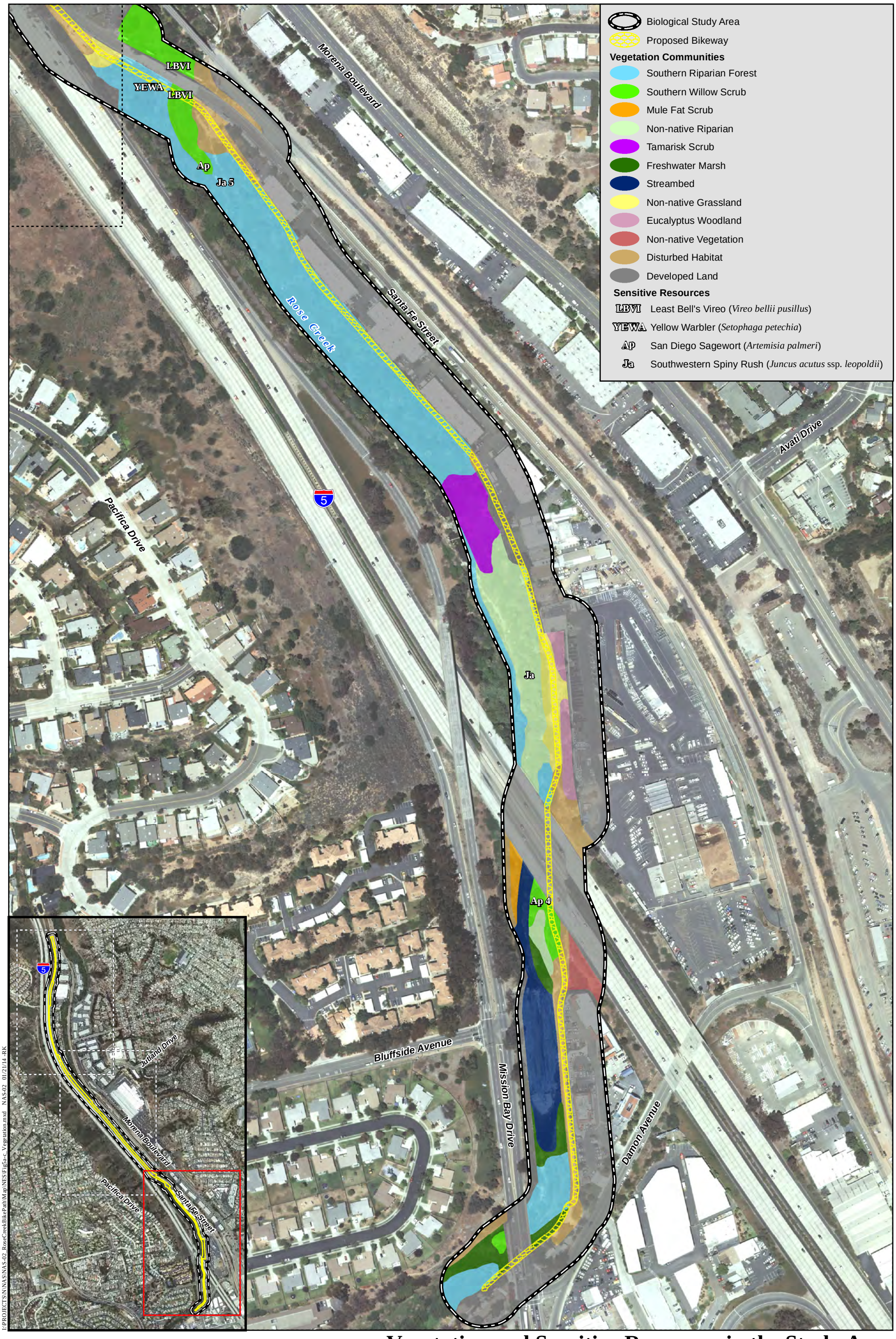
Vegetation and Sensitive Resources in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 5b



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Vegetation and Sensitive Resources in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 5c

and alkali bulrush (*Bolboschoenus maritimus* spp. *paludosus*). Portions of this habitat contain non-native, invasive species such as pampas grass (*Cortaderia* sp.), Mexican fan palm (*Washingtonia robusta*), Canary Island date palm (*Phoenix canariensis*), and Brazilian pepper (*Schinus terebinthifolius*). The Rose Creek Watershed Alliance has conducted restoration activities in portions of the riparian habitat in Rose Creek, consisting of cutting and herbicide treatments of pampas grass and girdling of non-native trees.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and with scattered emergent cottonwood (*Populus fremontii*) and western sycamores. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows (Holland 1986).

Arroyo willow is the dominant species present in this habitat within the BSA. Other species observed include mule fat, common celery (*Apium graveolens*), curly dock (*Rumex crispus*), pampas grass, and Bermuda grass (*Cynodon dactylon*).

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat.

Freshwater Marsh

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

Cattail is the dominant species present in this habitat within the BSA, with lesser coverage by alkali bulrush, common celery, and sedges (*Cyperus* sp.).

Non-native Riparian

Non-native riparian habitat consists of densely vegetated riparian thickets dominated by non-native, invasive species. Characteristic species include giant reed (*Arundo donax*), Mexican fan palm, tamarisk, Canary Island date palm, pampas grass, and eucalyptus (*Eucalyptus* sp.).

Dominant species occurring in this habitat within the BSA include Brazilian pepper, pampas grass, and Mexican fan palm. Giant reed (*Arundo donax*) also was observed in this habitat. Non-native riparian areas have been the focus of recent passive restoration efforts. Many of the Mexican fan palms have been treated and are dead or dying and the trunks of Brazilian pepper have been girdled but the trees are still persisting for the time being. Lower, wetter portions of this habitat support cattails and alkali bulrush beneath the non-native canopy.

Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species (*Tamarix* spp.) but may also contain other species, such as willows and pampas grass (*Cortaderia* sp.). This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage (Holland 1986).

Streambed

Streambed consists of non-vegetated portions of Rose Creek. This includes deeper portions of the channel, as well as the concrete-lined portion of the creek south of I-5 and upstream of the Mission Bay Drive bridge (Figure 5c).

Diegan Coastal Sage Scrub

Coastal sage scrub is one of the two major shrub types that occur in California. This vegetation community occupies xeric sites characterized by shallow soils. Sage scrub is dominated by subshrubs whose leaves abscise during summer drought and are replaced by a lesser amount of smaller leaves. This adaptation of drought evasion allows these species to better withstand the

prolonged drought period in the summer and fall in areas of low precipitation. Sage scrub species have relatively shallow root systems and open canopies. This last trait allows for the occurrence of a substantial herbaceous component in coastal sage scrub habitat. Four floristic associations are recognized within coastal sage scrub plant formation. These associations occur in distinct geographical areas along the California coast, with the Diegan association occupying the area from Orange County to northwestern coastal Baja California, Mexico (Baja; O'Leary 1990).

Typical species observed in this community in the BSA include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), broom baccharis (*Baccharis sarothroides*), and poison oak (*Toxicodendron diversilobum*). San Diego sagewort (*Artemisia palmeri*) also is present in a portion of this habitat.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. Characteristic species within this vegetation community include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut grass (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originate from the Mediterranean region, an area with a long history of agriculture and a climate similar to California.

Species present within this habitat in the BSA include ripgut grass, barley (*Hordeum* sp.), red brome, poison-oak, cheeseweed (*Malva parviflora*), and mustard (*Sisymbrium* sp.).

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa).* The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range.

Eucalyptus woodland occurs in two locations within the BSA: north of I-5 adjacent to a parking lot east of the creek and in the extreme northern tip of the BSA (Figures 5a and 5c).

Non-native Vegetation

Non-native vegetation is the name ascribed to cultivated plants such as cyclops acacia (*Acacia cyclops*), Peruvian pepper tree (*Schinus molle*), and hottentot-fig (*Carpobrotus edulis*) that have become naturalized in native habitat areas or that are remnant of previous cultivated land uses.

Non-native vegetation occurs in a single stand within the BSA just south of I-5 (Figure 5c). This habitat consists primarily of hottentot-fig and acacia.

Disturbed Habitat

Disturbed habitat is a non-native upland habitat type that includes areas in which there is sparse vegetative cover and where there is evidence of soil surface disturbance and compaction from previous human activity and/or the presence of building foundations and debris. Vegetation within disturbed habitat has a high predominance of non-native plant species, including exotic species recruited to the area from adjacent ornamental landscaped areas and/or ruderal (weedy) annual species that are indicators of disturbance, such as Russian thistle (*Salsola tragus*), filaree (*Erodium* sp.), garland daisy (*Glebionis coronaria*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (*Sonchus oleraceus*), among others.

Disturbed habitat occurs in scattered areas within the BSA (Figures 5a through 5c) and consists of bare areas used for parking and areas supporting a preponderance of non-native weedy vegetation, particularly garland daisy, perennial mustard (*Hirschfeldia incana*), filaree, and brass buttons (*Cotula australis*).

Urban/Developed

Urban/developed land generally includes areas that have been permanently altered due to the construction of aboveground developments such as buildings and roads, or areas where landscaping is clearly tended and maintained.

Developed land within the BSA consists of commercial and industrial development, as well as paved roads, including portions of I-5 and Santa Fe Street, Damon Avenue, and Mission Bay Drive (Figures 5a through 5c).

3.1.3.2. PLANT SPECIES

A total of 98 plant species were observed within the BSA during surveys, of which 66 (67 percent) are non-native. Appendix A contains a comprehensive list of all plant species encountered and the habitat they were determined to occupy within the BSA.

3.1.3.3. ANIMAL SPECIES

A total of 52 animal species were observed or detected within the BSA during surveys: five butterfly, two reptile, 41 bird, and four mammal species. Appendix B contains a comprehensive list of all animal species observed or otherwise detected within the BSA. Common animal species observed/detected within southern riparian forest include Nuttall's woodpecker (*Picoides nuttallii*), lesser goldfinch (*Carduelis psaltria*), and orange-crowned warbler (*Vermivora celata*). Within southern willow scrub, common animal species observed/detected included common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and lesser goldfinch. Bushtit (*Psaltriparus minimus*) and common yellowthroat were detected in mule fat scrub, and common yellowthroat also was detected in freshwater marsh. Common animal species observed/detected within non-native riparian include Nuttall's woodpecker, house wren (*Troglodytes aedon*), and spotted towhee (*Pipilo maculatus*). Within Diegan coastal sage scrub in the BSA, common animal species observed/detected include western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), Anna's hummingbird (*Calypte anna*), and California towhee (*Pipilo crissalis*). Common animal species observed/detected within non-native grassland include common white butterfly (*Pontia protodice*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), and California ground squirrel (*Spermophilus beecheyi*). Eucalyptus woodland within the BSA supports species such as American crow (*Corvus brachyrhynchos*), bushtit, and Anna's hummingbird. No animal species were observed/detected within tamarisk scrub.

3.1.3.4. WILDLIFE CORRIDOR

As previously discussed, the BSA is not within the MHPA, which is the City's biological preserve intended to link all core biological areas into a regional open space (Figure 4). The BSA occurs in a primarily urbanized area along the I-5 corridor between SR 52 and Garnet Avenue. Most of the BSA is developed and occupied by commercial development, roadways, and a rail line. The MHPA areas do occur to the north and south of the BSA, and include Marian Bear Memorial Park to the north, stretching eastward within San Clemente Canyon along the south side of SR 52, and an unnamed finger of MHPA following Rose Creek south of the BSA to its confluence with Mission Bay (Figure 4). Within the BSA, which occurs between these two areas, the creek is constrained by existing development and transportation

corridors, including I-5. The creek is particularly constrained in the vicinity of Mission Bay Drive and Damon Avenue, south of I-5, where it is concrete-lined and contained by retaining walls with intense urban development directly adjacent. Urban development in this area contributes to elevated noise levels, human encroachment, and dumping of trash into the creek. Although frogs, lizards, birds, and small to medium-sized mammals may utilize the creek within the BSA, due to its constrained nature and level of surrounding development, it is not likely to function as a viable corridor for larger species, and does not provide a continuous connection for terrestrial species between the two MHPA areas described above.

3.1.3.5 POTENTIAL JURISDICTIONAL WATERS AND WETLANDS

Potential USACE, RWQCB, and CDFW jurisdictional areas occur within the BSA, and include southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, and streambed (Figures 6a through 6c and 7a through 7c). RWQCB jurisdiction within the BSA follows the boundaries of USACE jurisdiction. There are no isolated waters of the State subject to exclusive RWQCB jurisdiction pursuant to the State Porter-Cologne Water Quality Control Act.

Three representative wetland sampling points were evaluated, and soil pits were excavated at each of these points. Standard data forms were completed for each sampling point in the field and are included in Appendix C-1. Appendix C-2 provides a summary of the three wetland delineation sampling points. The locations of the sampling points are illustrated on Figures 6b, 6c, 7b, and 7c.

3.1.3.6. INVASIVE PLANT SPECIES

Several invasive plant species occur within the BSA. The most abundant of which includes pampas grass, Brazilian pepper, and Mexican fan palm in non-native riparian and southern riparian forest; tamarisk in tamarisk scrub and southern willow scrub; garland daisy, filaree, and perennial mustard within disturbed habitat; perennial mustard within Diegan coastal sage scrub; hottentot-fig within non-native vegetation; and oats and bromes within non-native grassland. Other invasive plant species observed include, but are not limited to, poison hemlock (*Conium maculatum*), Canary Island date palm, giant reed, bristly ox-tongue (*Helminthotheca echioides*), Australian saltbush (*Atriplex semibaccata*), castor bean (*Ricinus communis*), and dwarf nettle (*Urtica urens*).

Biological Study Area
Proposed Bikeway
5
Santa Fe Street
Ariane Drive
Morena Boulevard
Jutland Drive
5
Jutland Drive
Morena Boulevard
Pacifica Drive
Santa Fe Street
I:\PROJECTS\N\NAS\NAS-02_RoseCreekBikePath\MapNES\Fig6a-c_USACE.mxd NAS-02 09/30/13 -RK

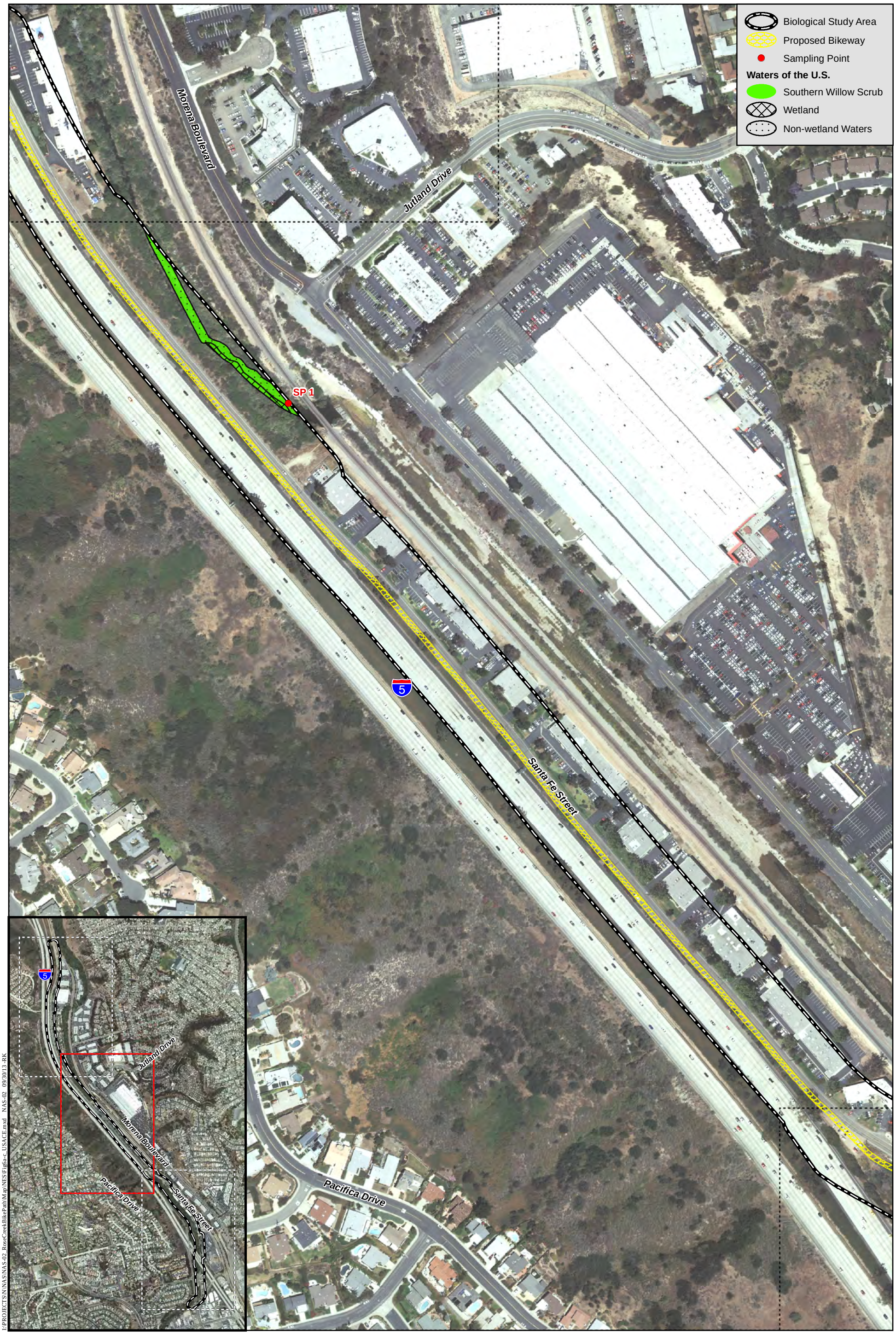
Waters of the U.S. in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 6a



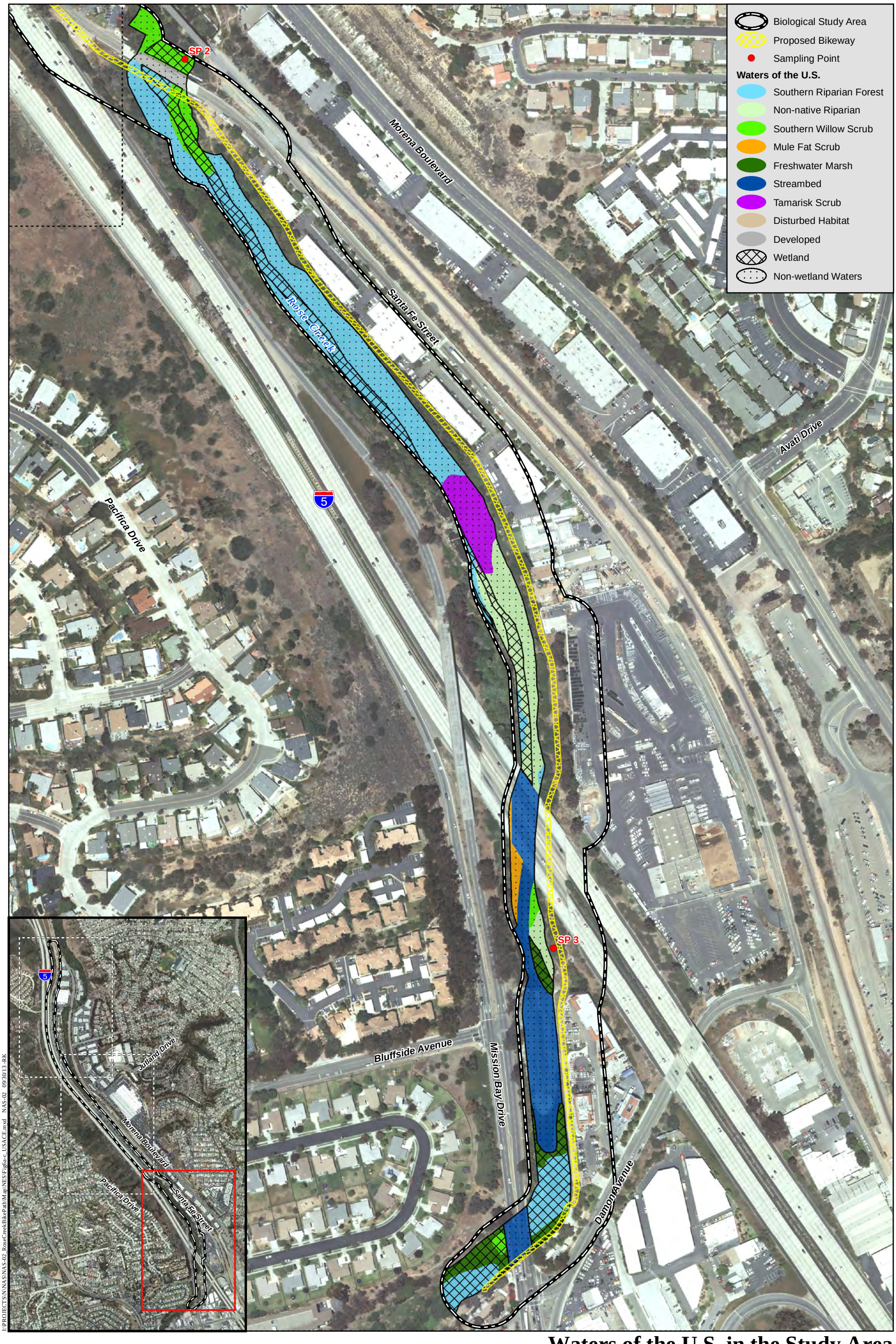
Waters of the U.S. in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 6b



Waters of the U.S. in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 6c

I:\PROJECTS\N\NAS\NAS-02_RoseCreekBikePath\Map\MXDs\Fig7a-c_CDFW.mxd NAS-02 09/30/13 -RK

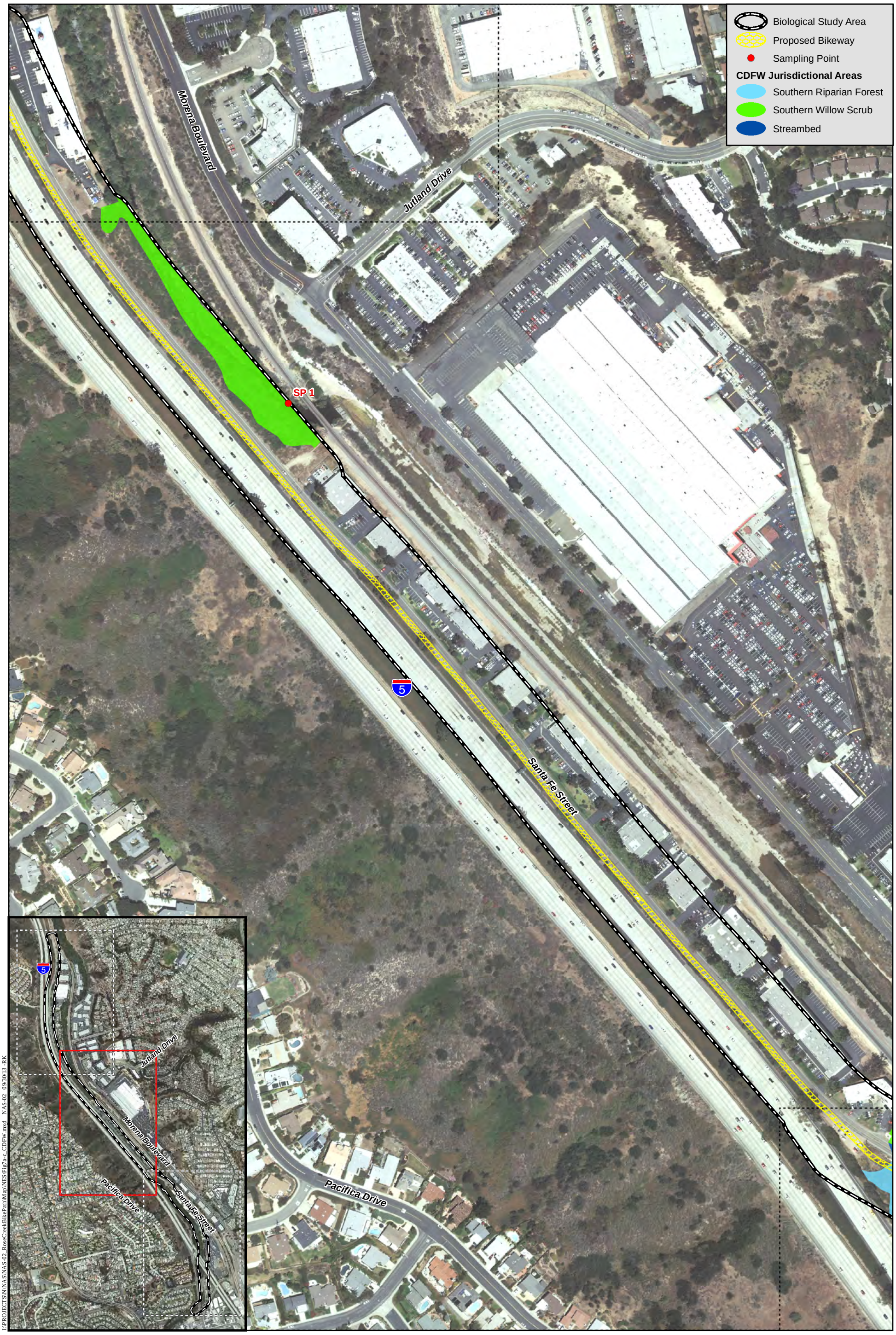
CDFW Jurisdictional Areas in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 7a



CDFW Jurisdictional Areas in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 7b

Biological Study Area
Proposed Bikeway
Sampling Point
CDFW Jurisdictional Areas
Southern Riparian Forest
Non-native Riparian
Southern Willow Scrub
Mule Fat Scrub
Freshwater Marsh
Tamarisk Scrub
Streambed

SP 2
SP 3
Morena Boulevard
Santa Fe Street
Rose Creek
Avati Drive
Pacifica Drive
5
Bluffside Avenue
Mission Bay Drive
Damon Avenue
Jutland Drive

I:\PROJECTS\N\NAS\NAS-02_RoseCreekBikePath\Map\NES\Fig7a-c_CDFW.mxd NAS-02 09/30/13 -RK

CDFW Jurisdictional Areas in the Study Area

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 7c

3.2. Regional Species and Habitats of Concern

As previously stated, the BSA occurs in a primarily urbanized area along the I-5 corridor between SR 52 and Garnet Avenue. Most of the BSA is developed and occupied by commercial development, roadways, and a rail line. Nonetheless, some natural areas remain within the BSA that support regional species and habitats of concern.

Initiated by the State of California, the NCCP that resulted in the promulgation of the special 4(d) rule of the federal ESA focuses on conserving coastal sage scrub in order to avoid the need for future federal and state listing of coastal sage scrub dependent species. The BSA is located within the MSCP planning area. The MSCP is a multi-jurisdictional planning program designed to develop an ecosystem preserve within the City and surrounding incorporated and unincorporated areas. Preserve areas identified within the City under the MSCP are identified as the MHPA. No portions of the BSA are within the MHPA.

3.2.1. Regional Species of Concern

A total of 74 regional species of concern have been reported as occurring in the vicinity of the BSA, including plants, reptiles, birds, and mammals. These species are identified in Table 2, along with their habitat requirements, status, and potential to occur within the BSA.

3.2.2. Regional Habitats of Concern

Seven regional habitats of concern have been reported as occurring in the vicinity of the BSA. These habitats, along with their habitat requirements, status, and potential to occur within the BSA, are identified in Table 3.

Table 2: Regional Species of Concern					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS					
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE CRPR 1B.1 MSCP Narrow Endemic (NE) MSCP Covered	**Distribution**: Limited to coastal areas of San Diego County and Baja California, Mexico (Baja) **Habitat**: Heavy clay soils near vernal pools and in grasslands, chaparral and coastal sage scrub between 33 and 3,000 ft	HP	No vernal pools occur within the BSA, but coastal sage scrub and grasslands are present. Clay soils are not present. Species was not observed during surveys. Grassland in the BSA is restricted in size (0.5 ac) and occurs in two locations adjacent to existing development. Diegan coastal sage scrub occupies 2.4 ac of the BSA, occurring in a scattered distribution adjacent to roadways and other development. The habitat present is not likely to support suitable conditions for this species. Nearest recorded presumed extant occurrence is in Mission Trails Regional Park, approximately 10 miles east of the BSA (Calflora 2015). Species is presumed extirpated in the U.S. Geological Survey (USGS) La Jolla quadrangle (CNPS 2015).

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Acanthomintha ilicifolia (cont.)	San Diego thorn-mint (cont.)				Species is not expected to occur in the BSA.
Adolphia californica	California adolphia	--/-- CRPR 2.1	**Distribution**: Coastal San Diego County and Baja **Habitat**: Coastal sage scrub and chaparral communities, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4 or 5 ft.	HP	Diegan coastal sage scrub occurs within the BSA. A conspicuous shrub that would have been detected during surveys if present.
Agave shawii	Shaw's agave	--/-- CRPR 2.1 MSCP NE MSCP Covered	**Distribution**: Coastal San Diego County and Baja **Habitat**: Coastal sage scrub and maritime succulent scrub, often on volcanic soils	HP	Diegan coastal sage scrub occurs within the BSA. No volcanic soils within the BSA. Highly visible species not observed during surveys.
Ambrosia pumila	San Diego ambrosia	FE/-- CRPR 1B.1 MSCP NE MSCP Covered	**Distribution**: Coastal San Diego County, western Riverside County, and Baja **Habitat**: Chaparral, coastal scrub, valley and foothill grassland, vernal pools and often in disturbed places between 65 and 1,370 ft	HP	Diegan coastal sage scrub, grassland, and disturbed habitat occur within the BSA. Species not observed during surveys. Much of the BSA is comprised of disturbed and developed lands subject to frequent vehicle and pedestrian traffic. The habitat present is not likely to support suitable conditions for this species.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Ambrosia pumila (cont.)	San Diego ambrosia (cont.)				Nearest recorded presumed extant occurrence is in Mission Trails Regional Park, approximately 10 miles east of the BSA (Calflora 2015). Species is not expected to occur in the BSA.
Aphanisma blitoides	Aphanisma	--/-- CRPR 1B.2 MSCP NE MSCP Covered	**Distribution**: Coastal San Diego County **Habitat**: Coastal bluffs near the ocean and beach dunes	A	No suitable habitat occurs within the BSA.
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/-- CRPR 1B.1 MSCP Covered	**Distribution**: Coastal San Diego County and Baja **Habitat**: Relatively open coastal chaparral. At occasional inland sites, occurs in denser mixed chaparral vegetation.	A	No suitable habitat occurs within the BSA.
Artemisia palmeri	San Diego sagewort	--/-- CRPR 4.2	**Distribution**: Coastal San Diego County and Baja **Habitat**: Stream courses, often within coastal sage scrub or below a riparian canopy.	SP	Species observed in Diegan coastal sage scrub, southern willow scrub, and disturbed habitat within the BSA. Approximately 262 individuals were observed in the BSA.
Astragalus tener var. *titi*	Coastal dunes milk-vetch	FE/SE CRPR 1B.1 CA Endemic MSCP NE MSCP Covered	**Distribution**: San Diego, Los Angeles, and Monterey counties **Habitat**: Coastal dunes and sandy places along the coast	A	No suitable habitat occurs within the BSA.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Atriplex pacifica	South coast saltscale	--/-- CRPR 1B.2	**Distribution**: Coastal areas of central and southern California and islands off the southern coast **Habitat**: Xeric, often mildly disturbed locales of coastal bluff scrub. Surrounding habitat is usually open Diegan coastal sage scrub, although it is found on alkaline flats in areas devoid of taller shrubs.	A	No suitable habitat occurs within the BSA.
Baccharis vanessae	Encinitas baccharis	FT/SE CRPR 1B.1 CA Endemic MSCP NE MSCP Covered	**Distribution**: San Diego County endemic; also found in Riverside County **Habitat**: Occurs in mature but relatively low-growing chaparral; also found in southern maritime and southern mixed chaparrals	A	No suitable habitat occurs within the BSA.
Bergerocactus emoryi	Golden-spined cereus	--/-- CRPR 2.2	**Distribution**: Coastal San Diego County, Baja, and San Clemente and Santa Catalina islands **Habitat**: Sandy soils and dry bluffs along the coast associated with maritime succulent scrub	A	No suitable habitat occurs within the BSA.
Bloomeria clevelandii	San Diego goldenstar	--/-- CRPR 1B.1 MSCP Covered	**Distribution**: Only in San Diego County and Baja **Habitat**: Valley grasslands, mima mounds, generally among vernal pools	HP	No vernal pools or mima mounds occur within the BSA. Annual grassland is extremely limited within the BSA, and clay soils are not present. Species not observed during surveys.
Brodiaea filifolia	Thread-leaved brodiaea	FT/SE CRPR 1B.1 CA Endemic MSCP Covered	**Distribution**: Interior valley regions of Riverside and San Diego counties **Habitat**: Clay lens soils in annual grasslands and vernal pools	HP	Annual grassland is extremely limited within the BSA, and clay soils are not present. Species not observed during surveys.
Brodiaea orcuttii	Orcutt's brodiaea	--/-- CRPR 1B.1 CA Endemic MSCP Covered	**Distribution**: Riverside and San Diego counties and Baja **Habitat**: Occurs in vernal pool communities and in vernally moist grasslands	A	No suitable habitat occurs within the BSA.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Ceanothus verrucosus	Wart-stemmed ceanothus	--/-- CRPR 2.2 MSCP Covered	**Distribution**: Limited to San Diego County **Habitat**: Occurs among mesic coastal chaparral vegetation	A	No suitable habitat occurs within the BSA.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	--/-- CRPR 1B.1	**Distribution**: Ventura, Los Angeles, Orange, and San Diego counties and Baja **Habitat**: Found in coastal bluff scrub, coastal dune areas	A	No suitable habitat occurs within the BSA.
Chloropyron maritimum ssp. *maritimum*	Salt marsh bird's beak	FE/SE CRPR 1B.2	**Distribution**: Santa Barbara County south to Baja California, Mexico **Habitat**: Salt marshes, particularly slightly raised hummocks between 0 and 100 ft	A	Appropriate habitat does not occur within the BSA.
Chorizanthe orcuttiana	Orcutt's spineflower	FE/SE CRPR 1B.1 CA Endemic	**Distribution**: San Diego County **Habitat**: Maritime chaparral, closed-cone coniferous forest and coastal scrub/sandy openings between 10 to 410 ft	A	No suitable habitat occurs within the BSA.
Chorizanthe polygonoides var. *longispina*	Long-spined spineflower	--/-- CRPR 1B.2	**Distribution**: Riverside and San Diego counties and Baja **Habitat**: On clay lenses in coastal sage scrub or chaparral areas with little or no shrub cover	HP	Diegan coastal sage scrub occurs within the BSA. Species not observed during surveys.
Comarostaphylis diversifolia ssp. *diversifolia*	Summer holly	--/-- CRPR 1B.2	**Distribution**: Orange, Riverside, and San Diego counties and Baja **Habitat**: Mesic north-facing slopes in southern mixed chaparral or southern maritime chaparral.	A	No suitable habitat occurs within the BSA.
Corethrogyne filaginifolia var. *incana*	San Diego sand aster	--/-- CRPR 1B.1	**Distribution**: Southwestern San Diego County and possibly Baja **Habitat**: Coastal chaparral primarily in sandy openings between chamise is typical microhabitat	A	No suitable habitat occurs within the BSA.
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	--/-- CRPR 1B.1 CA Endemic MSCP Covered	**Distribution**: San Diego County from Carlsbad to Fort Rosecrans **Habitat**: Sandy and disturbed areas within southern maritime chaparral	A	No suitable habitat occurs within the BSA.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Cylindropuntia californica var. *californica*	Snake cholla	--/-- CRPR 1B.1 MSCP NE	**Distribution**: Point Loma south to Chula Vista and into northern Baja **Habitat**: Diegan coastal sage scrub and maritime succulent scrub on xeric hillsides	A	Diegan coastal sage scrub occurs within the BSA, however, species' range is south of the BSA. Would have been observed during surveys if present.
Deinandra conjugens	Otay tarplant	FT/SE CRPR 1B.1 MSCP NE MSCP Covered	**Distribution**: Southern San Diego County and northwestern Baja **Habitat**: Fractured clay soils in grasslands or lightly vegetated coastal sage scrub	A	Diegan coastal sage scrub and grasslands occur within the BSA; however, clay soils are not present. BSA is outside of species' range.
Dudleya brevifolia	Short-leaved dudleya	--/SE CRPR 1B.1 CA Endemic MSCP NE MSCP Covered	**Distribution**: Range approximately 2.5 mi wide by 7.0 mi long between La Jolla and Del Mar **Habitat**: Open areas and sandstone bluffs of chamise chaparral or Torrey pine forest	A	No suitable habitat occurs within the BSA.
Dudleya variegata	Variegated dudleya	--/-- CRPR 1B.2 MSCP NE MSCP Covered	**Distribution**: San Diego County and Baja **Habitat**: Openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to vernal pools and mima mounds	HP	Diegan coastal sage scrub and grasslands occur within the BSA. Would likely have been observed during surveys if present.
Dudleya viscida	Sticky dudleya	--/-- CRPR 1B.2 CA Endemic MSCP Covered	**Distribution**: Coastal northern San Diego County; below 1,200 ft in Orange and Riverside counties **Habitat**: Conspicuous perennial succulent that grows primarily on very steep north-facing slopes within coastal bluff scrub, chaparral, and rocky coastal scrub	A	No suitable habitat occurs within the BSA.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE CRPR 1B.1 MSCP NE MSCP Covered	**Distribution**: Riverside and San Diego counties and Baja **Habitat**: Coastal scrub, grasslands and vernal pools/mesic areas between 66 and 2,034 ft	HP	Vernal pools are not present in the BSA. Small areas of Diegan coastal sage scrub and grasslands occur within the BSA. Species would likely have been observed during rare plant surveys if present. Nearest recorded presumed extant occurrence is in Marine Corps Air Station (MCAS) Miramar, approximately 5 miles east of the BSA (Calflora 2015). Species is not expected to occur in the BSA.
Euphorbia misera	Cliff spurge	--/-- CRPR 2.2	**Distribution**: Corona Del Mar to Baja **Habitat**: Rocky areas of coastal bluff scrub, coastal scrub, and Mojavean desert scrub	A	No suitable habitat occurs within the BSA.
Ferocactus viridescens	San Diego barrel cactus	--/-- CRPR 2.1 MSCP Covered	**Distribution:** Below 660 ft in sandy or disturbed areas along coastal areas in San Diego County and Baja **Habitat:** Dry slopes in coastal sage scrub between 10 and 1,476 ft	HP	Suitable Diegan coastal sage scrub occurs within the BSA. Would likely have been observed during rare plant surveys if present.

Table 2: Regional Species of Concern (cont.)

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
Geothallus tuberosus	Campbell's liverwort	--/-- CRPR 1B.1 CA Endemic	**Distribution**: San Diego and Riverside counties **Habitat**: Vernal pools and open sage scrub communities	HP	Diegan coastal sage scrub occurs within the BSA. Reported recently at Camp Pendleton; however, probably extirpated elsewhere in urbanized San Diego County (CNPS 2010).
Heterotheca sessiliflora ssp. *sessiliflora*	Beach goldenaster	--/-- CRPR 1B.1	**Distribution**: Coastal San Diego and Santa Barbara counties, Baja **Habitat**: Coastal chaparral, coastal dunes, coastal scrub	HP	Limited potential habitat (coastal sage scrub) is present within the BSA. Known from fewer than 20 extant occurrences (CNPS 2010). BSA does not support coastal dune or chaparral habitat.
Iva hayesiana	San Diego marsh-elder	--/-- CRPR 2.2	**Distribution**: San Diego County and Baja **Habitat**: Intermittent creeks are preferred habitat for this shrub. Sandy alluvial embankments with cobbles are frequently utilized.	HP	BSA supports suitable creek habitat. Species not observed during biological surveys.
Juncus acutus ssp. *leopoldii*	Southwestern spiny rush	--/-- CRPR 4.2	**Distribution**: Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja **Habitat**: Moist, saline, or alkaline soils in coastal salt marshes and riparian marshes	SP	Species observed in southern riparian forest and non-native riparian habitat in Rose Creek in the southern portion of the BSA.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	--/-- CRPR 1B.1	**Distribution:** Kern and San Luis Obispo counties south through San Diego and Riverside counties and into Baja **Habitat:** Coastal salt marshes and vernal pool communities	A	No suitable habitat occurs within the BSA.

Table 2: Regional Species of Concern (cont.)

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
Leptosyne (Coreopsis) maritima	Sea dahlia	--/-- CRPR 2.2	**Distribution**: San Diego County and Baja **Habitat**: Coastal bluff scrub	A	No suitable habitat occurs within the BSA.
Monardella viminea	Willowy monardella	FE/SE CRPR 1B.1 CA Endemic MSCP Covered	**Distribution**: San Diego County below 1,000 ft **Habitat**: Rocky washes generally associated with coastal sage scrub and chaparral	A	Diegan coastal sage scrub occurs within the BSA. Rocky streambed habitat suitable for this species is not present.
Myosurus minimus ssp. *apus*	Little mousetail	--/-- CRPR 3.1	**Distribution**: San Bernardino, Riverside, and San Diego counties **Habitat**: Vernal pool communities	A	No vernal pools occur within the BSA.
Navarretia fossalis	Spreading navarretia	FT/-- CRPR 1B.1 MSCP NE MSCP Covered	**Distribution**: Western Riverside through southwestern San Diego counties into Baja **Habitat**: Chenopod scrub, swamps, playas and vernal pools between 98 and 4,265 ft	A	Appropriate habitat does not occur within the BSA.
Navarretia prostrata	Prostrate navarretia	--/-- CRPR 1B.1 CA Endemic	**Distribution**: Alameda, Los Angeles, Merced, Monterey, Orange, Riverside, San Bernardino, and San Diego counties **Habitat**: Occurs in coastal scrub, valley and foothill grasslands with alkaline soil, and vernal pools	HP	No vernal pools occur within the BSA, but coastal sage scrub and grasslands are present. The habitat does not likely support suitable conditions for this species.
Nemacaulis denudata var. *denudata*	Coast woolly-heads	--/-- CRPR 1B.2	**Distribution**: Los Angeles, Orange, and San Diego counties and Baja **Habitat**: Coastal dune communities	A	Appropriate habitat does not occur within the BSA.
Orcuttia californica	California Orcutt grass	FE/SE CRPR 1B.1 MSCP NE MSCP Covered	**Distribution:** Riverside, San Diego, Ventura, and Los Angeles counties to Baja **Habitat:** In or near vernal pools. Tends to grow in wetter portions of vernal pool basins but does not show much growth until basins become somewhat desiccated.	A	Appropriate habitat does not occur within the BSA.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
PLANTS (cont.)					
Pinus torreyana ssp. *torreyana*	Torrey pine	--/-- CRPR 1B.2 CA Endemic MSCP NE MSCP Covered	**Distribution**: Occurs along the coast near Del Mar **Habitat**: Torrey pine woodlands and southern maritime chaparral	A	Appropriate habitat does not occur within the BSA.
Pogogyne abramsii	San Diego mesa mint	FE/SE CRPR 1B.1 CA Endemic MSCP NE MSCP Covered	**Distribution**: San Diego County and Baja **Habitat**: Vernal pools between 295 and 656 ft	A	Vernal pools are not present within the BSA.
Pogogyne nudiuscula	Otay mesa mint	FE/SE CRPR 1B.1 MSCP NE MSCP Covered	**Distribution**: Otay Mesa and northern Baja **Habitat**: Vernal pools on coastal mesas between 328 and 820 ft	A	Vernal pools are not present within the BSA.
Quercus dumosa	Nuttall's scrub oak	--/-- CRPR 1B.1	**Distribution**: Santa Barbara, Orange, and San Diego counties into Baja **Habitat**: Chaparral and coastal sage scrub, generally with clay loam soils within coastal zone	HP	Suitable habitat occurs within the BSA. Would have been observed during rare plant surveys if present.
Senecio aphanactis	Rayless ragwort	--/-- CRPR 2.2	**Distribution**: In southern California, occurs in San Luis Obispo, Ventura, Los Angeles, Orange, Riverside, and San Diego counties **Habitat**: Coastal sage scrub and woodland communities	HP	Diegan coastal sage scrub occurs within the BSA. Not observed during rare plant survey.
Sphaerocarpos drewei	Bottle liverwort	--/-- CRPR 1B.1 CA Endemic	**Distribution:** Riverside and San Diego counties **Habitat:** Openings in chaparral and coastal sage scrub	HP	Diegan coastal sage scrub occurs within the BSA. Most reported locations are presumed eradicated.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT OR SPECIES PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE					
Invertebrates					
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/-- MSCP Covered	**Distribution**: San Diego County **Habitat**: Inhabits vernal pools or basins capable of holding water	A	Vernal pools are not present within the BSA.
Streptocephalus woottoni	Riverside fairy shrimp	FE/-- MSCP Covered	**Distribution**: Western Riverside County south to Baja **Habitat**: Inhabits deep vernal pools or basins capable of holding water, typically at least 30 centimeters deep	A	Vernal pools are not present within the BSA.
Amphibians and Reptiles					
Cnemidophorus hyperythrus beldingi	Orange-throated whiptail	--/SSC MSCP Covered	**Distribution**: Ranges from southern Orange County and southern San Bernardino County (Colton) south to the cape of Baja **Habitat**: Generally inhabits sandy substrates in coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Can also be found in weedy, disturbed areas adjacent to these habitats. Important requirements for orange-throated whiptail populations include a mosaic of open, sunny areas and shade for thermoregulation	HP	Diegan coastal sage scrub and riparian habitat with sandy substrates occur within the BSA.
Phrynosoma coronatum blainvillei	Coast horned lizard	--/SSC MSCP Covered	**Distribution**: Coastal California west of Sierra Nevada from the Bay Area south through southern Baja **Habitat**: Coastal sage scrub, chaparral, grassland, and woodlands up to 6,000 ft. Not common where Argentine ants (*Linepithema humile*) have excluded native harvester ants (*Pogonomyrmex* sp.)	HP	Suitable habitat (coastal sage scrub and grassland) occurs within the BSA, although habitat likely too patchy and urbanized to support species.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Amphibians and Reptiles (cont.)					
Spea hammondii	Western spadefoot	--/SSC	**Distribution**: Throughout the Central Valley and Bay Area south along the coast to northwestern Baja **Habitat**: Open coastal sage scrub, chaparral, and grassland along sandy or gravelly washes, floodplains, alluvial fans, or playas. Requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.)	A	Appropriate habitat does not occur within BSA.
Birds					
Accipiter cooperi	Cooper's hawk	--/WL MSCP Covered	**Distribution**: Occurs year-round throughout San Diego County's coastal slope where stands of trees are present **Habitat**: Found in oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests	HP	Suitable woodland habitat occurs within the BSA. Species not detected during surveys.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	--/SSC MSCP Covered	**Distribution**: Ventura, Orange, Riverside, and San Diego counties into Baja **Habitat**: Found in coastal sage scrub and open chaparral communities	HP	Diegan coastal sage scrub occurs within the BSA. Species not detected during surveys.
Athene cunicularia	Burrowing owl	--/SSC	**Distribution:** Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas **Habitat:** Restricted to essentially flat, open country with suitable nest sites within native or non-native grassland, open coastal sage scrub, and fallow agricultural fields	HP	Diegan coastal sage scrub and grasslands occur within the BSA. However, density of vegetation, small patch size and isolation of the habitat, hilly terrain, presence of predators, and distance from known occurrences in the region strongly reduce the potential for this species to occur. Sign of species would likely have been observed during surveys if present.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
Charadrius alexandrinus nivosus	Western snowy plover	FT/SSC MSCP Covered	**Distribution**: Coastal California from north of the Bay Area south into Baja **Habitat**: Inhabits sandy beaches, salt marshes, and alkaline lakes	A	No suitable habitat occurs within the BSA.
Circus cyaneus	Northern harrier	--/SSC MSCP Covered	**Distribution**: In San Diego County, distribution primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert **Habitat**: Open grassland and marsh	HP	Grassland occurs within the BSA. However, hilly terrain and proximity to existing developments and disturbances strongly reduce the potential for this species to nest. This species could occasionally forage over portions of the BSA.
Elanus leucurus	White-tailed kite	--/FP	**Distribution**: Coastal slopes of San Diego County **Habitat**: Riparian woodlands and oak or sycamore groves adjacent to grassland	HP	Suitable habitat occurs within the BSA. Species not observed/detected during surveys.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
Empidonax traillii extimus	Southwestern willow flycatcher	FE/-- MSCP Covered	**Distribution**: Occurs in San Diego County during the breeding season but is rare. Most breeding pairs occur along the upper San Luis Rey River or along the Santa Margarita River in Camp Pendleton, but scattered pairs or unpaired individuals have been observed elsewhere. **Habitat:** Mature riparian woodland	HP	Riparian habitat occurs within the BSA. Species not detected during protocol surveys or other biological surveys. Rare migratory species has not been documented in the Project vicinity. Nearest recorded occurrence is approximately nine miles south of the BSA in the San Diego River corridor. Species considered absent from the BSA.
Falco mexicanus	Prairie falcon	--/WL	**Distribution**: Observed year-round in San Diego County but more commonly during winter **Habitat**: Nesting occurs on cliff or bluff ledges or occasionally in old hawk or raven nests; foraging occurs in grassland or desert habitats	A	Suitable habitat not present in the BSA.
Icteria virens	Yellow-breasted chat	--/SSC	**Distribution**: Occurs throughout San Diego County's coastal lowlands in the breeding season **Habitat**: Mature riparian woodland	HP	Riparian habitat occurs within the BSA. Species not observed/detected during surveys.
Laterallus jamaicensis coturniculus	California black rail	--/ST Fully Protected	**Distribution**: Historically known from the San Francisco Bay area and the delta of the Sacramento and San Joaquin rivers south along the coast to northern Baja as well as in San Bernardino and Riverside counties **Habitat**: Wetland habitats	A	Wetlands occur within the BSA. Presumed extirpated from San Diego County.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
Passerculus sandwichensis beldingi	Belding's savannah sparrow	--/SE MSCP NE	**Distribution**: Santa Barbara County to northern Baja **Habitat**: Inhabits coastal salt marshes	A	Habitat that supports this species is not present within the BSA.
Polioptila californica californica	Coastal California gnatcatcher	FT/SSC MSCP Covered	**Distribution**: Southern Los Angeles, Orange, western Riverside, and San Diego counties south into Baja **Habitat**: Coastal sage scrub of varying subtypes, sometimes riparian (foraging and dispersal only), other habitats as well	HP	Marginal Diegan coastal sage scrub occurs within the BSA. This species was not found during protocol-level surveys. Species has been recorded in more extensive, higher quality habitat to the north and east of the BSA, as well as on the slopes west of I-5. Habitat within the BSA is considered marginal for this species as it is small and patchy in distribution and situated directly adjacent to existing development.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
Rallus longirostris levipes	Light-footed clapper rail	FE/SE Fully Protected MSCP Covered	**Distribution**: Santa Barbara to San Diego counties and northern Baja **Habitat**: Inhabits extensive coastal salt and freshwater marshes containing cordgrass, cattails, or tules, and rushes	HP	Very little marsh habitat occurs within the BSA (0.56 ac), occurring only west of I-5 in the southern tip of the BSA near Mission Bay Drive. The majority of marsh occurring within the BSA is on a concrete-lined reach of the creek, where accumulated sediment has allowed for the establishment of wetland vegetation. Nearest known occurrence is in the Kendall-Frost Mission Bay Marsh Reserve approximately one mile to the southwest on the northern boundary of Mission Bay. The Kendall-Frost Reserve totals 21 acres of salt marsh, tidal channels, and salt flats, and is adjacent to the Northern Wildlife Preserve.

Table 2: Regional Species of Concern (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
Rallus longirostris levipes (cont.)	Light-footed clapper rail (cont.)				Suitable habitat within the BSA is likely too small and surrounded by development to support this species.
Setophaga petechia	Yellow warbler	--/SSC	**Distribution**: Observed throughout much of San Diego County during the breeding season with rare sightings in winter **Habitat**: Riparian woodland	SP	Riparian habitat occurs within the BSA. Species observed/detected in southern riparian forest in Rose Creek near the Santa Fe Street bridge.
Sterna antillarum browni	California least tern	FE/SE MSCP Covered	**Distribution**: Migratory bird that winters in Latin America with unknown winter range and habitats. Nesting range is along the Pacific coast from San Francisco Bay to southern Baja **Habitat**: Inhabits bays and lagoons and forms breeding colonies in adjacent open sandy beaches, dunes, or disturbed sites along the coast	A	No suitable habitat occurs within the BSA.
Vireo bellii pusillus	Least Bell's vireo	FE/SE MSCP Covered	**Distribution**: Riverside, San Diego, Santa Barbara, and Ventura counties into northern Baja **Habitat**: Inhabits riparian woodlands and riparian forests	SP	Riparian habitat occurs within the BSA. One individual was detected during protocol surveys on May 2, 2014. This individual was not detected again during subsequent surveys. This single individual was likely a transient male, temporarily moving through the area during migration and not associated with a breeding territory or active nest.

Table 2: Regional Species of Concern (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Mammals					
Chaetodipus fallax fallax	Northwestern San Diego pocket mouse	--/SSC	**Distribution**: Los Angeles County and southern San Bernardino County south into west-central Baja **Habitat**: Open areas of coastal sage scrub and weedy growth, often on sandy substrates	HP	Appropriate habitat (Diegan coastal sage scrub) and soils occur within the BSA.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	--/SSC	**Distribution**: Ranges from southern Santa Barbara County south (on the coastal slope) to the vicinity of San Quintin, Baja **Habitat**: Inhabits open habitats, including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if some shrub cover is present.	HP	Diegan coastal sage scrub, grasslands, and disturbed areas occur within the BSA.
Neotoma lepida intermedia	San Diego desert woodrat	--/SSC	**Distribution**: Coastal slope of southern California from San Luis Obispo County south into coastal northwestern Baja **Habitat**: Open chaparral and coastal sage scrub, often with large stick nests in rock outcrops or around clumps of cactus or yucca	HP	Appropriate habitat (Diegan coastal sage scrub) occurs within the BSA.
Odocoileus hemionus	Southern mule deer	--/-- MSCP Covered	**Distribution**: Southern Riverside County (Tahquitz Valley), south on the coastal slope to vicinity of San Quintin, Baja **Habitat**: Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements along routes that provide greatest amount of protective cover.	HP	Appropriate habitat (riparian areas, Diegan coastal sage scrub, and grasslands) occurs within the BSA. This species is not anticipated to occur within the BSA due to the highly constrained nature of the BSA which does not facilitate movement of large mammals.

Table 2: **Regional Species of Concern** (cont.)					
SCIENTIFIC NAME	**COMMON NAME**	**STATUS***	**GENERAL HABITAT DESCRIPTION**	**HABITAT PRESENT/ ABSENT†**	**RATIONALE**
WILDLIFE (cont.)					
Vertebrates (cont.)					
Mammals (cont.)					
Perognathus longimembris pacificus	Pacific pocket mouse	FE/SSC	**Distribution**: Between 1894 and 1972, the subspecies was recorded from eight general locales from Los Angeles County south to the Mexican border in San Diego County. Only three populations are known to be extant today: one at the Dana Point Headlands in Orange County and two on Camp Pendleton in San Diego County. The subspecies occurs within approximately 2.4 mi inland of the Pacific Ocean and has not been reliably recorded above 600 ft in elevation (Erickson 1993). **Habitat**: Fine-grained, sandy or gravelly substrates in coastal strand, coastal dunes, river alluvium, and coastal sage scrub growing on marine terraces	HP	Appropriate habitat (Diegan coastal sage scrub) and marginal soils occur within the BSA. However, the BSA does not support coastal stand, coastal dune, or coastal sage scrub growing on marine terraces. River alluvium associated with Rose Creek within the BSA is not likely to support this species. Further, the species is presumed to be extirpated from the local area and the BSA does not occur in close proximity to known occurrences in the region.

*A listing and explanation of status codes is provided in Appendix D.

†ABSENT (A) = suitable habitat is absent. HABITAT PRESENT (HP) = suitable habitat is present. SPECIES PRESENT (SP) = species is present based on survey results and/or other data.

SOURCE: CDFW 2012. *The list of species included in this table is based on database queries for areas within approximately 5 miles of the BSA, including selected results from the Del Mar and La Jolla, California USGS 7.5 Minute Quadrangles.*

Table 3: Regional Habitats of Concern

NATURAL COMMUNITY	GLOBAL RANKING	STATE RANKING	HABITAT PRESENT OR ABSENT
Southern Maritime Chaparral	G1	S1.1	Absent
San Diego Mesa Hardpan Vernal Pool	G2	S2.1	Absent
Southern Coastal Salt Marsh	G2	S2.1	Absent
Southern Riparian Forest	G4	S4	Present
Southern Cottonwood Willow Riparian Forest	G3	S3.2	Absent
Southern Riparian Scrub	G3	S3.2	Present
Torrey Pine Forest	G1	S1.1	Absent

SOURCE: *CDFW 2014. The list of natural communities included in this table is based on database queries for areas within approximately 5 miles of the BSA, including selected results from the Del Mar and La Jolla, California USGS 7.5 Minute Quadrangles.*

Global Rankings
G1 = Less than 2,000 ac exist worldwide.
G2 = Approximately 2,000 to 10,000 ac exist worldwide.
G3 = Approximately 10,000 to 50,000 ac exist worldwide.
G4 = Community is secure worldwide, but factors exist to cause some concern.

State Rankings
S1.1 = Considered very threatened in California; less than 2,000 ac exist statewide.
S2.1 = Considered very threatened in California; approximately 2,000 to 10,000 ac exist statewide.
S3.2 = Considered very threatened in California; approximately 10,000 to 50,000 ac exist statewide.
S4 = Community is secure statewide, but factors exist to cause some concern.

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Chapter 4. Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1. Natural Communities of Special Concern

Natural communities of special concern or sensitive natural communities are those that are (1) subject to regulation under the CWA, as administered by the USACE; (2) considered rare within the region or sensitive by CDFW (Holland 1986); or (3) support sensitive plants or animals protected under the federal or California ESA. In total, nine sensitive natural communities occur within the BSA: southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, streambed, Diegan coastal sage scrub, and non-native grassland (Figures 5a through 5c). Refer to Section 3.1.3. for general descriptions. Although non-native riparian and tamarisk scrub communities are dominated by non-native species, they are considered communities of concern in the BSA due to their location along the Rose Creek riparian corridor and their status as jurisdictional habitats.

For the proposed project, permanent impacts include the bikeway and associated retaining walls, piers, and columns. Temporary impacts include construction access and staging areas. Construction Best Management Practices (BMPs), including installation of orange construction fencing at the approved limits of disturbance and monitoring project limits during construction would avoid additional impacts to adjacent environmentally sensitive areas. Figures 8a through 8c depict temporary and permanent impacts to sensitive vegetation communities and sensitive resources for the proposed project. Proposed project-related impacts would occur to southern riparian forest, southern willow scrub, freshwater marsh, non-native riparian, streambed, Diegan coastal sage scrub, and non-native grassland (Table 4; Figures 8a through 8c). These vegetation communities would require mitigation for impacts. No impacts would occur to tamarisk scrub (Table 4). Proposed project-related impacts would also occur to eucalyptus woodland, non-native vegetation, disturbed habitat, and developed land (Table 4). These four vegetation communities are not considered sensitive; therefore, mitigation would not be required. Mitigation ratios and requirements are discussed below.

Implementation of the proposed project would result in temporary impacts to 0.69 ac and permanent impacts to 0.25 ac of USACE jurisdictional areas (Figures 9a through 9c; Table 5). Project implementation would result in temporary impacts to 1.17 ac and permanent impacts to 0.75 ac of CDFW jurisdictional areas (Figures 10a through 10c; Table 6).

Table 4: Proposed Project Impacts to Vegetation Communities (ac)*****

VEGETATION COMMUNITY	IMPACT		
	Temporary	**Permanent**	**Total**
Southern riparian forest	0.53	0.45	**0.98**
Southern willow scrub	0.19	0.09	**0.28**
Freshwater marsh	0.14	0.05	**0.19**
Non-native riparian	0.07	0.04	**0.11**
Tamarisk scrub	0.00	0.00	**0.00**
Streambed	0.06	0.00	**0.06**
Diegan coastal sage scrub	0.4	0.2	**0.6**
Non-native grassland	0.2	0.2	**0.4**
Eucalyptus woodland	0.2	0.0	**0.2**
Non-native vegetation	<0.1	0.0	**<0.1**
Disturbed habitat	0.5	0.6	**1.1**
Developed land	0.7	7.7	**8.4**
TOTAL	**3.1**	**9.3**	**12.4**

*Upland habitats are rounded to the nearest 0.1 ac, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

4.1.1. Southern Riparian Forest

4.1.1.1 Survey Results

Approximately 5.28 ac of southern riparian forest occur within the BSA. This habitat occurs along portions of the Rose Creek corridor (Figures 5a through 5c).

4.1.1.2. Avoidance and Minimization Efforts

The proposed project has been designed to avoid and/or minimize impacts to sensitive vegetation communities including southern riparian forest. The area of impact has been reduced with the use of retaining walls that minimize the project grading footprint. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.1.3. Project Impacts

Implementation of the project would result in temporary impacts to 0.53 ac and permanent impacts to 0.45 ac of southern riparian forest due to construction access, and grading and construction of the bikeway, including retaining walls and bridge construction (Figures 8b and 8c; Table 4). A total of 0.12 ac of the temporary impacts (23 percent) and 0.01 ac of the

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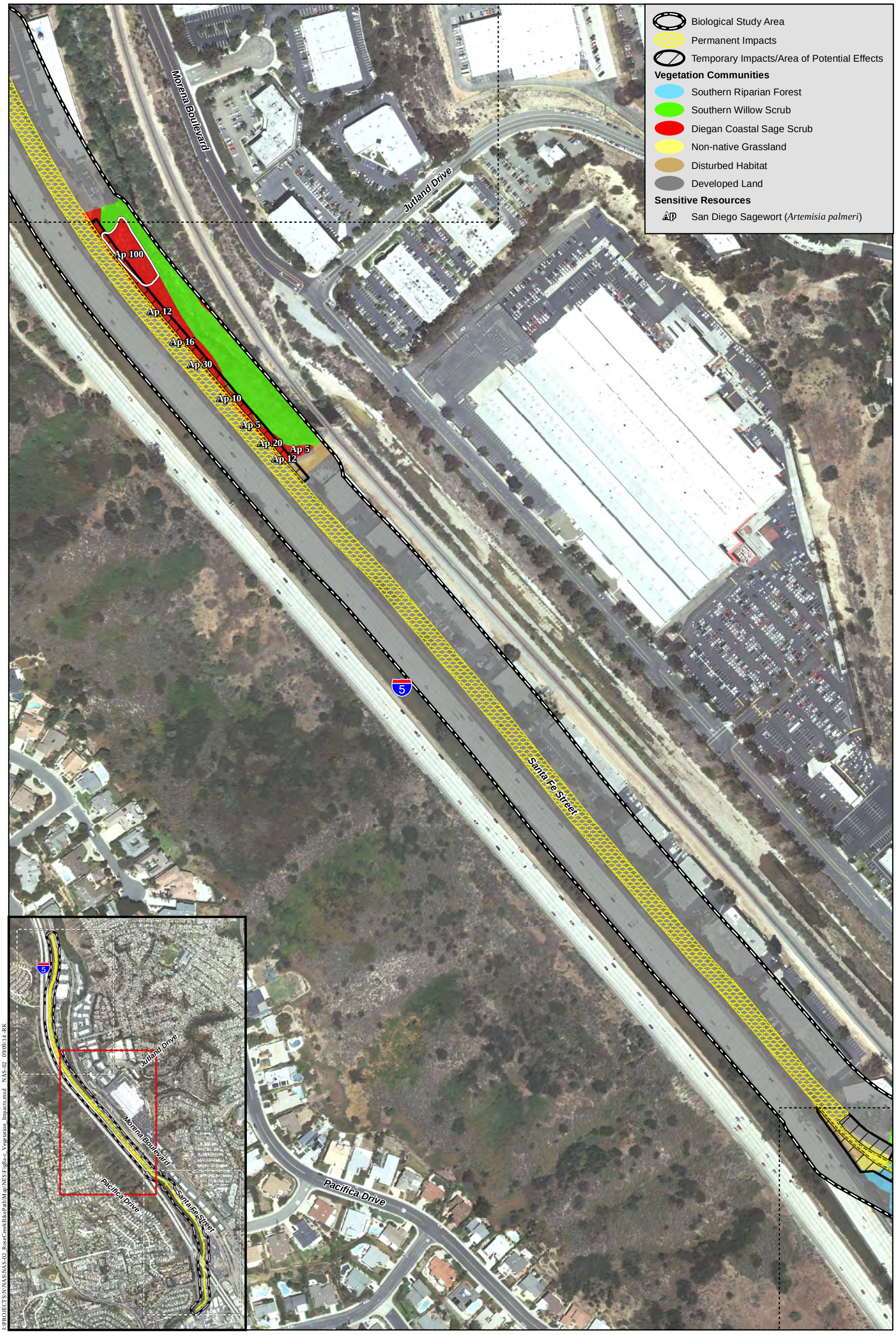
Vegetation and Sensitive Resources/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 8a



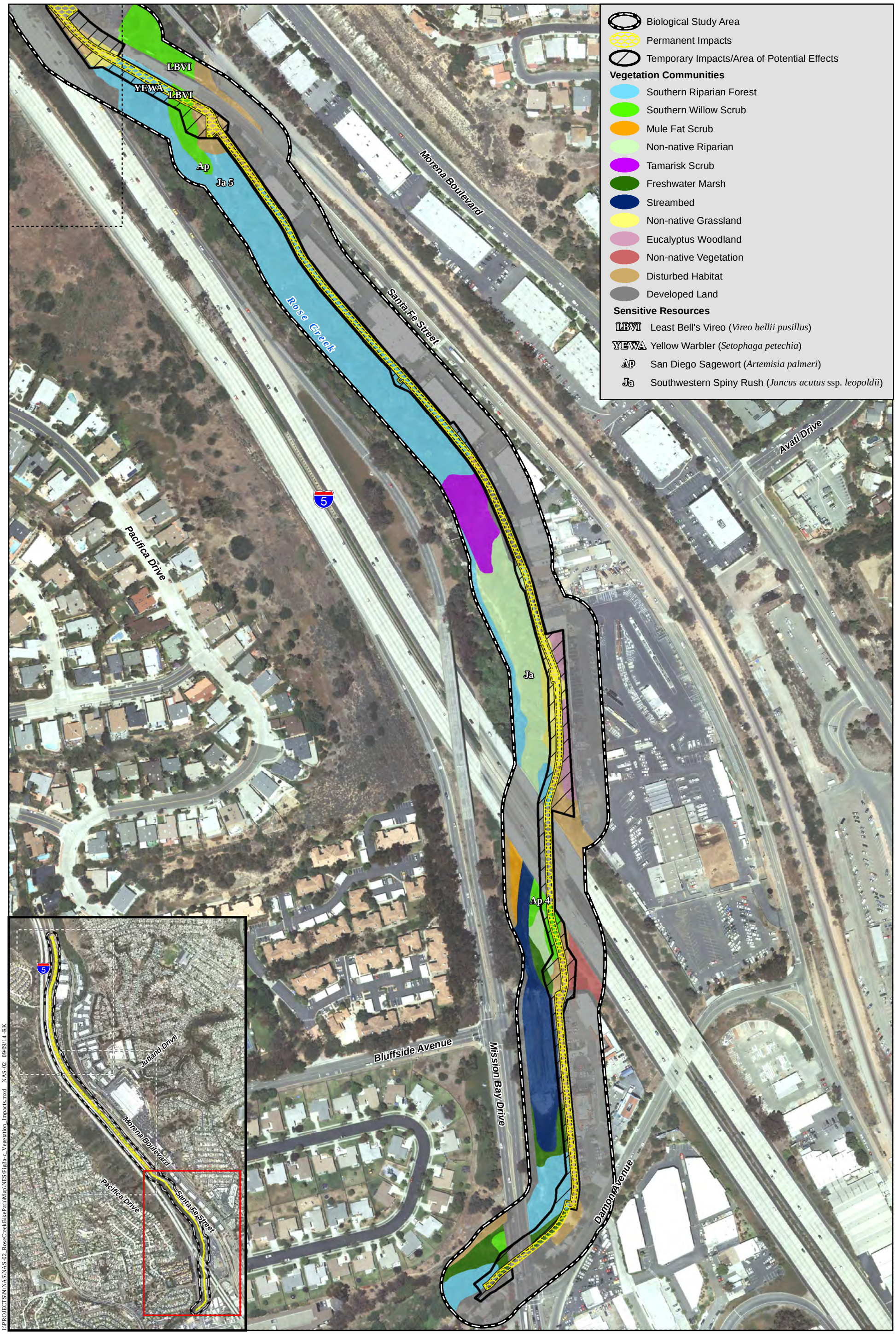
Vegetation and Sensitive Resources/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 8b



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Vegetation and Sensitive Resources/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 8c

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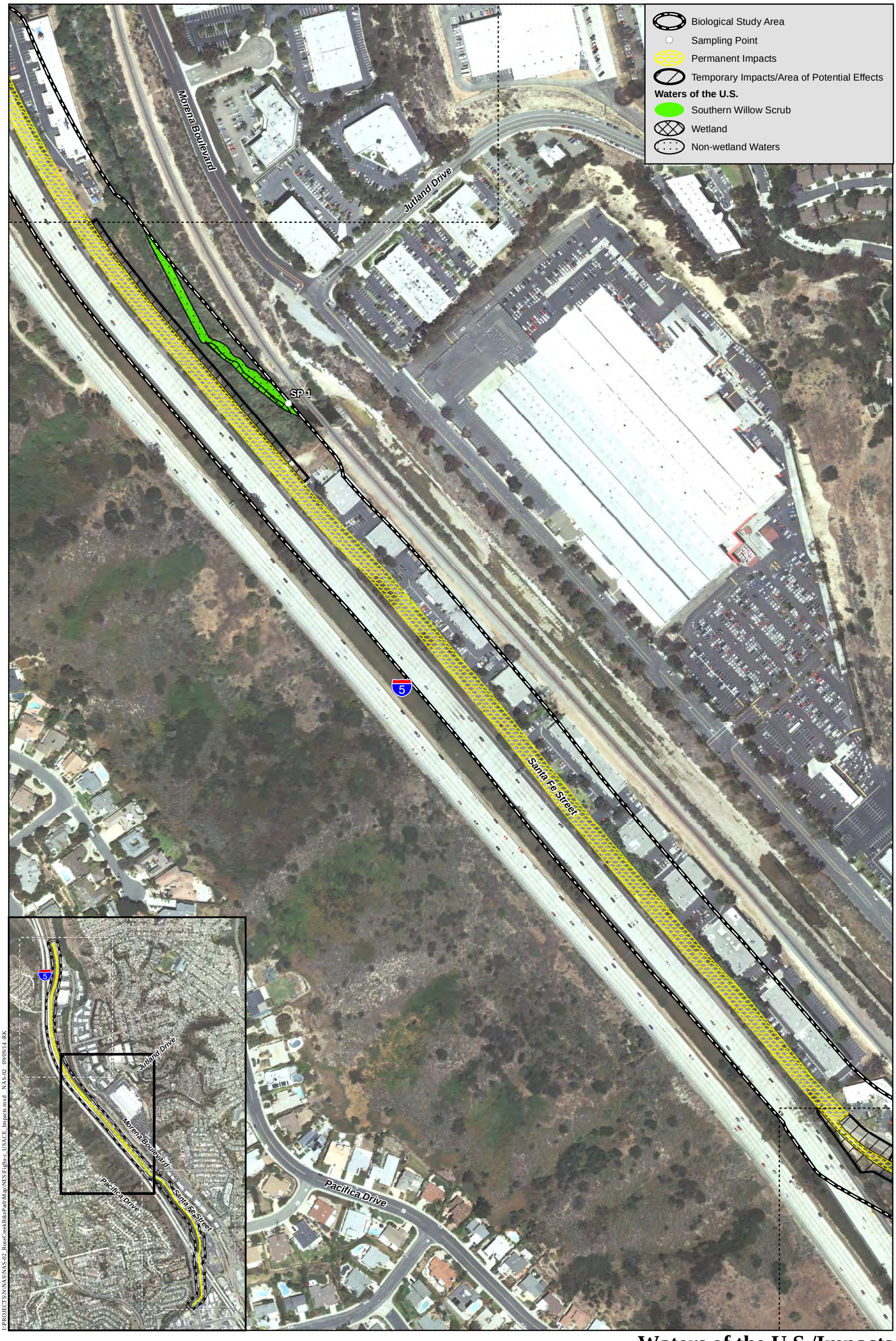
Waters of the U.S./Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 9a



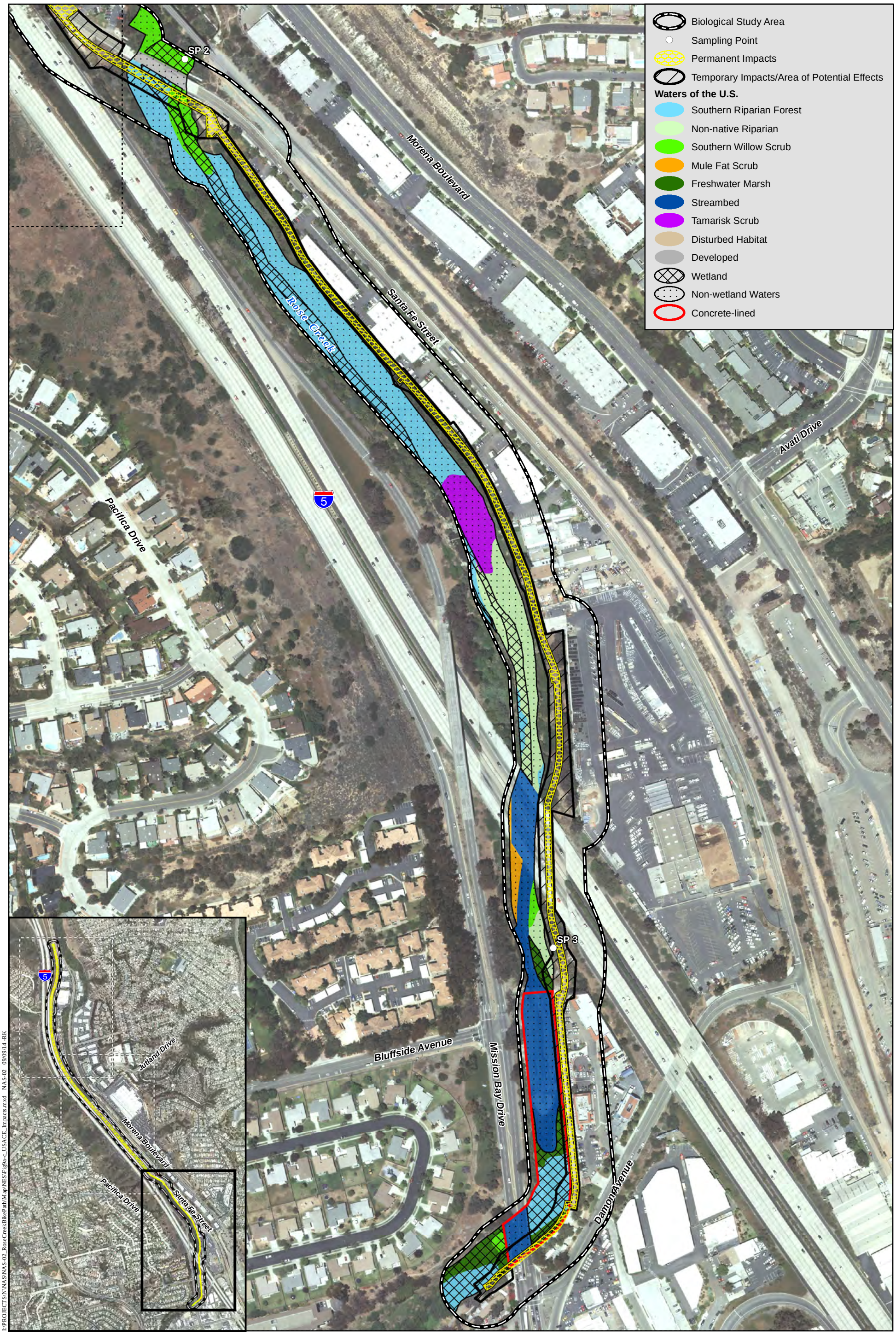
Waters of the U.S./Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 9b



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Waters of the U.S./Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 9c

Biological Study Area
Permanent Impacts
Temporary Impacts/Area of Potential Effects
CDFW Jurisdictional Areas
Southern Riparian Forest
Southern Willow Scrub

Santa Fe Street
5
Ariane Drive
Morena Boulevard
Jutland Drive
Morena Boulevard
Pacifica Drive
Santa Fe Street
Jutland Drive

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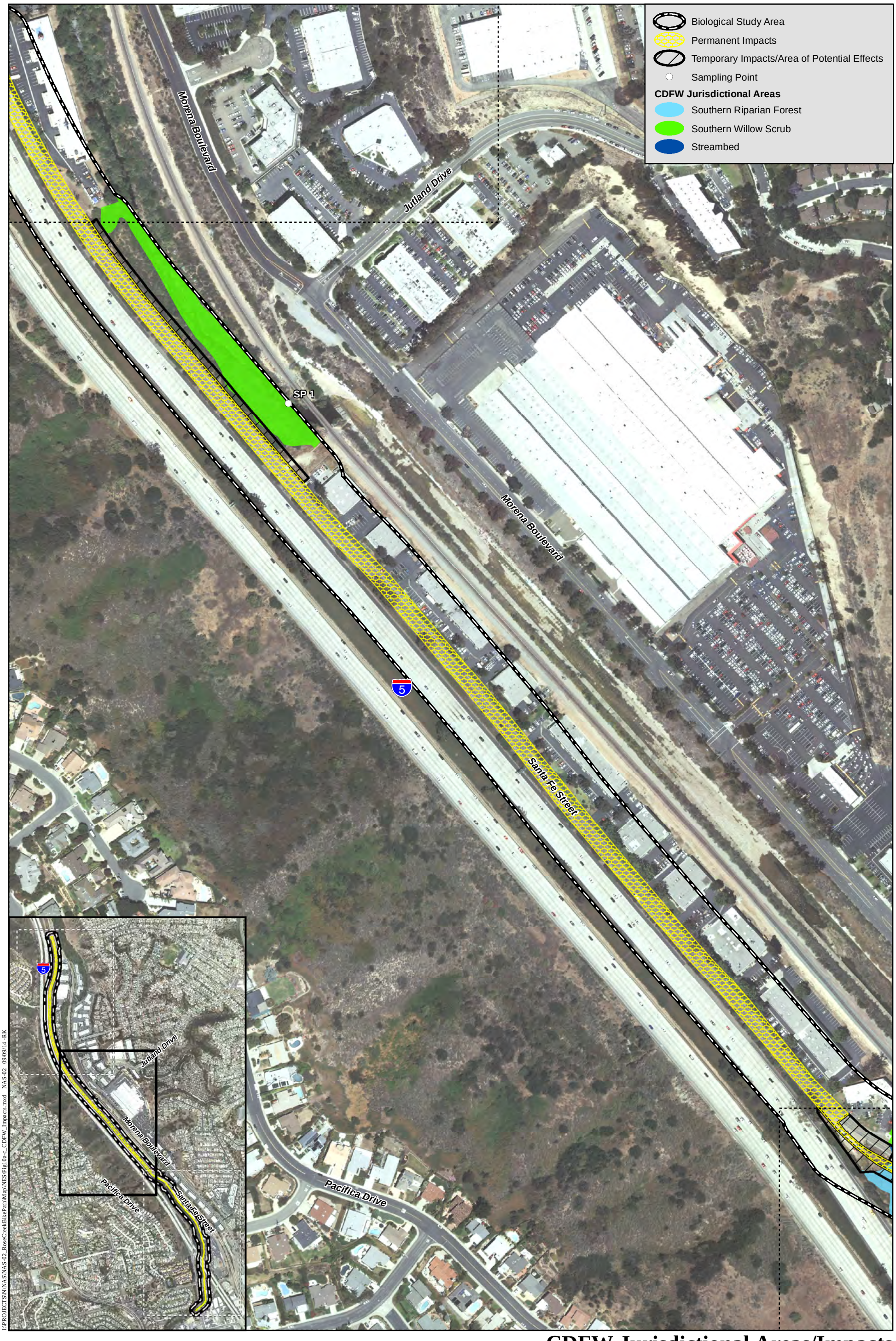
CDFW Jurisdictional Areas/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 10a



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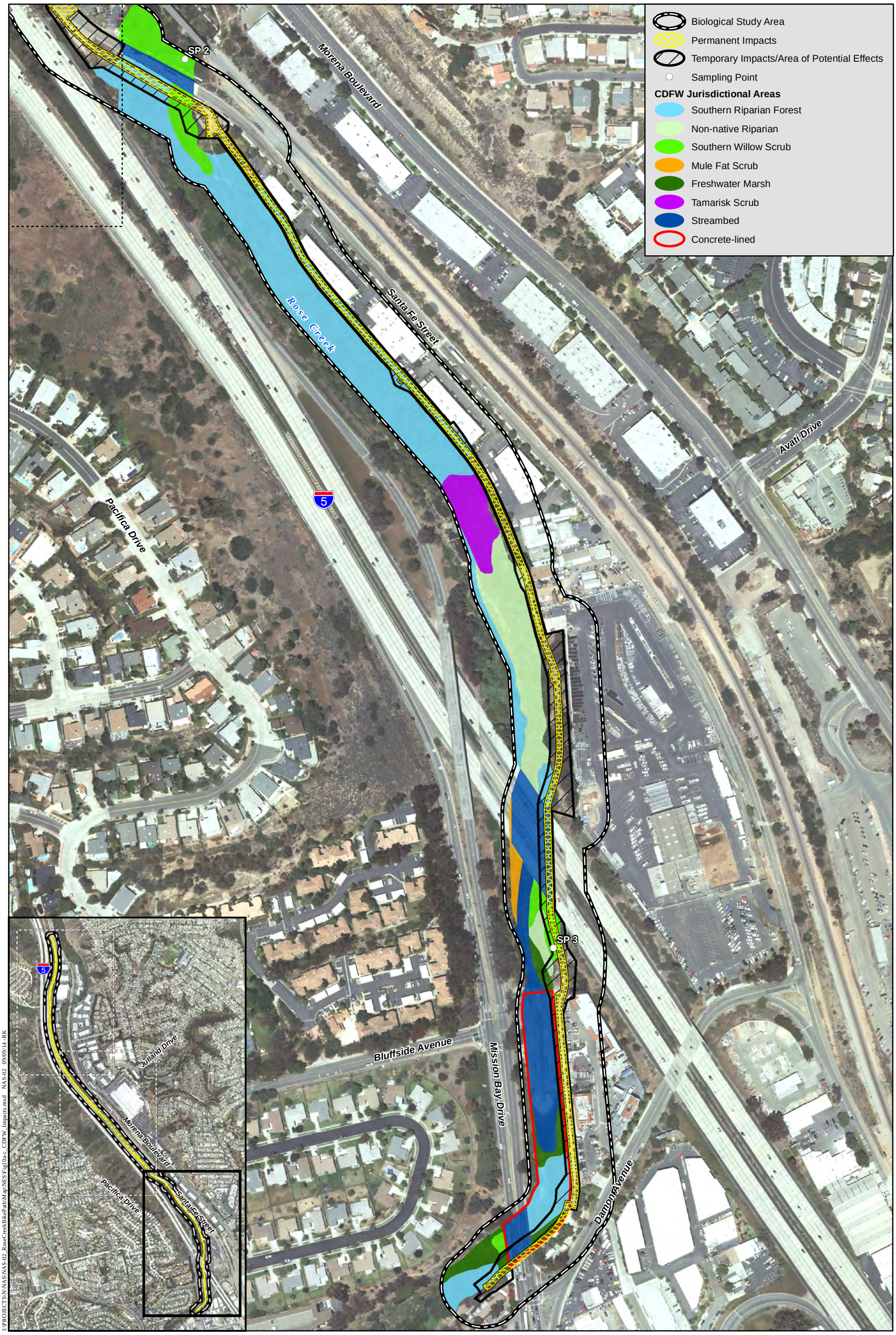
CDFW Jurisdictional Areas/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

0 250 Feet

Figure 10b



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CDFW Jurisdictional Areas/Impacts

ROSE CREEK BIKEWAY PROJECT

HELIX Environmental Planning

N 0 250 Feet

Figure 10c

permanent impacts (2 percent) to southern riparian forest would occur within concrete-lined portions of Rose Creek.

4.1.1.4. COMPENSATORY MITIGATION

Mitigation for temporary impacts to southern riparian forest would occur at a 1:1 ratio while permanent impacts to southern riparian forest would be mitigated at a 3:1 ratio (Table 5). Mitigation for temporary impact areas would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. Mitigation for permanent impacts would occur through on- and/or off-site restoration, enhancement, and/or establishment/re-establishment with an establishment/re-establishment ratio of 1:1, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to southern riparian forest would be determined in consultation with the resource agencies.

Table 5: Proposed Mitigation Requirements for Impacts to Vegetation Communities (ac)*

Vegetation Community	Impact Type	Impact	Mitigation Ratio†	Required Mitigation†
Southern riparian forest	T	0.53	1:1	0.53
Southern riparian forest	P	0.45	3:1	1.35
Southern willow scrub	T	0.19	1:1	0.19
Southern willow scrub	P	0.09	3:1	0.27
Freshwater marsh	T	0.14	1:1	0.14
Freshwater marsh	P	0.05	3:1	0.15
Non-native riparian	T	0.07	1:1	0.07
Non-native riparian	P	0.04	2:1	0.08
Streambed	T	0.06	--**	0.00
Streambed	P	0.00	--**	0.00
Diegan coastal sage scrub	T	0.4	1:1	0.4
Diegan coastal sage scrub	P	0.2	1:1	0.2
Non-native grassland	T	0.2	0.5:1	0.1
Non-native grassland	P	0.2	0.5:1	0.1
	TOTAL	**2.6**	**--**	**3.58**

*Upland habitats are rounded to the nearest 0.1 ac, while wetland habitats are rounded to the nearest 0.01; thus, totals reflect rounding

**No permanent impacts would occur and temporary impacts are limited to construction access within an unvegetated, concrete-lined portion of Rose Creek.

T=Temporary impacts; P=Permanent impacts

†Mitigation ratios and required mitigation would be finalized in consultation with the resource agencies.

4.1.1.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of southern

riparian forest in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.1.2. Southern Willow Scrub

4.1.2.1 SURVEY RESULTS

A total of 2.52 ac of southern willow scrub was mapped in the BSA. This habitat occurs along Rose Creek in scattered locations, including adjacent to the three existing bridge crossings (i.e., Santa Fe Street bridge, I-5 overpass, and Mission Bay Drive bridge [Figures 5a through 5c]).

4.1.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project has been designed to avoid and/or minimize impacts to sensitive vegetation communities including southern willow scrub. The area of impact has been reduced with the use of retaining walls that minimize the project grading footprint. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.2.3. PROJECT IMPACTS

Implementation of the project would result in temporary impacts to 0.19 ac and permanent impacts to 0.09 ac of southern willow scrub due to construction access, and grading and construction of the bikeway, including retaining walls and bridge construction (Figures 8b and 8c; Table 4).

4.1.2.4. COMPENSATORY MITIGATION

Mitigation for temporary impacts to southern willow scrub would occur at a 1:1 ratio while permanent impacts to southern willow scrub would be mitigated at a 3:1 ratio (Table 5). Mitigation for temporary impact areas would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. Mitigation for permanent impacts would occur through on- and/or off-site restoration, enhancement, and/or establishment/re-establishment with an establishment/re-establishment ratio of 1:1, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to southern willow scrub would be determined in consultation with the resource agencies.

4.1.2.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of southern willow scrub in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.1.3. Mule Fat Scrub

4.1.3.1 SURVEY RESULTS

A total of 0.11 ac of mule fat scrub was mapped in the BSA. This habitat occurs as a single small stand of mule fat on the west side of the creek, south of the I-5 overpass (Figure 5c).

4.1.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

The project alignment avoids mule fat scrub habitat, and temporary impact areas, such as construction staging locations, are also located outside of mule fat scrub habitat.

4.1.3.3. PROJECT IMPACTS

The proposed project would avoid impacts to mule fat scrub.

4.1.3.4. COMPENSATORY MITIGATION

The proposed project would avoid impacts to mule fat scrub; therefore, no mitigation is required.

4.1.3.5. CUMULATIVE IMPACTS

The proposed project would avoid impacts to mule fat scrub, thus no cumulative loss would occur.

4.1.4. Freshwater Marsh

4.1.4.1 SURVEY RESULTS

A total of 0.56 ac of freshwater marsh was mapped in the BSA. Freshwater marsh occurs in portions of the creek south of I-5, extending to the southern tip of the BSA (Figure 5c).

4.1.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project has been designed to avoid and/or minimize impacts to sensitive vegetation communities including freshwater marsh. While it is not feasible to completely avoid project impacts to freshwater marsh, the area of impact has been reduced with the use of retaining walls that minimize the project grading footprint. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.4.3. PROJECT IMPACTS

Implementation of the project would result in temporary impacts to 0.14 ac and permanent impacts to 0.05 ac of freshwater marsh due to construction access, and grading and construction of the bikeway, including retaining walls and bridge construction (Figure 8c; Table 4). A total of 0.08 ac of the temporary impacts (57 percent) and 0.04 ac of the permanent impacts (80 percent) to freshwater marsh would occur within concrete-lined portions of Rose Creek.

4.1.4.4. COMPENSATORY MITIGATION

Mitigation for temporary impacts to freshwater marsh would occur at a 1:1 ratio while permanent impacts to freshwater marsh would be mitigated at a 3:1 ratio (Table 5). Mitigation for temporary impact areas would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. Mitigation for permanent impacts would occur through on- and/or off-site restoration, enhancement, and/or establishment/re-establishment with an establishment/re-establishment ratio of 1:1, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to freshwater marsh would be determined in consultation with the resource agencies.

4.1.4.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of freshwater

marsh in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.1.5. Non-native Riparian

4.1.5.1 SURVEY RESULTS

A total of 1.45 ac of non-native riparian was mapped in the BSA. Non-native riparian occurs as a band of habitat along the creek, north and south of the I-5 overpass (Figure 5c).

4.1.5.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project has been designed to avoid and/or minimize impacts to potentially jurisdictional habitats including non-native riparian. While it is not feasible to completely avoid project impacts to non-native riparian, the area of impact has been reduced with the use of retaining walls that minimize the project footprint. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.5.3. PROJECT IMPACTS

Implementation of the project would result in temporary impacts to 0.07 ac and permanent impacts to 0.04 ac of non-native riparian due to construction access and grading and construction of the bikeway, including retaining walls (Figure 8c; Table 4).

4.1.5.4. COMPENSATORY MITIGATION

Mitigation for temporary impacts to non-native riparian would occur at a 1:1 ratio while permanent impacts to non-native riparian would be mitigated at a 2:1 ratio (Table 5). Mitigation for temporary impact areas would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. Mitigation for permanent impacts would occur through on- and/or off-site restoration, enhancement, and/or establishment/re-establishment with an establishment/re-establishment ratio of 1:1, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to freshwater marsh would be determined in consultation with the resource agencies.

4.1.5.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of non-native riparian in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.1.6. Tamarisk Scrub

4.1.6.1 SURVEY RESULTS

A total of 0.56 ac of tamarisk scrub was mapped in the BSA. Tamarisk scrub occurs as a single stand of tamarisk along Rose Creek, north of the I-5 overpass (Figure 5c).

4.1.6.2. AVOIDANCE AND MINIMIZATION EFFORTS

The project alignment avoids tamarisk scrub habitat, and temporary impact areas, such as construction staging locations, are also located outside of tamarisk scrub habitat.

4.1.6.3. PROJECT IMPACTS

The proposed project would avoid impacts to tamarisk scrub.

4.1.6.4. COMPENSATORY MITIGATION

The proposed project would avoid impacts to tamarisk scrub; therefore, no mitigation is required.

4.1.6.5. CUMULATIVE IMPACTS

The proposed project would avoid impacts to tamarisk scrub; thus, no cumulative loss would occur.

4.1.7. Streambed

4.1.7.1 SURVEY RESULTS

A total of 1.11 ac of streambed were mapped within the BSA. Streambed consists of non-vegetated portions of Rose Creek. This includes deeper portions of the channel, as well as the concrete-lined portion of the creek south of I-5 and upstream of the Mission Bay Drive bridge (Figure 5c).

4.1.7.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project has been designed to avoid and/or minimize impacts to potentially jurisdictional habitats including streambed. While it is not feasible to completely avoid project impacts to streambed, the area of impact has been reduced with the use of retaining walls that minimize the project footprint. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.7.3. PROJECT IMPACTS

Implementation of the project would result in temporary impacts to 0.06 ac of streambed occurring on a concrete-lined portion of Rose Creek south of I-5 and east of Mission Bay Drive (Table 4; Figure 8c). No permanent impacts to streambed would occur.

4.1.7.4. COMPENSATORY MITIGATION

No mitigation for temporary impacts to streambed would be required, as the impacts would result only from construction access within an unvegetated, concrete-lined portion of Rose Creek, and would not alter the contours of the creek or otherwise necessitate restoration activities (Table 5).

4.1.7.5. CUMULATIVE IMPACTS

The proposed project would avoid permanent impacts to streambed; thus, no cumulative loss would occur.

4.1.8. Diegan Coastal Sage Scrub (including disturbed)

4.1.8.1. SURVEY RESULTS

A total of 2.4 ac of Diegan coastal sage scrub occur in the northern tip and central portion of the BSA (Figures 5a and 5b). This habitat occurs in the northern tip of the BSA adjacent to the west side of Santa Fe Street and to the east of the existing rail line, as well as along the east side of Santa Fe Street in the central portion of the BSA (Figures 5a and 5b).

4.1.8.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project has been designed to avoid and/or minimize impacts to sensitive vegetation communities including Diegan coastal sage scrub. While it is not feasible to completely avoid project impacts to Diegan coastal sage scrub, the area of impact has been reduced by constructing the bikeway within existing disturbed and developed areas to the greatest extent possible. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.8.3. PROJECT IMPACTS

Implementation of the project would result in temporary impacts to 0.4 ac and permanent impacts to 0.2 ac of Diegan coastal sage scrub due to construction access and grading and construction of the bikeway (Figures 8a and 8b; Table 4).

4.1.8.4. COMPENSATORY MITIGATION

Mitigation for temporary and permanent impacts to Diegan coastal sage scrub would occur at a 1:1 ratio (Table 5). Mitigation for temporary impact areas would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. All areas of Diegan coastal sage scrub that would be temporarily impacted by the proposed project would be revegetated with a Diegan coastal sage scrub plant palette for erosion control measures. Mitigation for permanent impacts would occur through on- and/or off-site restoration or purchase of credits at an approved mitigation bank. Mitigation is currently anticipated to occur further upstream in Rose Canyon. Final mitigation requirements would be determined in consultation with the resource agencies.

4.1.8.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of Diegan coastal sage scrub in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.1.9. Non-native Grassland

4.1.9.1. SURVEY RESULTS

A total of 0.5 ac of non-native grassland was mapped in the BSA. Non-native grassland occurs in two locations within the BSA (Figures 5a and 5b).

4.1.9.2. AVOIDANCE AND MINIMIZATION EFFORTS

The proposed project limits have been designed to reduce impacts to non-native grasslands to the greatest extent practicable. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.1.9.3. PROJECT IMPACTS

Project implementation would result in temporary impacts to 0.2 ac and permanent impacts to 0.2 ac of non-native grassland due to construction access and grading and construction of the bikeway (Figure 8c; Table 4).

4.1.9.4. COMPENSATORY MITIGATION

Mitigation would be required at a 0.5:1 ratio for permanent impacts to non-native grassland resulting in required mitigation of 0.1 ac (Table 5). No mitigation for temporary impacts to non-native grassland would be required, since all areas of non-native grassland that would be temporarily impacted by the proposed project would be revegetated with a native grassland and forb palette as an erosion control measure. Mitigation for permanent impacts would occur through on- and/or off-site restoration, or purchase of credits at an approved mitigation bank, and may be in-kind or at a higher tier due the limited area of impact.

4.1.9.5. CUMULATIVE IMPACTS

The project is located within the planning boundary of the City's MSCP Subarea Plan, outside the MHPA. Areas located outside the MHPA are not targeted for conservation under the MSCP. Although implementation of the project would contribute to the cumulative loss of non-native grassland in the City, the cumulative losses have been addressed by the implementation of the City's MSCP. While SANDAG is not a signatory party to the MSCP, the project would comply with the requirements of the MSCP.

4.2. Jurisdictional Areas

4.2.1. Survey Results

Federal (USACE) jurisdictional areas within the BSA total 9.40 ac, comprised of 3.00 ac of wetland WUS and 6.40 ac of non-wetland WUS. Wetlands include 1.65 ac of southern riparian forest, 0.47 ac of southern willow scrub, 0.56 ac of freshwater marsh, 0.32 ac of non-native riparian, and 0.01 ac of tamarisk scrub, of which 0.65 ac occurs on concrete-lined portions of Rose Creek just upstream of Mission Bay Drive. Non-wetland WUS include 4.60 acres of natural-bottom creek and 1.03 ac of concrete-lined creek.

State (CDFW) jurisdictional areas within the BSA total 12.61 ac, comprised of 5.28 ac of southern riparian forest, 2.52 ac of southern willow scrub, 0.11 ac of mule fat scrub, 0.56 ac of freshwater marsh, 1.45 ac of non-native riparian, 0.56 ac of tamarisk scrub, and 2.13 ac of streambed. These results are based on the jurisdictional delineation, which included three sampling points as discussed in Appendix C-2. The delineation was field verified on May 28, 2015 by USACE Project Manager Rose Galer and CDFW Senior Environmental Specialist Tim Dillingham. An overview of the definitions of federal and state jurisdictional areas is presented in Appendices E and F, respectively.

4.2.2. Avoidance and Minimization Efforts

The proposed project has been designed to avoid and/or minimize impacts to USACE and CDFW jurisdictional areas. Complete avoidance of impacts to jurisdictional areas is not feasible due to the lack of available space in the adjacent uplands to support an alternate alignment. The uplands surrounding the proposed impact area are already highly constrained by existing developments that cannot accommodate the space required for the bikeway. Where impacts cannot be avoided, the area of impact has been reduced with the use of retaining walls that minimize the project grading footprint, as well as positioning the bikeway within and adjacent to existing disturbed and developed areas, to the greatest extent practicable. The proposed limits of

disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

The proposed project has been designed to reduce temporary construction-related impacts to riparian areas both within and outside the proposed project limits. No permanent impacts to water quality are anticipated from project construction, as the project is not a Priority Development Project, meaning that the project does not have uses that would contribute pollutants. Water quality could be adversely affected during construction by potential surface runoff, including sedimentation from disturbance areas. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. Appropriate BMPs would be implemented during construction to address potential water quality impacts. These include (1) installing erosion and sediment control devices such as silt fences, fiber rolls, bonded fiber matrix, and gravel bags in appropriate locations; (2) placing temporary filters at storm drain inlets (e.g., gravel bags/filter fabric); (3) designating containment areas for material storage (e.g., covering/berming of soil stockpiles); and (4) providing containment areas for solid waste storage and concrete washout. Proposed post-construction BMPs would include revegetating disturbed areas to minimize erosion.

4.2.3. Project Impacts

Implementation of the proposed project would result in temporary impacts to 0.69 ac and permanent impacts to 0.25 ac of USACE jurisdictional areas (Figures 9a through 9c; Table 6). Temporary impacts are comprised of 0.39 ac of USACE wetland and 0.30 ac non-wetland WUS. Permanent impacts are comprised of 0.17 ac of USACE wetland and 0.08 ac of non-wetland WUS. These totals include 0.32 ac of temporary impacts and 0.07 ac of permanent impacts to concrete-lined portions of Rose Creek.

Table 6: Proposed Project Impacts to USACE Jurisdictional Areas (ac)*

HABITAT		IMPACT		
		Temporary	**Permanent**	**Total**
Wetlands				
Southern riparian forest	Earthen-bottom	0.10	0.09	0.19
	Concrete-lined	0.12	0.01	0.13
Southern willow scrub		0.03	0.02	0.05
Freshwater marsh	Earthen-bottom	0.06	0.01	0.07
	Concrete-lined	0.08	0.04	0.12
Non-native riparian		--	--	--
Tamarisk scrub		--	--	--
Wetlands Subtotal		**0.39**	**0.17**	**0.56**
Non-wetland Waters				
Earthen-bottom	Vegetated creek	0.18	0.06	0.24
	Unvegetated creek	--	--	--
Concrete-lined, Unvegetated creek		0.12	0.02	0.14
Non-wetland Waters Subtotal		**0.30**	**0.08**	**0.38**
TOTAL		**0.69**	**0.25**	**0.94**

*Acreage is rounded to the nearest 0.01 acre; thus, total reflects rounding.

Project implementation would result in temporary impacts to 1.17 ac and permanent impacts to 0.75 ac of CDFW jurisdictional areas (Figures 10a through 10c; Table 7). These totals include 0.32 ac of temporary impacts and 0.07 ac of permanent impacts to concrete-lined portions of Rose Creek.

Table 7: Proposed Project Impacts to CDFW Jurisdictional Areas (ac)*

HABITAT		IMPACT		
		Temporary	**Permanent**	**Total**
Southern riparian forest	Earthen-bottom	0.41	0.44	0.85
	Concrete-lined	0.12	0.01	0.13
Southern willow scrub		0.19	0.09	0.28
Freshwater marsh	Earthen-bottom	0.06	0.01	0.07
	Concrete-lined	0.08	0.04	0.12
Non-native riparian		0.07	0.04	0.11
Tamarisk scrub		--	--	--
Streambed	Earthen-bottom	0.12	0.10	0.22
	Concrete-lined	0.12	0.02	0.14
TOTAL		**1.17**	**0.75**	**1.92**

*Acreage is rounded to the nearest 0.01 acre; thus, total reflects rounding.

4.2.4. Compensatory Mitigation

Temporary impacts to southern riparian forest, southern willow scrub, freshwater marsh, and non-native riparian would be mitigated at a 1:1 ratio, while permanent impacts to southern riparian forest, southern willow scrub, freshwater marsh, and vegetated USACE waters would be mitigated at a 3:1 ratio. Permanent impacts to non-native riparian would be mitigated at a 2:1 ratio. Permanent impacts to unvegetated streambed, consisting of bikeway construction within the concrete-lined channel upstream of and below Mission Bay Drive, as well as unvegetated streambed below I-5, would be mitigated at a 1:1 ratio. No mitigation for temporary impacts to unvegetated creek/streambed would be required, as the impacts would result only from construction access within unvegetated portions of Rose Creek and would not alter the contours of the creek or otherwise necessitate restoration activities.

Based on the ratios above, impacts to USACE jurisdictional areas would result in required mitigation of 0.52 ac for southern riparian forest, 0.05 ac for southern willow scrub, 0.29 ac for freshwater marsh, 0.36 for vegetated waters, and 0.02 for unvegetated waters, for a total mitigation requirement of 1.24 ac (Table 8). Impacts to CDFW jurisdictional areas would result in required mitigation of 1.88 ac for southern riparian forest, 0.46 ac for southern willow scrub, 0.29 ac for freshwater marsh, 0.15 for non-native riparian, and 0.12 for streambed for a total mitigation requirement of 2.90 ac (Table 9).

Table 8: USACE Jurisdictional Area Impacts and Mitigation Summary (ac)*

Habitat	Impact Type	Impact	Mitigation Ratio†	Required Mitigation†
Wetlands				
Southern riparian forest	T	0.22	1:1	0.22
Southern riparian forest	P	0.10	3:1	0.30
Southern willow scrub	T	0.03	1:1	0.03
Southern willow scrub	P	0.02	3:1	0.02
Freshwater marsh	T	0.14	1:1	0.14
Freshwater marsh	P	0.05	3:1	0.15
Non-wetland Waters of the U.S.				
Vegetated creek†	T	0.18	1:1	0.18
Vegetated creek†	P	0.06	3:1	0.18
Unvegetated creek	T	0.12	--**	--
Unvegetated creek	P	0.02	1:1	0.02
	TOTAL	**0.94**	**--**	**1.24**

T=Temporary impacts; P=Permanent impacts
*Rounded to the nearest 0.01; thus, totals reflect rounding
†Supports wetland vegetation but does not meet the USACE's three-parameter wetland definition. Considered non-wetland waters by the USACE.
**Impacts are limited to construction access within an unvegetated, concrete-lined portion of Rose Creek and would not alter the contours of the creek or otherwise necessitate compensatory mitigation.
†Mitigation ratios and required mitigation would be finalized in consultation with the resource agencies.

Table 9: CDFW Jurisdictional Area Impacts and Mitigation Summary (ac)*

Habitat	Impact Type	Impact	Mitigation Ratio†	Required Mitigation†
Wetlands				
Southern riparian forest	T	0.53	1:1	0.53
Southern riparian forest	P	0.45	3:1	1.35
Southern willow scrub	T	0.19	1:1	0.19
Southern willow scrub	P	0.09	3:1	0.27
Freshwater marsh	T	0.14	1:1	0.14
Freshwater marsh	P	0.05	3:1	0.15
Non-native riparian	T	0.07	1:1	0.07
Non-native riparian	P	0.04	2:1	0.08
Streambed	T	0.24	--**	--
Streambed	P	0.12	1:1	0.12
	TOTAL	**1.92**	**--**	**2.90**

T=Temporary impacts; P=Permanent impacts
*Rounded to the nearest 0.01; thus, totals reflect rounding
**Temporary impacts are limited to construction access within an unvegetated portions of Rose Creek, comprised of concrete-lined areas and areas below I-5.
†Mitigation ratios and required mitigation would be finalized in consultation with the resource agencies.

Mitigation for temporary impacts would occur either through restoration of these areas to their pre-impact contours and conditions, or through habitat mitigation. Mitigation for permanent impacts would occur through on- and/or off-site restoration, enhancement, and/or establishment/re-establishment with an establishment/re-establishment ratio of 1:1, or purchase of credits at an approved mitigation bank. Final mitigation requirements would be determined in consultation with the resource agencies.

4.2.5. Cumulative Impacts

Impacts to jurisdictional areas must be permitted by the resource agencies and conform to their "no net loss" policy, thus no cumulative loss of jurisdictional areas would occur.

4.3. Special Status Plant Species Occurrences

No federally or state listed endangered or threatened or City Narrow Endemic plant species were observed within the BSA; however, two species listed as CNPS sensitive were observed within the BSA: San Diego sagewort and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii;* Figures 5a, 5b, and 5c). No impacts to southwestern spiny rush would occur upon implementation of the proposed project (Figure 8c), further discussed below. Impacts to San Diego sagewort are further discussed below.

4.3.1. San Diego Sagewort (*Artemisia palmeri*)

San Diego sagewort is a CRPR 4.2 species. It is found primarily near stream courses, often within coastal sage scrub or below a riparian canopy. This species has a wide distribution in San Diego County, with records from Camp Pendleton south to Border Field State Park, and east to the Cleveland National Forest. San Diego sagewort is relatively common in lower elevation sage scrub in the project vicinity, with numerous individuals present inside and outside the BSA, including along the west side of the rail line, east of the BSA.

4.3.1.1 SURVEY RESULTS

Approximately 262 individuals were observed within the BSA, with nearly all occurring in Diegan coastal sage scrub.

4.3.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The project would avoid impacts to approximately 148 San Diego sagewort individuals (56 percent) of the 262 individuals observed in the BSA. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.3.1.3. PROJECT IMPACTS

Approximately 114 San Diego sagewort individuals would be impacted by project implementation (Figures 8a through 8c).

4.3.1.4. COMPENSATORY MITIGATION

Mitigation for impacts to San Diego sagewort would be mitigated through habitat mitigation for impacts to Diegan coastal sage scrub and southern willow scrub. Although species-specific mitigation is not necessitated due to the low sensitivity status of this species and its relative abundance in the project vicinity, San Diego sagewort would be included in the seed mix for restoration of temporarily impacted areas.

4.3.1.5. CUMULATIVE EFFECTS

The project would result in only a minor contribution to cumulative regional impacts to San Diego sagewort, as numerous individuals within and adjacent to the BSA would remain unaffected.

4.3.2. Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)

Southwestern spiny rush is a CRPR 4.2 species. It is found primarily in moist, saline, or alkaline soils in coastal salt marshes and riparian marshes. This species has a wide regional distribution, which includes records in San Diego, Los Angeles, San Bernardino, San Luis Obispo, and Ventura counties.

4.3.2.1 SURVEY RESULTS

A total of six individuals were observed in the BSA, occurring in southern riparian forest and non-native riparian habitat within Rose Creek.

4.3.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

The project alignment would avoid impacting southwestern spiny rush, and temporary impact areas, such as construction staging locations, also would avoid this species. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be monitored to protect adjacent areas from equipment access during construction.

4.3.2.3. PROJECT IMPACTS

The proposed project would avoid impacts to southwestern spiny rush.

4.3.2.4. COMPENSATORY MITIGATION

The proposed project would avoid impacts to southwestern spiny rush; therefore, no mitigation is required.

4.3.2.5. CUMULATIVE EFFECTS

The proposed project would avoid impacts to southwestern spiny rush; thus, no cumulative loss would occur.

4.4. Special Status Animal Species Occurrences

Protocol surveys were conducted for the following federally listed species: coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher. Least Bell's vireo was detected in the BSA, with survey results further discussed below. Focused survey reports for

coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher are presented in Appendices G-1, G-2, and G-3, respectively.

In addition, one non-listed sensitive animal species was detected within the BSA during surveys: yellow warbler (*Setophaga petechia*). This species is further discussed below.

Table 2 discusses other sensitive animal species that have potential to occur within the BSA as a result of the presence of potentially suitable habitat, but were not detected during surveys.

4.4.1. Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is federally listed threatened, a state species of special concern, and City MSCP covered species. The habitat of this species is primarily Diegan coastal sage scrub, although it may sometimes use other habitats adjacent to Diegan coastal sage scrub. Atwood (1990, 1992) estimated that approximately 1,811 to 2,291 gnatcatcher pairs remain in southern California. Of these, there are 24 to 30 pairs in Los Angeles County, 224 to 294 pairs in Orange County, 724 to 916 pairs in Riverside County, and 837 to 1,061 pairs in San Diego County. Unitt (2004) estimated that San Diego County's gnatcatcher population exceeds 2,000 pairs, but fires in 1996 and 2003 temporarily reduced the carrying capacity of several core habitat areas including Mission Trails and Miramar. The BSA is not located within gnatcatcher critical habitat.

4.4.1.1 SURVEY RESULTS

Protocol surveys did not identify any gnatcatchers in the BSA, and this species is not expected to occur in the BSA due to the limited habitat present, species composition, and its location directly adjacent to I-5.

Although the coastal California gnatcatcher has not been detected within the BSA, the species has been documented in more extensive, higher quality habitat to the north and east of the BSA, as well as on the slopes west of I-5. Habitat within the BSA is considered marginal for this species as it is small and patchy in distribution, and situated directly adjacent to existing development.

4.4.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

Focused surveys for coastal California gnatcatcher were negative, and the BSA is considered unoccupied. However, in order to ensure avoidance of this species, if vegetation clearing and grubbing must occur during the gnatcatcher breeding season (February 15 through August 31),

pre-construction nesting bird surveys would be conducted within three days prior to initiating clearing or grubbing activities in suitable gnatcatcher habitat (i.e., Diegan coastal sage scrub). If nesting gnatcatchers are detected within or adjacent to the impact area, construction within 300 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

4.4.1.3. PROJECT IMPACTS

Focused surveys for coastal California gnatcatcher were negative and the area is considered currently unoccupied. However, due to recorded occurrences of this species in habitat north and east of the BSA, as well as on the slopes west of I-5, this species could temporarily disperse into habitat in the BSA. As such, the potential exists for construction activities to affect this species should it occupy habitat within or adjacent to the construction area at the time of construction. Direct effects to this species are not anticipated, as the habitat present within the BSA is too small to support a breeding territory and focused surveys were negative. Effects on habitat are limited to a narrow band of habitat adjacent to Santa Fe Street, with plant species composition consisting primarily of broom baccharis, poison oak, and San Diego sagewort, comprising 0.2 ac of permanent effects and 0.4 ac of temporary effects.

Potential indirect effects resulting from noise during construction would be avoided by conducting pre-construction breeding season surveys and establishing setbacks from active nests. Given the proximity of I-5, background noise is expected to already exceed the usual limit of 60 decibel (dB) hourly average. An allowance is made for these conditions such that construction-related activities must not result in an increase of more than 3 dB above the existing background noise in occupied habitat. If needed, noise attenuation measures may be implemented to satisfy this requirement.

Indirect effects from night lighting would not occur as the only lighting associated with the project is low-voltage safety lighting in the protective railing between the bikeway and the creek in the off-street portion of the bike path, which is not near or adjacent to any sage scrub habitat.

4.4.1.4. COMPENSATORY MITIGATION

If construction occurs between February 15 and August 31, pre-construction gnatcatcher surveys, consisting of three surveys spaced one week apart, would be conducted prior to initiating clearing or grubbing activities. Should nesting gnatcatchers be detected within 300 ft of the construction area, construction on or within 300 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

Direct impacts to unoccupied coastal California gnatcatcher habitat would be mitigated through preservation of Diegan coastal sage scrub at appropriate ratios at a location approved in consultation with the agencies.

4.4.1.5. CUMULATIVE EFFECTS

The loss of Diegan coastal sage scrub resulting from project implementation would be fully mitigated to ensure no net loss in the region. Future non-federal projects in the region would undergo separate environmental review and effects analyzed and mitigated through the CEQA and/or permitting process. Furthermore, although this project is not subject to the MSCP, it is located within the boundaries of the City's MSCP Subarea Plan, and coastal California gnatcatcher is a covered species under that Plan. Cumulative effects on this species resulting from projects subject to regulation by the MSCP were addressed with adoption of the MSCP. Projects that conform to MSCP guidelines are considered not to have a cumulative effect on MSCP-covered species. All private development projects and many local, public projects are subject to MSCP guidelines, thereby addressing cumulative effects for many projects in the region. With implementation of avoidance and mitigation measures described herein, the project would not contribute to cumulative effects on coastal California gnatcatcher.

4.4.2. Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's vireo is a federally listed endangered species, state listed endangered species, and City MSCP covered species. The vireo was once widespread throughout the Central Valley and other low elevation river valleys of California. This species now ranges from Riverside, San Diego, Santa Barbara, and Ventura counties into northern Baja California, Mexico. The vireo typically prefers riparian areas dominated by willows of mixed-age composition. These areas frequently include other trees such as western cottonwood and western sycamore, with a dense understory of young willows, mule fat, California wild rose (*Rosa californica*), and a variety of other shrubby species.

4.4.2.1 SURVEY RESULTS

A single least Bell's vireo was detected near the Santa Fe Street bridge over Rose Creek on May 2, 2014 during protocol surveys for the bikeway (Figure 5c). A single vireo was detected in the same location during a pre-construction survey for geotechnical investigations for the Mid-Coast Corridor Transit project in April 2014, as well as during protocol surveys conducted on May 2 and May 14 for this project (Dudek 2014). Vireo was not detected on any other visits for the proposed project or for the Mid-Coast Corridor Transit project. As such, it is concluded that the

single individual was a transient male, temporarily moving through the area during migration, and not associated with a breeding territory or active nest.

Potential vireo habitat within and adjacent to the BSA includes wetland and riparian habitat within the Rose Creek corridor, including southern riparian forest, southern willow scrub, mule fat scrub, non-native riparian, freshwater marsh, and tamarisk scrub.

4.4.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

If vegetation clearing and grubbing must occur during the vireo breeding season (March 15 to September 15), pre-construction vireo surveys would be conducted prior to initiating clearing or grubbing activities. The survey would consist of three surveys spaced one week apart, with the final survey occurring within three days prior to initiating clearing or grubbing activities. If nesting vireos are detected on or within 500 ft of the impact area during pre-construction surveys, construction on or within 500 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

4.4.2.3. PROJECT IMPACTS

Implementation of the proposed project would avoid impacts to the vast majority of southern riparian forest and southern willow scrub, the preferred habitats of this species. As discussed in Section 4.1., a total of 0.45 ac of southern riparian forest and 0.09 ac of southern willow scrub would be permanently impacted by project implementation.

Year 2014 protocol surveys for least Bell's vireo were negative and the BSA is currently presumed to be unoccupied by the species. However, due to the presence of suitable habitat within the BSA and observations of a non-breeding male during project surveys, the potential exists for construction activities to impact this bird should it occupy habitat within or adjacent to the construction area.

Potential indirect effects resulting from noise during construction would be avoided by conducting pre-construction breeding season surveys and establishing setbacks from active nests. Given the proximity of I-5, background noise is expected to already exceed the usual limit of 60 dB hourly average. An allowance is made for these conditions such that construction-related activities must not result in an increase of more than 3 dB above the existing background noise in occupied habitat. If needed, noise attenuation measures may be implemented to satisfy this requirement.

Indirect effects from night lighting would not occur as the only lighting associated with the project is low-voltage safety lighting in the protective railing between the bikeway and the creek, which would be selectively place, shielded, and directed away from the creek.

4.4.2.4. COMPENSATORY MITIGATION

If construction occurs between March 15 and September 31, pre-construction vireo surveys would be conducted prior to initiating clearing or grubbing activities. The survey would consist of three surveys spaced one week apart, with the final survey occurring within three days prior to initiating clearing or grubbing activities. Should nesting vireos be detected within 500 ft of the construction area, construction on or within 500 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

Direct impacts to least Bell's vireo habitat would be mitigated through preservation and/or restoration of southern riparian forest and southern willow scrub at appropriate ratios at a location approved in consultation with the agencies.

4.4.2.5. CUMULATIVE EFFECTS

Should the project site or adjacent areas be occupied by the least Bell's vireo, mitigation measures would be implemented to protect this species during its breeding season and ensure the no direct or indirect adverse effects occur. The loss of southern riparian forest and southern willow scrub resulting from project implementation would be fully mitigated to ensure no net loss in the region. Compensation for loss of habitat, and clearing and grubbing outside the breeding season for occupied habitat, would reduce any effects that would occur so that breeding and use of the territory would not be affected. Future non-federal projects in the region would undergo separate environmental review and effects analyzed and mitigated through the CEQA and/or permitting process. Furthermore, although this project is not subject to the MSCP, it is located within the boundaries of the City's MSCP Subarea Plan, and least Bell's vireo is a covered species under that Plan. Cumulative effects on this species resulting from projects subject to regulation by the MSCP were addressed with adoption of the MSCP. Projects that conform to MSCP guidelines are considered not to have a cumulative effect on MSCP-covered species. All private development projects and many local, public projects are subject to MSCP guidelines, thereby addressing cumulative effects for many projects in the region. With implementation of avoidance and mitigation measures described herein, the project will not contribute to cumulative effects on least Bell's vireo.

4.4.3. Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Southwestern willow flycatcher is a federally listed endangered species and City MSCP covered species. The flycatcher migrates north in the spring from South America, Mexico, and Central America to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. This species inhabits mature riparian woodland within San Diego County during the breeding season but is rare. Like the least Bell's vireo, the flycatcher occurs in riparian woodland habitat that is characterized by a dense growth of willows, mule fat, arrowweed (*Pluchea* sp.), buttonbush (*Cephalanthus* sp.), cottonwood, sycamore, and tamarisk. Surface water or saturated soils are usually present in or adjacent to nesting thickets.

4.4.3.1 SURVEY RESULTS

This species was not observed or otherwise detected within the BSA during protocol surveys and there are no records of the species in the vicinity. The nearest records are from the San Diego River approximately nine miles to the south.

4.4.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

Southwestern willow flycatcher is not present within the BSA, thus no avoidance and minimization efforts are required.

4.4.3.3. PROJECT IMPACTS

Southwestern willow flycatcher is not present within the BSA; thus, no impacts would occur.

4.4.3.4. COMPENSATORY MITIGATION

No impacts would occur and no mitigation is required.

4.4.3.5. CUMULATIVE EFFECTS

Southwestern willow flycatcher is not present within the BSA and, as stated above, the nearest records for this species are from the San Diego River approximately nine miles to the south. Thus, no contribution to cumulative regional impacts to southwestern willow flycatcher would occur as a result of implementation of the proposed project.

4.4.4. Yellow Warbler (*Setophaga petechia*)

4.4.4.1. SURVEY RESULTS

The yellow warbler is a state species of special concern. This species prefers riparian woodland. A yellow warbler was detected in southern riparian forest near the Santa Fe Street bridge crossing over Rose Creek (Figure 5c).

4.4.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

When possible, clearing and grubbing would occur outside the breeding season of yellow warbler (February 15 to August 15) to avoid impacts to breeding birds. If vegetation clearing and grubbing must occur during the yellow warbler breeding season, pre-construction nesting bird surveys would be conducted within three days prior to initiating clearing or grubbing activities. If nesting yellow warblers are detected on or within 300 ft of the impact area during pre-construction surveys, construction on or within 300 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active. Potential yellow warbler habitat within and adjacent to the BSA includes wetland and riparian habitat within the Rose Creek corridor, including southern riparian forest, southern willow scrub, mule fat scrub, non-native riparian, freshwater marsh, and tamarisk scrub.

4.4.4.3. PROJECT IMPACTS

Implementation of the proposed project would avoid impacts to the vast majority of southern riparian forest and southern willow scrub, the preferred habitats of this species. As discussed in Section 4.1., a total of 0.45 acre of southern riparian forest and 0.09 acre of southern willow scrub would be permanently impacted by project implementation. However, construction activities could impact this species if it occurs during the breeding season.

4.4.4.4. COMPENSATORY MITIGATION

If construction occurs between February 15 and August 31, pre-construction nesting bird surveys would be conducted within three days prior to initiating clearing or grubbing activities. Should the nesting yellow warblers be detected within 300 ft of the construction area, construction on or within 300 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

Direct impacts to yellow warbler habitat would be mitigated through preservation and/or restoration of southern riparian forest and southern willow scrub at appropriate ratios at a location approved in consultation with the agencies.

4.4.4.5. CUMULATIVE EFFECTS

No substantial contribution to cumulative regional impacts to yellow warbler would occur as a result of implementation of the proposed project. Habitat impact mitigation, and clearing and grubbing outside the breeding season, would reduce any impacts that would occur so that breeding and use of the territory would not be affected.

4.4.5. Indirect Impacts

Potential indirect impacts from project construction and/or operation include decreased water quality (through sedimentation), noise, fugitive dust, non-native plant species colonization, and night lighting. The discussion of indirect impacts to water quality occurs in Section 4.2.2., and the discussion of indirect noise impacts occurs in Sections 4.4.1.3 and 4.4.2.3.

4.4.5.1. FUGITIVE DUST

Fugitive dust produced by construction operations has the potential to disperse onto adjacent preserved vegetation, which may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. This, in turn, could affect animals dependent on these plants (e.g., seed-eating rodents). Fugitive dust may make plants unsuitable as habitat for insects and birds. Active construction areas and unpaved surfaces would be watered pursuant to compliance with local dust control requirements through measures such as regular watering and/or use of chemical palliatives. As such, no temporary or permanent indirect effects from fugitive dust would occur.

4.4.5.2. COLONIZATION OF NON-NATIVE PLANT SPECIES

Non-native plants could colonize areas disturbed by construction and could potentially spread into adjacent native habitats. Many non-native plants are highly invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on the native plant species.

The BSA already contains a wide variety of non-native species, including many invasive species, and project implementation is not anticipated to increase colonization by non-native plants. However, the following avoidance and minimization measures would be implemented to reduce potential impacts associated with invasive species to less than adverse and substantial:

- A qualified biologist shall review the project landscape/erosion control plans to ensure that no invasive species (as listed in the California Invasive Plant Inventory [Cal-IPC]) are included.

- Upon completion of grading, all areas of temporary disturbance shall be revegetated with native species or non-invasive ornamental landscaping to limit colonization by invasive species.

4.4.5.3. NIGHT LIGHTING

Night lighting has potential to spill over into native habitats, which could interfere with wildlife movement and provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss in native wildlife. The project would implement the following design measure to reduce indirect impacts from night lighting to less than adverse and substantial:

- Permanent low-voltage safety lighting would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from the creek.

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Chapter 5. Conclusions and Regulatory Determinations

5.1. Federal Endangered Species Act Consultation Summary

Impacts to federally listed threatened and endangered species would require consultation between FHWA and USFWS pursuant to ESA Section 7. Least Bell's vireo was detected in the BSA during a single protocol survey for the project and was not associated with a breeding territory or active nest. No other federally listed species were detected in the BSA during project surveys. The detection of least Bell's vireo within the BSA necessitates consultation with USFWS. However, avoidance measures are proposed herein to ensure that no adverse, direct or indirect effects occur. These measures include clearing and grubbing outside the breeding season of least Bell's vireo (March 15 to September 15), when possible, to avoid impacts to breeding birds. If vegetation clearing and grubbing must occur during the vireo breeding season, pre-construction vireo surveys would be conducted prior to initiating clearing or grubbing activities. The survey would consist of three surveys spaced one week apart, with the final survey occurring within three days prior to initiating clearing or grubbing activities. If nesting vireos are detected on or within 500 ft of the impact area during pre-construction surveys, construction on or within 500 ft of the nest shall be postponed until after the young have fledged or the nest is no longer active.

5.2. California Endangered Species Act Consultation Summary

Impacts to state listed threatened and endangered species would require consultation and permitting between SANDAG and CDFW pursuant to CESA Section 2081, or a consistency determination issued by CDFW pursuant to CESA Section 2080.1. Least Bell's vireo was detected in the BSA during a single protocol survey for the project and was not associated with a breeding territory or active nest. No other state listed species were detected in the BSA during project surveys. Avoidance measures are proposed herein to ensure that no adverse, direct or indirect effects occur. These measures include clearing and grubbing outside the breeding season of least Bell's vireo (March 15 to September 15), when possible, to avoid impacts to breeding birds. If vegetation clearing and grubbing must occur during the vireo breeding season, pre-construction vireo surveys would be conducted prior to initiating clearing or grubbing activities. The survey would consist of three surveys spaced one week apart, with the final survey occurring within three days prior to initiating clearing or grubbing activities. If nesting vireos are detected on or within 500 ft of the impact area during pre-construction surveys, construction on or within 500 ft of the nest shall be postponed until after the young have fledged

or the nest is no longer active. With implementation of the measures described herein, consultation is not required for this project, as the project is expected to have no effect on state-listed species.

5.3. Wetlands and Other Waters Coordination Summary

A jurisdictional delineation was conducted within the BSA on May 11 and May 31, 2011 in the northern portion of the BSA, and on April 3, 2013 in the southern portion of the BSA. Potential USACE and CDFW jurisdictional areas occur within the BSA, and include southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, and streambed.

The project proposes 0.94 ac of impacts to potential USACE jurisdiction associated with Rose Creek, comprised of 0.25 ac of permanent impact and 0.69 ac of temporary impact. Based on these values, project impacts would be expected to be authorized by the USACE under Nationwide Permit 14 (Linear Transportation Projects). Impacts to wetland and non-wetland WUS would require permitting with the USACE pursuant to Section 404 of the CWA. As presented in Section 2.4, coordination to date with the USACE occurred during a February 27, 2015 site visit with USACE Senior Project Manager Meris Guerrero (and other agency personnel), and on May 28, 2015 with USACE Project Manager Rose Galer to verify the jurisdictional delineation.

The project proposes 0.94 ac of impacts to potential RWQCB jurisdiction associated with Rose Creek, corresponding to proposed impacts to USACE jurisdiction. Water Quality Certification would be required from the RWQCB pursuant to Section 401 of the CWA. Section 401 Water Quality Certification would be required prior to USACE issuance of Nationwide Permit 14 authorization. As presented in Section 2.4, coordination to date with the RWQCB occurred during a February 27, 2015 site visit with RWQCB Engineering Geologist Mike Porter (and other agency personnel), and a May 11, 2015 meeting and May 27, 2015 conference call with Mike Porter.

The project proposes 1.92 ac of impacts to potential CDFW jurisdiction associated with Rose Creek, comprised of 0.75 ac of permanent impact and 1.17 ac of temporary impact. Impacts to riparian-vegetation and unvegetated streambed would require permitting with the CDFW pursuant to Sections 1600 et seq. of the California Fish and Game Code. Project impacts would be expected to be authorized by the CDFW under a Standard 5-Year Streambed Alteration Agreement. As presented in Section 2.4, coordination to date with the CDFW occurred during March 9, 2015 and May 28, 2015 site visits with CDFW Senior Environmental Specialist Tim Dillingham.

5.4. Invasive Species Act (EO 13112)

Executive Order (EO) 13112 was adopted on February 3, 1999 and seeks to prevent the introduction of alien plant and animal species that cause economic or environmental harm. Several invasive plant species occur within the project alignment, including pampas grass, Brazilian pepper, Mexican fan palm, Canary Island date palm, castor bean, giant reed, poison hemlock, perennial mustard, Australian saltbush, and hottentot-fig. Pampas grass, hottentot-fig, and giant reed are rated as High on the Cal-IPC inventory; Mexican fan palm, perennial mustard, poison hemlock, and Australian saltbush are listed as Moderate; and Brazilian pepper, Canary Island date palm, and castor bean are listed as Limited.

The following measures would be implemented to prevent the spread or infestation of invasive species:

- Invasive species within the project footprint would be removed by project construction.
- A qualified biologist shall review the project landscape/erosion control plans to ensure that no invasive species are included.
- Upon completion of grading, all areas of temporary disturbance shall be revegetated with native species or non-invasive ornamental landscaping, as appropriate.

As such, the proposed project would be implemented consistent with EO 13112 requirements.

5.5. City of San Diego MSCP

As previously discussed, the City's MSCP Subarea Plan has been prepared to meet the requirements of the California NCCP Act of 1991 and describe how the City's portion of the MSCP Preserve, the MHPA, would be implemented. The MSCP provides local jurisdictions that have approved subarea plans with incidental take coverage for a number of species.

The City's MSCP covers 85 plant and animal species, 15 of which are listed as Narrow Endemic species, which have restricted geographic distributions, soil affinities, and/or habitats. Under the MSCP, impacts to Narrow Endemic species are to be avoided to the maximum extent practicable. None of the 15 Narrow Endemic species (San Diego thornmint [*Acanthomintha ilicifolia*], Shaw's agave [*Agave shawii*], San Diego ambrosia [*Ambrosia pumila*], aphanisma [*Aphanisma blitoides*], coastal dunes milk vetch [*Astragalus tener* var. *titi*], Encinitas baccharis [*Baccharis vanessae*], snake cholla [*Cylindropuntia californica* var. *californica*], Otay tarplant [*Deinandra conjugens*], short-leaved dudleya [*Dudleya brevifolia*], variegated dudleya [*Dudleya variegata*], San Diego button-celery [*Eryngium aristulatum* var. *parishii*], spreading navarretia [*Navarretia fossalis*], Orcutt grass [*Orcuttia californica*], San Diego mesa mint [*Pogogyne*

abramsii], and Otay Mesa mint [*Pogogyne nudiuscula*]) were detected in the BSA during project surveys and impacts to Narrow Endemic species are not anticipated. Please refer to Table 2 for additional species information.

The MSCP provides the framework for local jurisdictions to obtain incidental take authority for projects processed in accordance with the requirements of the adopted MSCP Subarea Plan. This authorization allows for implementation of public projects planned by the City or potentially proposed in the future. Although potentially suitable habitat is present in the BSA for several covered species/take authorized species (Table 2), least Bell's vireo was the only covered species detected within the BSA during biological surveys, and was presumed to be passing through, not breeding. Impacts to this species are not expected. Furthermore, project implementation would not be expected to impact the local or regional survival of any MSCP covered species because of the limited impacts to native habitat, all of which would occur outside of the City's MHPA, and implementation of avoidance, minimization, and mitigation measures consistent with the City's MSCP and Biology Guidelines, as well as negative survey results within the BSA for all but one covered species.

The project alignment is outside the MHPA; however, the northern tip of the BSA is adjacent to the MHPA. As such, MSCP land use adjacency guidelines, such as water quality, lighting, noise, and invasive species, are applicable due to the presence of sensitive vegetation communities as well as sensitive plants and animals within the BSA. Potential indirect impacts from project construction could include:

- decreased water quality during construction (as discussed in Section 4.2.2.). Appropriate BMPs would be implemented during construction to address potential water quality impacts. No permanent impacts to water quality are anticipated from project construction, as the project does not have uses that would contribute pollutants;
- noise generated during construction could affect nesting birds if construction were to occur during the avian breeding season (as discussed in Sections 4.4.1, 4.4.2, and 4.4.4). If possible, construction would occur outside the avian breeding season. Nesting bird surveys would be conducted if construction must occur during the avian breeding season and buffer zones placed around active nests until the young have fledged or the nest is no longer active;
- non-native plant species colonization in previously undisturbed areas (as discussed in Sections 4.4.5.2. and 5.4). Numerous non-native plant species already occur in the BSA and no further invasion resulting from the project is anticipated. The proposed project would remove invasive species within the project footprint and revegetate disturbed areas with native species or non-invasive ornamentals; and

abramsii], and Otay Mesa mint [*Pogogyne nudiuscula*]) were detected in the BSA during project surveys and impacts to Narrow Endemic species are not anticipated. Please refer to Table 2 for additional species information.

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The project alignment is outside the MHPA; however, the northern tip of the BSA is adjacent to the MHPA. As such, MSCP land use adjacency guidelines, such as water quality, lighting, noise, and invasive species, are applicable due to the presence of sensitive vegetation communities as well as sensitive plants and animals within the BSA. Potential indirect impacts from project construction could include:

- decreased water quality during construction (as discussed in Section 4.2.2.). Appropriate BMPs would be implemented during construction to address potential water quality impacts. No permanent impacts to water quality are anticipated from project construction, as the project does not have uses that would contribute pollutants;
- noise generated during construction could affect nesting birds if construction were to occur during the avian breeding season (as discussed in Sections 4.4.1, 4.4.2, and 4.4.4). If possible, construction would occur outside the avian breeding season. Nesting bird surveys would be conducted if construction must occur during the avian breeding season and buffer zones placed around active nests until the young have fledged or the nest is no longer active;
- non-native plant species colonization in previously undisturbed areas (as discussed in Sections 4.4.5.2. and 5.4). Numerous non-native plant species already occur in the BSA and no further invasion resulting from the project is anticipated. The proposed project would remove invasive species within the project footprint and revegetate disturbed areas with native species or non-invasive ornamentals; and

- night lighting which may interfere with wildlife movement or provide predators an unnatural advantage over their prey (as discussed in Section 4.4.5.3.). The project would integrate permanent low-voltage safety lighting into the protective railing between the bikeway and the creek, and would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from the creek.

In addition, the bikeway would connect with existing bikeways to the north and south; these existing bikeways are within the MHPA. The proposed bikeway is of similar character to these bikeways, which have not conflicted with the MHPA. While SANDAG is not a signatory party to the MSCP, for the reasons summarized above, the project would conform to MHPA adjacency guidelines and project implementation would not result in impacts to the MHPA.

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Appendix A Plant Species Observed within the BSA

Appendix A
PLANT SPECIES OBSERVED WITHIN THE BSA

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
MONOCOTS			
Arecaceae	*Phoenix canariensis**	Canary Island date palm	DH, NNR, SWS
	*Washingtonia robusta**	Mexican fan palm	NNR, SRF, SWS
Asphodelaceae	*Asphodelus fistulosus**	hollow-stem asphodel	DH
Cyperaceae	*Bolboschoenus maritimus* ssp. *paludosus*	alkali bulrush	FWM, NNR
	*Cyperus involucratus**	umbrella plant	FWM, SRF, SWS
	Eleocharis macrostachya	pale spike-rush	SRF
	Schoenoplectus californicus	California bulrush	FWM
Juncaceae	*Juncus acutus* ssp. *leopoldii*†	southwestern spiny rush	NNR, SRF
Poaceae	*Arundo donax**	giant reed	NNR
	Avena sp.*	oats	DH, NNG
	*Bromus diandrus**	ripgut grass	DH, NNG, SWS
	*Bromus hordaceus**	soft chess	DH
	*Bromus madritensis**	foxtail chess	DH, NNG
	*Cortaderia selloana**	pampas grass	DCSS, EUCW, FWM, NNR, NNV, SRF, SWS
	Cynodon dactylon	Bermuda grass	SWS
	*Hordeum murinum**	barley	DH, NNG, SWS
	*Lamarckia aurea**	goldentop	DH
	*Pennisetum setaceum**	fountain grass	DH
	*Stipa miliacea**	smilo grass	DH, SWS
Typhaceae	*Typha* sp.	cattail	FWM, NNR, SRF, SWS
EUDICOTS			
Aizoaceae	*Carpobrotus edulis**	hottentot-fig	DEV, EUCW, NNG, NNV
	*Mesembryanthemum crystallinum**	crystalline iceplant	DH
Anacardiaceae	*Rhus integrifolia*	lemonadeberry	DCSS
	*Schinus terebinthifolius**	Brazilian pepper tree	NNR, NNV, SRF, SWS
	Toxicodendron diversilobum	poison oak	DCSS, EUCW, NNG, NNV, SRF, SWS
Apiaceae	*Apium graveolens**	celery	FWM, SRF, SWS

Appendix A (cont.)
PLANT SPECIES OBSERVED WITHIN THE BSA

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
EUDICOTS (cont.)			
Apiaceae (cont.)	*Conium maculatum**	poison hemlock	DH
	*Foeniculum vulgare**	fennel	DH, NNV
Asteraceae	*Ambrosia psilostachya*	western ragweed	DH, NNG, NNR
	Artemisia californica	California sagebrush	DCSS
	Artemisia palmeri†	San Diego sagewort	DCSS, DH, SWS
	Baccharis pilularis	coyote brush	DCSS, SWS
	Baccharis salicifolia	mule fat	MFS, NNR, SRF, SWS
	Baccharis sarothroides	broom baccharis	DCSS
	*Cirsium vulgare**	bull thistle	DH
	*Cotula australis**	Australian brass-buttons	DH, FWM
	*Gazania linearis**	freeway daisy	DH
	*Glebionis coronaria**	garland daisy	DH, NNG , NNV
	*Hedypnois cretica**	Crete hedypnois	SRF
	*Helminthotheca echioides**	bristly ox-tongue	DH
	Heterotheca grandiflora	telegraph weed	DH
	Isocoma menziesii	goldenbush	DCSS, DH
	*Lactuca serriola**	wild lettuce	DH
	*Osteospermum fruticosum**	African daisy	SRF
	*Senecio vulgaris**	common groundsel	DH
	*Sonchus asper**	prickly sow thistle	DH
	*Sonchus oleraceus**	common sow thistle	SRF
	Xanthium strumarium	cocklebur	FWM
Bignoniaceae	*Bignonia capreolata**	cross vine	NNR
Brassicaceae	*Hirschfeldia incana**	perennial mustard	DCSS, DH, SRF
	*Lepidium latifolium**	peppergrass	FWM, MFS, SRF
	Nasturtium officinale	water cress	SRF
	*Raphanus sativus**	wild radish	DH, SWS
	Sisymbrium sp.*	mustard	DH, NNG
Chenopodiaceae	*Atriplex semibaccata**	Australian saltbush	DH
	*Chenopodium murale**	nettle-leaf goosefoot	DH
	*Salsola tragus**	Russian thistle	DH
Cucurbitaceae	*Marah macrocarpa*	wild cucumber	SWS
Euphorbiaceae	*Euphorbia peplus**	petty spurge	DH, SRF
	*Ricinus communis**	castor-bean	DCSS, DH, FWM, NNG, SRF
Fabaceae	*Acacia* sp.*	acacia	NNV

Appendix A (cont.)
PLANT SPECIES OBSERVED WITHIN THE BSA

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
EUDICOTS (cont.)			
Fabaceae (cont.)	*Acmispon glaber*	deerweed	DCSS
	*Lathyrus odoratus**	sweet pea	DH
	*Medicago polymorpha **	bur-clover	DH, SWS
	*Melilotus albus**	white sweet clover	SRF
	*Melilotus officinalis**	yellow sweet clover	DH
	Melilotus sp.*	sweetclover	DH
Fagaceae	*Quercus agrifolia* var. *agrifolia*	coast live oak	DCSS, DH, SWS
Geraniaceae	*Erodium cicutarium**	red-stem filaree	DH
	Erodium sp.*	filaree	DH, EUCW
	*Geranium dissectum**	cut-leaf geranium	SRF, SWS
Lamiaceae	*Salvia mellifera*	black sage	DCSS
Malvaceae	*Malva parviflora**	cheeseweed	DH, NNG, SRF
Myrsinaceae	*Anagallis arvensis**	scarlet pimpernel	DH
Myrtaceae	*Callistemon viminalis**	weeping bottle brush	SWS
	Eucalyptus sp.*	eucalyptus	DCSS, DEV, EUCW, NNV
Oleaceae	*Fraxinus uhdei**	shamel ash	NNR, SRF, SWS
Onagraceae	*Epilobium ciliatum* ssp. *ciliatum*	willow herb	SRF, SWS
	Oenothera elata ssp. *hookeri*	great marsh evening-primrose	SRF, SWS
Oxalidaceae	*Oxalis pes-caprae**	Bermuda-buttercup	EUCW, SRF, SWS
Phrymaceae	*Mimulus aurantiacus*	monkey-flower	DCSS
Plantaginaceae	*Plantago lanceolata**	English plantain	FWM, SRF, SWS
Platanaceae	*Platanus racemosa*	western sycamore	DEV, SRF
Polygonaceae	*Eriogonum fasciculatum*	buckwheat	DCSS
	*Rumex crispus**	curly dock	DCSS, DH, FWM, SWS
Rubiaceae	*Galium aparine*	goose grass	DH, NNG
Salicaceae	*Populus fremontii* ssp. *fremontii*	western cottonwood	SRF, SWS
	Salix gooddingii	black willow	SRF
	Salix laevigata	red willow	SRF, SWS
	Salix lasiolepis	arroyo willow	NNR, SRF, SWS
Solanaceae	*Datura wrightii*	jimson weed	DH
	*Nicotiana glauca**	tree tobacco	DH, NNG
	*Solanum nigrum**	black nightshade	DH

Appendix A (cont.)
PLANT SPECIES OBSERVED WITHIN THE BSA

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT‡
EUDICOTS (cont.)			
Tamaricaceae	*Tamarix* sp.*	tamarisk	SWS, TS
Tropaeolaceae	*Tropaeolum majus**	garden nasturtium	DH, SRF, SWS
Ulmaceae	*Ulmus parviflora**	Chinese elm	DEV
	Ulmus sp.*	elm	NNR
Urticaceae	*Urtica urens**	dwarf nettle	DH

*Non-native species
†Sensitive species
‡Habitat acronyms: DCSS=Diegan coastal sage scrub, DEV=developed, DH=disturbed habitat, EUCW=eucalyptus woodland, FWM=freshwater marsh, MFS=mule fat scrub, NNG=non-native grassland, NNV=non-native vegetation, SRF =Southern cottonwood-willow riparian forest, SWS=southern willow scrub, TS=tamarisk scrub

Appendix B Animal Species Observed or Detected within the BSA

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED WITHIN THE BSA

SCIENTIFIC NAME	COMMON NAME
INVERTEBRATES	
Lepidoptera – Butterflies and Moths	
Brephidium exilis	western pygmy blue
Hylephila phyleus	fiery skipper
Papilio rutulus	western tiger swallowtail
Papilio zelicaon	anise swallowtail
Pontia protodice	common white
VERTEBRATES	
Reptiles	
Phrynosomatidae – Earless, Spiny, Tree, Side-blotched, and Horned Lizards	
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Birds	
Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles	
Buteo jamaicensis	red-tailed hawk
Aegithalidae – Bushtit	
Psaltriparus minimus	bushtit
Anatidae – Ducks, Geese, and Swans	
Anas platyrhynchos	mallard
Anas zonorhyncha	gadwall
Ardeidae – Bitterns, Herons, and Allies	
Ardea alba	great egret
Ardea herodias	great blue heron
Egretta thula	snowy egret
Charadriidae – Plovers and Lapwings	
Charadrius vociferus	killdeer
Columbidae – Doves	
Columba livia	rock pigeon
Zenaida macroura	mourning dove
Corvidae – Jays, Magpies, and Crows	
Aphelocoma coerulescens	western scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED WITHIN THE BSA

SCIENTIFIC NAME	**COMMON NAME**
VERTEBRATES (cont.)	
Birds (cont.)	
Emberizidae – Sparrows, Longspurs, and Emberiza Buntings	
Icterus cucullatus	hooded oriole
Melospiza melodia	song sparrow
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Falconidae – Caracaras and Falcons	
Falco sparverius	American kestrel
Fringillidae – Finches	
Carpodacus mexicanus	house finch
Carduelis psaltria	lesser goldfinch
Hirundinidae – Swallows	
Stelgidopteryx serripennis	northern rough-winged swallow
Icteridae – Orioles	
Molothrus ater	brown-headed cowbird
Mimidae – Mimic Thrushes	
Mimus polyglottos	northern mockingbird
Parulidae – Wood-warblers	
Cardellina pusilla	Wilson's warbler
Geothlypis trichas	common yellowthroat
Setophaga coronata	yellow-rumped warbler
Setophaga petechia†	yellow warbler
Setophaga townsendi	Townsend's warbler
Vermivora celata	orange-crowned warbler
Passeridae – Old World Sparrows	
Passer domesticus	house sparrow
Picidae – Woodpeckers	
Picoides nuttallii	Nuttall's woodpecker
Rallidae – Rails, Gallinules, and Coots	
Fulica americana	American coot
Sturnidae – Starlings	
Sturnus vulgaris	European starling
Timaliidae – Wrentit	
Chamaea fasciata	wrentit
Trochilidae – Hummingbirds	
Calypte anna	Anna's hummingbird

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED WITHIN THE BSA

SCIENTIFIC NAME	**COMMON NAME**
VERTEBRATES (cont.)	
Birds (cont.)	
Troglodytidae – Wrens	
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	house wren
Tyrannidae – Flycatchers	
Contopus sordidulus	western wood-pewee
Sayornis nigricans	black phoebe
Tyrannus vociferans	Cassin's kingbird
Vireonidae – Vireos	
Vireo bellii pusillus	least Bell's vireo†
Mammals	
Geomyidae – Gophers	
Thomomys bottae	Botta's pocket gopher
Leporidae – Rabbits and Hares	
Sylvilagus audubonii	desert cottontail
Procyonidae – Raccoons	
Procyon lotor	raccoon
Sciuridae – Squirrels, Chipmunks, and Marmots	
Spermophilus beecheyi	California ground squirrel

†Sensitive species

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Appendix C-1 Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Elvira to Morena Double Track/Rose Ck Bikeway City/County: San Diego/San Diego Sampling Date: May 11, 2011

Applicant/Owner: SANDAG/NCTD HELIX Job No. CHM-01.02/NAS-02 State: CA Sampling Point: 1

Investigator(s): L. Sward, S. Nigro Section, Township, Range: unsectioned lands 15S/3W - La Jolla Quad

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 1-2

Subregion (LRR): C Lat: 32°49'22.24" N Long: 117°13.42.88"W Datum:

Soil Map Unit Name: Huerhuero loam-Urban land complex, 9 to 30 percent slopes NWI classification: frshwtr frsted/scrub wtl

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ✔	No ____	

Remarks:

SP located in southern willow scrub on first bench above open water in adjacent creek. Area is USACE non-wetland WUS (photos 6-7).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=15')			
1. Baccharis salicifolia	20	X	FACW
2. Callistemon viminalis	5		UPL
3. Acacia sp.	10	X	UPL
4. Tamarix ramosissima	5		FAC
5.			
	40	= Total Cover	
Herb Stratum (Plot size: r=5')			
1. Ambrosia psilostachya	50	X	FAC
2. Foeniculum vulgare	2		FACU
3. Melilotus sp.	5		FAC
4. Cortaderia jubata	10		FAC*
5.			
6.			
7.			
8.			
	67	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1. none			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

*no indicator status. assigned as FAC based on best professional judgment.
Meets hydrophytic vegetation criterion.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100	NA	NA			lmy snd	
3-7	10YR 3/2	60	NA	NA			sdy cly lm	a lot of roots and OM
3-7	10YR 2/2	40	NA	NA			sdy cly lm	
7-15	10YR 3/3	100	NA	NA			sdy loam	slightly moist, some gravel, trash

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ✔

Remarks:

hydric soil indicators not present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ✔ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

2 secondary hydrology indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Elvira to Morena Double Track/Rose Ck Bikeway City/County: San Diego/San Diego Sampling Date: May 11, 2011

Applicant/Owner: SANDAG/NCTD HELIX Job No. CHM-01.02/NAS-02 State: CA Sampling Point: 2

Investigator(s): L. Sward, S. Nigro Section, Township, Range: unsectioned lands 16S/3W - La Jolla Quad

Landform (hillslope, terrace, etc.): terrace adjacent to creek Local relief (concave, convex, none): slightly concave Slope (%): 1-2

Subregion (LRR): C Lat: 32°49.01.78 N Long: 117°13'21.03" W Datum:

Soil Map Unit Name: Made land NWI classification: frshwtr frsted/scrub wtl

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔ No ____	
Wetland Hydrology Present?	Yes ✔ No ____	

Remarks:

SP located in southern willow scrub adjacent to open water in creek. Area is USACE wetland. (photo 13)

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix laevigata	25	X	FACW
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=15')			
1. Baccharis salicifolia	20	X	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: r=5')			
1. Typha domingensis	70	X	OBL
2. Lepidium latifolium	5		FACW
3. Apium graveolens	3		FACW
4. Melilotus sp.	5		FAC
5. Bolboschoenus maritimus ssp. paludosus	2		OBL
6. Foeniculum vulgare	5		FACU
7. Picris echioides	2		FAC
8. Cortaderia jubata	3		FAC*
	95	= Total Cover	
Woody Vine Stratum (Plot size: r=10')			
1. none			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

*no indicator status. assigned as FAC based on best professional judgment.
Meets hydrophytic vegetation criterion.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/2	90	5YR 4/6	10	C	PL	sdy loam	
14-15	2.5Y 2.5/1	97	5YR 4/6	3	C	M	sdy loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ✔ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 10"

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

1 primary and 2 secondary hydrology indicators present

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Rose Creek Bicycle Facility City/County: San Diego/San Diego Sampling Date: April 3, 2013

Applicant/Owner: SANDAG HELIX Job No. NAS-02 State: CA Sampling Point: 3

Investigator(s): S. Nigro, G. Aldridge Section, Township, Range: unsectioned lands 16S/3W - La Jolla Quad

Landform (hillslope, terrace, etc.): terrace adjacent to creek Local relief (concave, convex, none): slightly concave Slope (%): 1-2

Subregion (LRR): C Lat: 32.810171 N Long: -117.219147 W Datum:

Soil Map Unit Name: Made Land NWI classification: frshwtr frsted/scrub wtl

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✔	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:

SP located in southern willow scrub south of I-5. Area is CDFW wetland but does not meet USACE wetland or waters of the U.S. criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=20')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: r=20')			
1. Baccharis salicifolia	40	X	FAC
2. Salix lasiolepis	20	X	FACW
3. Schinus terebinthifolius	10		FAC
4.			
5.			
	70 = Total Cover		
Herb Stratum (Plot size: r=10')			
1. Raphanus sativus	20	X	UPL
2. Bromus diandrus	30	X	UPL
3. Cortaderia sp.	20	X	FACU
4. Geranium dissectum	10		UPL
5. Foeniculum vulgare	4		UPL
6. Medicago polymorpha	1		FACU
7. Oxalis pes-caprae	5		UPL
8. Tropaeolum majus	5		UPL
	100 = Total Cover		
Woody Vine Stratum (Plot size: r=10')			
1. none			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✔

Remarks:

Does not meet hydrophytic vegetation criterion.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/3	100	--	--	--	--	clay loam	
7-17	10YR 3/4	100	--	--	--	--	clay loam	cobbles present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

Hydric soil indicators not present.
(photos 19-20)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

NA

Remarks:

No hydrology indicators present.

Appendix C-2 Discussion of Jurisdictional Delineation Sampling Point Data

Appendix C-2
DISCUSSION OF JURISDICTIONAL DELINEATION SAMPLING POINT DATA

Sampling Point 1

This sampling point was located in southern willow scrub on a low terrace adjacent to open water in the main channel in the central portion of the BSA (Figures 9b and 10b). Two wetland plants (mule fat and western ragweed [*Ambrosia psilostachya*]) and one upland plant (acacia) were dominant, thus meeting the wetland vegetation criterion. A soil pit excavated to 15 inches did not reveal the presence of hydric soil indicators. Wetland hydrology was indicated by two secondary indicators: drift deposits (B3) and drainage patterns (B10). This sampling point met only two of the three USACE wetland criteria and is not USACE wetland; it is, however, USACE non-wetland WUS as well as CDFW jurisdictional habitat.

Sampling Point 2

This sampling point was located in southern willow scrub along Rose Creek, just upstream of the Santa Fe Street bridge (Figures 9c and 10c). Three wetland plants were dominant: red willow, mule fat, and southern cattail (*Typha domingensis*), thus meeting the wetland vegetation criterion. A soil pit excavated to 15 inches revealed the presence of redox dark surface (F6), thus meeting the hydric soil criterion. Wetland hydrology was indicated by one primary indicator: saturation (A3); and one secondary indicator (FAC-neutral test [D5]). This sampling point met all three USACE wetland criteria and is USACE wetland WUS, as well as CDFW jurisdictional habitat.

Sampling Point 3

This sampling point was located southern willow scrub on a terrace upslope of the main channel, and just downstream of I-5 (Figures 9c and 10c). Two wetland plants (arroyo willow and mule fat) and three upland plants (wild radish [*Raphanus sativus*], ripgut grass, and pampas grass) were dominant, therefore not meeting the wetland vegetation criterion. A soil pit excavated to 17 inches did not reveal the presence of hydric soil indicators. No primary or secondary wetland hydrology indicators were present, thus not meeting the wetland hydrology test. This sampling point is CDFW wetland but does not meet USACE wetland or waters of the U.S. criteria.

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Appendix D Explanation of Status Codes for Plant and Animal Species

Appendix D
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

FEDERAL AND STATE CODES

U.S. Fish and Wildlife Service (USFWS)

FE Federally listed endangered
FT Federally listed threatened

California Department of Fish and Wildlife (CDFW)

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

LOCAL CODES AND OTHER ABBREVIATIONS

Multiple Species Conservation Program (MSCP) Covered

MSCP covered species for which the City has take authorization within MSCP area.

MSCP Narrow Endemic (NE) Species

Some native species (primarily plants with restricted geographic distributions, soil affinities, and/or habitats) are referred to as narrow endemic species. For vernal pools and identified narrow endemic species, the MSCP will specify measures in its respective subarea plans to ensure that impacts to these resources are avoided to the maximum extent practicable.

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

California Rare Plant Rank (CRPR)

List

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

Threat Code Extension

.1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 = Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A CA Endemic entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no threat code extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

Appendix E Federal Jurisdictional Definitions

Appendix E
FEDERAL JURISDICTIONAL DEFINITIONS

Wetlands and "Waters of the U.S." Definitions

The U.S. Army Corps of Engineers (USACE; Federal Register 1982) and the Environmental Protection Agency (EPA, Federal Register 1980) jointly define wetlands as "[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory 1987).

The official definition of "Waters of the U.S." and their limits of jurisdiction (as they may apply) are defined by the USACE' Regulatory Program Regulations (Section 328.3, paragraphs [a] 1-3 and [e], and Section 328.4, paragraphs [c] 1 and 2) as follows:

All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; all waters including interstate wetlands, all other waters such as interstate lakes, rivers, streams [including intermittent streams], mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such water, which are or could be used by interstate travelers for recreation or other purposes; or from which fish or shellfish are or could be taken and sold in interstate commerce; or which are or could be used for industries in interstate commerce; or wetlands adjacent to waters [other than waters that are themselves wetlands].

Non-tidal Waters of the U.S. The limits of jurisdiction in non-tidal waters: In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or when adjacent wetlands are present, the jurisdiction extends to the limit of the adjacent wetlands.

The term ordinary high water mark (OHWM) means that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation (scouring), the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Waters of the U.S. must exhibit an OHWM or other evidence of surface flow created by hydrologic physical changes. These physical changes include (Riley 2005):

- Natural line impressed on the bank
- Shelving
- Changes in the character of soil
- Destruction of terrestrial vegetation
- Presence of litter and debris
- Wracking
- Vegetation matted down, bent, or absent
- Sediment sorting
- Leaf litter disturbed or washed away
- Scour
- Deposition
- Multiple observed flow events
- Bed and banks
- Water staining
- Change in plant community

Jurisdictional areas also must be connected to Waters of the U.S. (Guzy and Anderson 2001; U.S. Supreme Court 2001).

As a consequence of the U.S. Supreme Court decision in Rapanos v. United States, a memorandum was developed regarding Clean Water Act jurisdiction (Grumbles and Woodley 2007). The memorandum states that the EPA and the USACE will assert jurisdiction over traditional navigable waters (TNW), wetlands adjacent to TNW, tributaries to TNWs that are a relatively permanent water body (RPW), and wetlands adjacent to TNW. An RPW has year round flow or continuous seasonal flow (i.e., typically for three months or longer). Jurisdiction over other waters (i.e., non TNW and RPW) will be based on a fact specific analysis to determine if they have a significant nexus to a TNW.

Pursuant to the USACE Instructional Guidebook (USACE and EPA 2007), the significant nexus evaluation will cover the subject reach of the stream (upstream and downstream) as well as its adjacent wetlands (Illustrations 2 through 6, USACE and EPA 2007). The evaluation will include the flow characteristics, annual precipitation, ability to provide habitat for aquatic species, ability to retain floodwaters and filter pollutants, proximity of the subject reach to a TNW, drainage area, and the watershed.

Wetland Criteria

Wetland boundaries are determined using three mandatory criteria (hydrophytic vegetation, wetland hydrology, and hydric soil) established for wetland delineations and described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Following is a brief discussion of the three criteria and how they are evaluated.

Vegetation

"Hydrophytic vegetation is defined herein as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present" (Environmental Laboratory 1987).

The wetland indicator status (obligate upland, facultative upland, facultative, facultative wetland, obligate wetland, or no indicator status) of the dominant plant species of all vegetative layers is determined. Species considered to be hydrophytic include the classifications of facultative, facultative wetland, and obligate wetland as defined by Reed (1988; Table A-1). The percent of dominant wetland plant species is calculated. The hydrophytic vegetation criterion is considered to be met if it meets the "Dominance Test," "Prevalence Index," or the vegetation has morphological adaptations for prolonged inundation.

Table A-1
DEFINITIONS OF PLANT INDICATOR CATEGORIES

INDICATOR CATEGORIES	ABBREVIATION	PROBABILITY OF OCCURRING IN WETLANDS
Obligate wetland	OBL	Occur almost exclusively in wetlands (99 percent probability of occurring in a wetland).
Facultative wetland	FACW	Usually found in wetlands (67 to 99 percent probability of occurring in a wetland) but occasionally in uplands.
Facultative	FAC	Equally likely to occur in wetland (34 to 66 percent probability) or non-wetland.
Facultative upland	FACU	Usually occur in non-wetlands but occasionally found in wetlands (1 to 33 percent probability of occurring in a wetland).
Obligate upland	UPL	Occur almost exclusively in non-wetlands (1 percent probability of occurring in a wetland).

Hydrology

"The term 'wetland hydrology' encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic reducing conditions, respectively" (Environmental Laboratory 1987).

Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for at least 5 percent of the growing season during a normal rainfall year (approximately 18 days for most of low-lying southern California). Hydrology criteria are evaluated based on the characteristics listed below (USACE 2008). Where positive indicators of wetland hydrology are present, the limit of the OHWM (or the limit of adjacent wetlands) is noted and mapped. Evidence of wetland hydrology is met by the presence of a single primary indicator or two secondary indicators.

Primary

- surface water (A1)
- high water table (A2)
- saturation (A3)
- water marks (B1; non-riverine)
- sediment deposits (B2; non-riverine)
- drift deposits (B3; non-riverine
- surface soil cracks (B6)
- inundation visible on aerial imagery (B7)
- water-stained leaves (B9)
- salt crust (B11)
- biotic crust (B12)
- aquatic invertebrates (B13)
- hydrogen sulfide odor (C1)
- oxidized rhizospheres along living roots (C3)
- presence of reduced iron (C4)
- recent iron reduction in tilled soils (C6)
- thin muck surface (C7)

Secondary

- watermarks (B1; riverine)
- sediment deposits (B2; riverine)
- drift deposits (B3; riverine)
- drainage patterns (B10)
- dry-season water table (C2)
- crayfish burrows (C8)
- saturation visible on aerial imagery (C9)
- shallow aquitard (D3)
- FAC-neutral test (D5)

In the absence of all other hydrologic indicators, and in the absence of significant modifications of an area's hydrologic function, positive hydric soil characteristics are assumed to indicate positive wetland hydrology. This assumption applies unless the site visit was done during the wet season of a normal or wetter-than-normal year. Under those circumstances, wetland hydrology would not be present.

Soils

"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part" (Natural Resources Conservation Service [NRCS] 2004).

Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation. Soil matrix and mottle colors are identified at each sampling plot using a Munsell

soil color chart (Kollmorgen 1994). Generally, an 18-inch or deeper pit is excavated with a shovel at each sampling plot unless refusal occurs above 18 inches.

Soils in each area are closely examined for hydric soil indicators, including the characteristics listed below. Hydric soil indicators are presented in three groups. Indicators for "All Soils" (A) are used in any soil regardless of texture, indicators for "Sandy Soils" (S) area used in soil layers with USDA textures of loamy fine sand or coarser, and indicators for "Loamy and Clayey Soils" (F) are used with soil layers of loamy very fine sand and finer (USACE 2008).

- histosols (A1)
- histic epipedons (A2)
- black histic (A3)
- hydrogen sulfide (A4)
- stratified layers (A5)
- 1 cm muck (A9)
- depleted below dark surface (A11)
- thick dark surface (A12)
- sandy mucky mineral (S1)
- sandy gleyed matrix (S4)
- sandy redox (S5)
- stripped matrix (S6)
- loamy mucky mineral (F1)
- loamy gleyed matrix (F2)
- depleted matrix (F3)
- redox dark surface (F6)
- depleted dark surface (F7)
- redox depressions (F8)
- vernal pools (F9)
- 2 cm muck (A10)
- reduced vertic (F18)
- red parent material (TF2)

Hydric soils may be assumed to be present in plant communities that have complete dominance of obligate or facultative wetland species. In some cases, there is only inundation during the growing season and determination must be made by direct observation during that season, recorded hydrologic data, testimony of reliable persons, and/or indication on aerial photographs.

Non-wetland Waters of the U.S.

The non-wetland Waters of the U.S. designation is met when an area has periodic surface flows but lacks sufficient indicators to meet the hydrophytic vegetation and/or hydric soils criteria. For purposes of delineation and jurisdictional designation, the non-wetland Waters of the U.S. boundary in non-tidal areas is the OHWM as described in the Section 404 regulations (33 CFR Part 328).

USGS Mapping

The USGS Quad maps are one of the resources used to aid in the identification and mapping of jurisdictional areas. Their primary uses include understanding the subregional landscape position of a site, major topographical features, and a project's position in the watershed.

In our experience the designation of watercourse as a blue-line stream (intermittent or perennial) on USGS maps has been unreliable and typically overstates the hydrology of most streams. This has also been the experience of others, including the late Luna Leopold. Leopold was a hydrologist with USGS from 1952 to 1972, Professor in the Department of Geology and Geophysics, and Department of Landscape Architecture, University of California, Berkeley from 1972 to 1986, and Professor Emeritus from 1987 until his death in 2006. In regard to stream mapping on USGS maps, Dr. Leopold opined that ". . . blue lines on a map are drawn by nonprofessional, low-salaried personnel. In actual fact, they are drawn to fit a rather personalized aesthetic."

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Appendix F State Jurisdictional Definitions

Appendix F
STATE JURISDICTIONAL DEFINITIONS

California Department of Fish and Wildlife Regulations

The California Department of Fish and Game (CDFW; Department) regulates alterations or impacts to streambeds or lakes (wetlands) under Fish and Game Code Sections 1600 through 1616 for any private, state, or local government or public utility-initiated projects. The Fish and Game Code Section 1602 requires any entity to notify the Department before beginning any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers and streams as well as lakes in the state.

In order to notify the Department, a person, state, or local governmental agency or public utility must submit a complete notification package and fee to the Department regional office that serves the county where the activity will take place. A fee schedule is included in the notification package materials. Under the Permit Streamlining Act (Government Code Sections 65920 et seq.), the Department has 30 days to determine whether the package is complete. If the requestor is not notified within 30 days, the application is automatically deemed to be complete.

Once the notification package is deemed to be complete, the Department will determine whether the applicant will need a Lake or Streambed Alteration Agreement (SAA) for the activity, which will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an SAA is required, the Department will conduct an on-site inspection, if necessary, and submit a draft SAA that will include measures to protect fish and wildlife resources while conducting the project. If the applicant is applying for a regular SAA (less than five years), the Department will submit a draft SAA within 60 calendar days after notification is deemed complete. The 60-day time period does not apply to notifications for long-term SAAs (greater than five years).

After the applicant receives the SAA, the applicant has 30 calendar days to notify the Department whether the measures in the draft SAA are acceptable. If the applicant agrees with the measures included in the draft SAA, the applicant will need to sign the SAA and submit it to the Department. If the applicant disagrees with any measures in the draft SAA, the applicant must notify the Department in writing and specify the measures that are not acceptable. Upon written request, the Department will meet with the applicant within 14 calendar days of receiving

the request to resolve the disagreement. If the applicant fails to respond in writing within 90 calendar days of receiving the draft SAA, the Department may withdraw that SAA. The time periods described above may be extended at any time by mutual agreement.

After the Department receives the signed draft SAA, the Department will make it final by signing the SAA; however, the Department will not sign the SAA until it both receives the notification fee and ensures that the SAA complies with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). After the applicant receives the final agreement, the applicant may begin the project the agreement covers, provided that the applicant has obtained any other necessary federal, state and/or local authorizations.

Section 401 Water Quality Certification

Whenever a project requires a Federal Clean Water Act (CWA) Section 404 permit or a Rivers and Harbors Act Section 10 permit, it must first obtain a CWA Section 401 Water Quality Certification. The California Regional Water Quality Control Board (RWQCB) administers the 401 Certification program. Federal CWA Section 401 requires that every applicant for a Section 404 permit must request a Water Quality Certification that the proposed activity will not violate state and federal water quality standards.

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Appendix G-1 Year 2014 Coastal California Gnatcatcher Survey Report

HELIX Environmental Planning, Inc.
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La Mesa, CA 91942
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619.462.0552 **fax**
www.**helixepi**.com

May 19, 2014 NAS-02

Ms. Stacey Love
U.S. Fish & Wildlife Service
2177 Salk Ave., Suite 250
Carlsbad, CA 92008

Subject: Year 2014 Coastal California Gnatcatcher Survey Report for the Rose Creek Bicycle Facility Project

Dear Ms. Love:

This letter presents the results of a U.S. Fish and Wildlife Service (USFWS) protocol presence/absence survey conducted for the coastal California gnatcatcher (*Polioptila californica californica*; CAGN) by HELIX Environmental Planning, Inc. (HELIX) for the proposed Rose Creek Bicycle Facility Project (project). This report describes the methods used to perform the survey and the results. It is being submitted to the USFWS as a condition of HELIX's Threatened and Endangered Species Permit TE778195.

PROJECT LOCATION

The project site is located north of Mission Bay, near Interstate (I-) 5, between Balboa Avenue and State Route 52 in the City of San Diego, San Diego County (Figure 1). It would occupy a 2-mile segment stretching from the northern terminus of Santa Fe Street to the west side of Mission Bay Drive, crossing over Rose Creek. The site is situated within the Pueblo Land Grant of the U.S. Geological Survey 7.5-minute La Jolla quadrangle (Figure 2). The site is located outside the Coastal Zone and the City of San Diego's Multiple Habitat Planning Area (MHPA).

PROJECT DESCRIPTION

The proposed project represents Segment 9B of the Coastal Rail Trail (CRT), as identified in the Regional Bike Plan (RBP) and Coastal Rail Trail Project Study Report (October 2000). The CRT is a 44-mile bicycle facility extending from the City of Oceanside's San Luis Rey River Bikeway to the Santa Fe Train Depot in the City of San Diego. The proposed bicycle facility would extend a distance of approximately 2 miles from the northern terminus of Santa Fe Street to the west side of Mission Bay Drive, crossing over Rose Creek.

The alignment of the bikeway includes a combination of on- and off-road configurations. Beginning at the northern terminus of Santa Fe Street, the bicycle facility would be a Class II facility located within the existing paved area of Santa Fe Street to the bridge over Rose Creek, a distance of approximately 7,200 linear feet. More specifically, this stretch of the bikeway would consist of a 10-foot-wide cycle-track on the west side of the road to accommodate both directions of travel. The cycle-track would include a 3-foot buffer between traffic and the cycle track. Some on-street parking along the west side of Santa Fe Street may have to be eliminated to accommodate the bicycle facility.

The off-road portion of the bikeway would consist of a Class I facility, consisting of a paved 10-foot-wide cycle track with 2-foot shoulders. The off-road portion would encompass approximately 4,000 linear feet. The off-road portion would start just north of the Santa Fe bridge over Rose Creek. At this point, the facility would be located on a bridge which would parallel the existing Santa Fe Street bridge. Once across the creek, the facility would be located along the eastern bank of Rose Creek on a bench behind existing businesses fronting Santa Fe Street. The bench would be created by a cut along the east edge and a short retaining wall located along the west side. The maximum width of the bench would be 14 feet to accommodate the facility.

The bicycle facility would cross under the I-5 freeway bridge over Rose Creek. Beneath the bridge, the facility would be constructed on a structure connected to one of the bents supporting the I-5 bridge.

On the other side of the I-5 bridge, the facility would return to a bench cut into the top of the east bank of Rose Creek and an existing service road behind existing businesses. It would cross beneath the Mission Bay Drive bridge over Rose Creek, on a structure similar to the one beneath the I-5 bridge, and connect with an existing Class I bicycle facility near the intersection of Mission Bay Drive and Damon Street.

METHODS

The survey consisted of 3 site visits that were performed by HELIX biologist Jason Kurnow (TE 778195) in accordance with the current USFWS protocol (USFWS 1997). Surveys were conducted within potential CAGN habitat occurring within the Biological Study Area (BSA) established for the project (Figures 3a-c). The total area surveyed was approximately 2.4 acres. The survey was conducted on foot with the aid of binoculars. Taped CAGN vocalizations were

played for approximately 10 seconds at approximate 5-minute intervals. If a CAGN was heard before playing the tape, the tape was not played. The tape also was not played after a CAGN was detected. Table 1 details the survey locations, times, and conditions.

Table 1
SURVEY INFORMATION

DATE	BIOLOGIST	TIME (start/stop)	ACRES (ac) SURVEYED/ SURVEY RATE (ac per hour)	WEATHER CONDITIONS (start/stop)
4/2/14	Jason Kurnow Tara Baxter*	0935/1030	2.4 ac/2.6 ac	63°F, 100% cloud cover, wind 0-2 mph/ 63°F, 100% cloud cover, wind 4-7 mph.
4/9/14	Jason Kurnow	0830/1020	2.4 ac/1.3 ac	70°F, 80% cloud cover, wind 0-1 mph/ 82°F, 90% cloud cover, wind 0-1 mph.
4/16/14	Jason Kurnow Tara Baxter*	0720/0810	2.4 ac/2.9ac	66°F,100% cloud cover, wind 0-1 mph/ 67°F, 50% cloud cover, wind 0-1 mph.

* Supervised individual

VEGETATION COMMUNITIES

Seven wetland/riparian and 6 upland vegetation communities or land use types occur in the BSA (Figures 3a-c). Wetland/riparian habitats include southern riparian forest, southern willow scrub, mule fat scrub, freshwater marsh, non-native riparian, tamarisk scrub, and streambed. Upland habitats include Diegan coastal sage scrub, non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, and developed land. A brief description of each community is provided below.

Southern Riparian Forest

Southern riparian forest is composed of winter-deciduous trees that require water near the soil surface. Willow (*Salix* sp.), cottonwood (*Populus* sp.), and western sycamore form a dense medium height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mule fat, stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*; Beauchamp 1986).

This habitat occurs along portions of the Rose Creek corridor within the BSA. Species present include red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), black willow (*Salix*

gooddingii), mule fat (*Baccharis salicifolia*), and western sycamore (*Platanus racemosa*). Poison-oak (*Toxicodendron diversilobum*) is prevalent in portions of the understory. Areas within or directly adjacent to the creek support scattered cattails (*Typha* sp.), spike-sedge (*Eleocharis* sp.), water-cress (*Rorippa nasturtium-aquaticum*), and alkali bulrush (*Bolboschoenus maritimus* spp. *paludosus*). Portions of this habitat contain non-native, invasive species such as pampas grass (*Cortaderia* sp.), Mexican fan palm (*Washingtonia robusta*), Canary Island date palm (*Phoenix canariensis*), and Brazilian pepper (*Schinus terebinthifolius*). Passive restoration has been initiated in these areas to treat the non-native, invasive species.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and with scattered emergent cottonwood (*Populus fremontii*) and western sycamores. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows (Holland 1986).

This habitat occurs along Rose Creek in scattered locations, including adjacent to the three existing bridge crossings (i.e. Santa Fe Street bridge, I-5 overpass, and Mission Bay Drive bridge). Arroyo willow is the dominant species present. Other species observed include mule fat, common celery (*Apium graveolens*), curly dock (*Rumex crispus*), pampas grass, and Bermuda grass (*Cynodon dactylon*).

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat.

This habitat occurs as a single small stand of mule fat on the west side of the creek, south of the I-5 overpass.

Freshwater Marsh

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

Freshwater marsh occurs in portions of the creek south of I-5, extending to the southern tip of the BSA. Cattail is the dominant species present, with lesser coverage by alkali bulrush, common celery, and sedges (*Cyperus* sp.).

Non-native Riparian

Non-native riparian habitat consists of densely vegetated riparian thickets dominated by non-native, invasive species. Characteristic species include giant reed (*Arundo donax*), Mexican fan palm, tamarisk, Canary Island date palm, pampas grass, and eucalyptus (*Eucalyptus* sp.).

Non-native riparian occurs as a band of habitat along the creek, north and south of the I-5 overpass. Dominant species occurring in this habitat include Brazilian pepper, pampas grass, and Mexican fan palm. This area has been the focus of recent passive restoration efforts. Many of the Mexican fan palms have been treated and are dead or dying and the trunks of Brazilian pepper have been girdled but the trees are still persisting for the time being. Lower, wetter portions of this habitat support cattails and alkali bulrush beneath the non-native canopy.

Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species (*Tamarix* spp.) but may also contain other species, such as willows and pampas grass (*Cortaderia* sp.). This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage (Holland 1986).

Tamarisk scrub occurs as a single stand of tamarisk along Rose Creek north of the I-5 overpass.

Streambed

Streambed consists of non-vegetated portions of Rose Creek. This includes deeper portions of the channel, as well as the concrete-lined portion of the creek south of I-5 and upstream of the Mission Bay Drive bridge.

Diegan Coastal Sage Scrub

Coastal sage scrub is one of the two major shrub types that occur in California. This vegetation community occupies xeric sites characterized by shallow soils. Sage scrub is dominated by subshrubs whose leaves abscise during summer drought and are replaced by a lesser amount of smaller leaves. This adaptation of drought evasion allows these species to better withstand the prolonged drought period in the summer and fall in areas of low precipitation. Sage scrub species have relatively shallow root systems and open canopies. This last trait allows for the occurrence of a substantial herbaceous component in coastal sage scrub habitat. Four floristic

associations are recognized within coastal sage scrub plant formation. These associations occur in distinct geographical areas along the California coast, with the Diegan association occupying the area from Orange County to northwestern coastal Baja California, Mexico (Baja; O'Leary 1990).

Typical species observed in this community in the BSA include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and broom baccharis (*Baccharis sarothroides*).

A total of 2.4 acres of Diegan coastal sage scrub occur in the northern tip and central portion of the BSA.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. Characteristic species within this vegetation community include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut grass (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originate from the Mediterranean region, an area with a long history of agriculture and a climate similar to California.

Non-native grassland occurs in two locations within the BSA. Species present include ripgut grass, barley (*Hordeum* sp.), red brome, poison-oak, cheeseweed (*Malva parviflora*), and mustard (*Sisymbrium* sp.).

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa)*. The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range.

Eucalyptus woodland occurs in two locations within the BSA: north of I-5 adjacent to a parking lot east of the creek and in the extreme northern tip of the BSA.

Non-native Vegetation

Non-native vegetation is the name ascribed to cultivated plants such as cyclops acacia (*Acacia cyclops*), Peruvian pepper tree (*Schinus molle*), and hottentot-fig (*Carpobrotus edulis*) that have become naturalized in native habitat areas or that are remnant of previous cultivated land uses.

Non-native vegetation occurs in a single stand within the BSA, just south of I-5. This habitat consists primarily of hottentot-fig and acacia.

Disturbed Habitat

Disturbed habitat is a non-native upland habitat type that includes areas in which there is sparse vegetative cover and where there is evidence of soil surface disturbance and compaction from previous human activity and/or the presence of building foundations and debris. Vegetation within disturbed habitat will have a high predominance of non-native plant species, including exotic species recruited to the area from adjacent ornamental landscaped areas and/or ruderal (weedy) annual species that are indicators of disturbance, such as Russian thistle (*Salsola tragus*), filaree (*Erodium* sp.), garland daisy (*Glebionis coronaria*), telegraph weed (*Heterotheca grandiflora*), horehound (*Marrubium vulgare*), and sow-thistle (*Sonchus oleraceus*), among others.

Disturbed habitat occurs in scattered areas within the BSA and consists of bare areas used for parking and areas supporting a preponderance of non-native weedy vegetation, particularly garland daisy, filaree, and brass buttons (*Cotula australis*).

Urban/Developed

Urban/developed land generally includes areas that have been permanently altered due to the construction of above-ground developments such as buildings and roads, or areas where landscaping is clearly tended and maintained.

Developed land within the BSA consists of commercial and industrial development, as well as paved roads, including portions of I-5 and Santa Fe Street, Damon Avenue, and Mission Bay Drive.

RESULTS

Coastal California gnatcatcher was not observed or detected during the course of this presence/absence survey, and is currently presumed to be absent from the BSA.

CERTIFICATION

I certify that the information in this survey report and enclosed exhibit fully and accurately represents my work.

Please contact me at (619) 462-1515 if you have any questions.

Sincerely,

Jason Kurnow
Biologist

Enclosures:
Figure 1 Regional Location Map
Figure 2 Project Vicinity Map
Figure 3a-3c Vegetation Communities and Survey Route

REFERENCES

Conrad, C. Eugene. 1987. Common Shrubs of Chaparral and Associated Ecosystems of Southern California. Gen. Tech. Rep. PSW-99. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station. 86 p.

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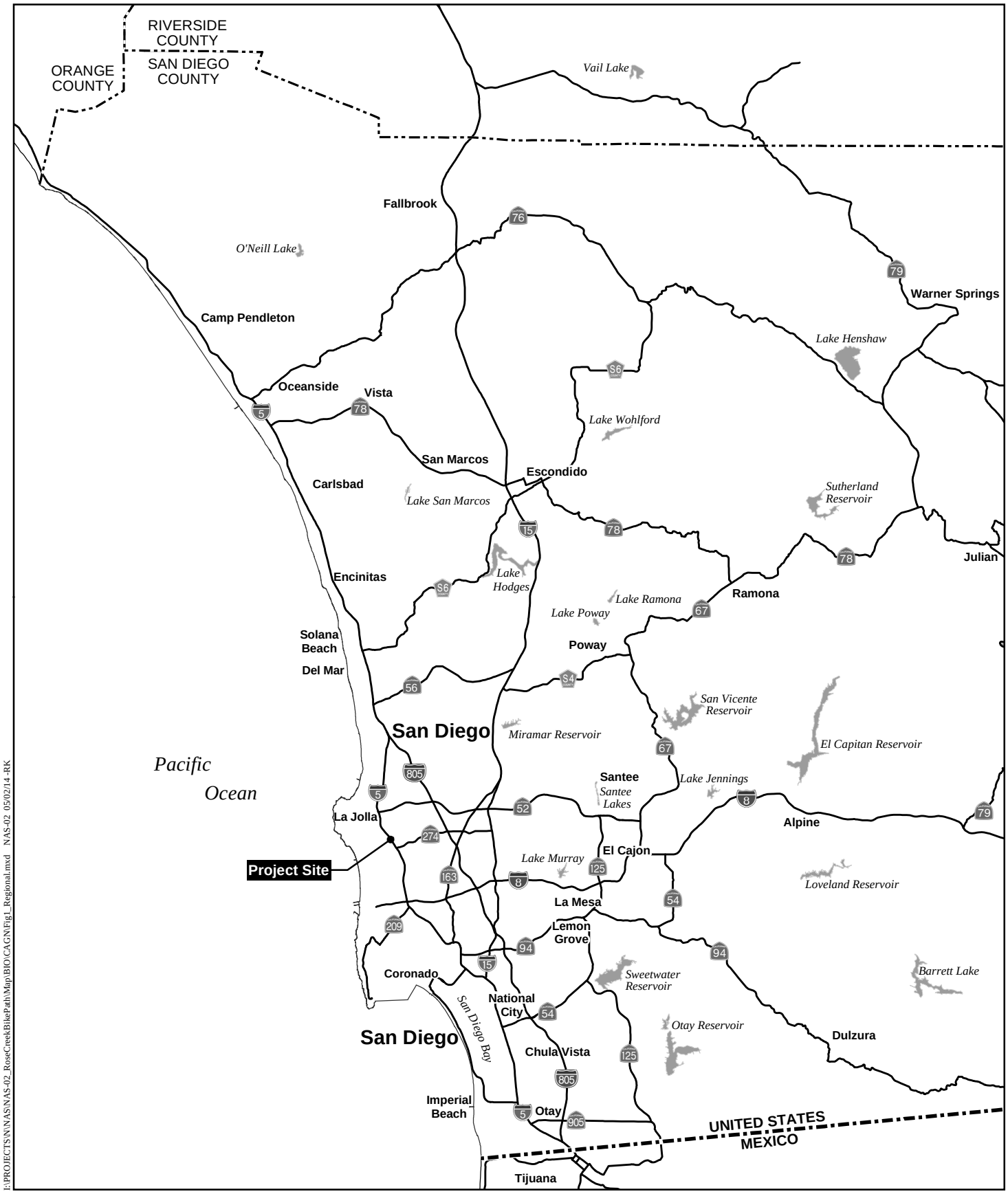
U.S. Fish and Wildlife Service (USFWS). 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. 5pp.



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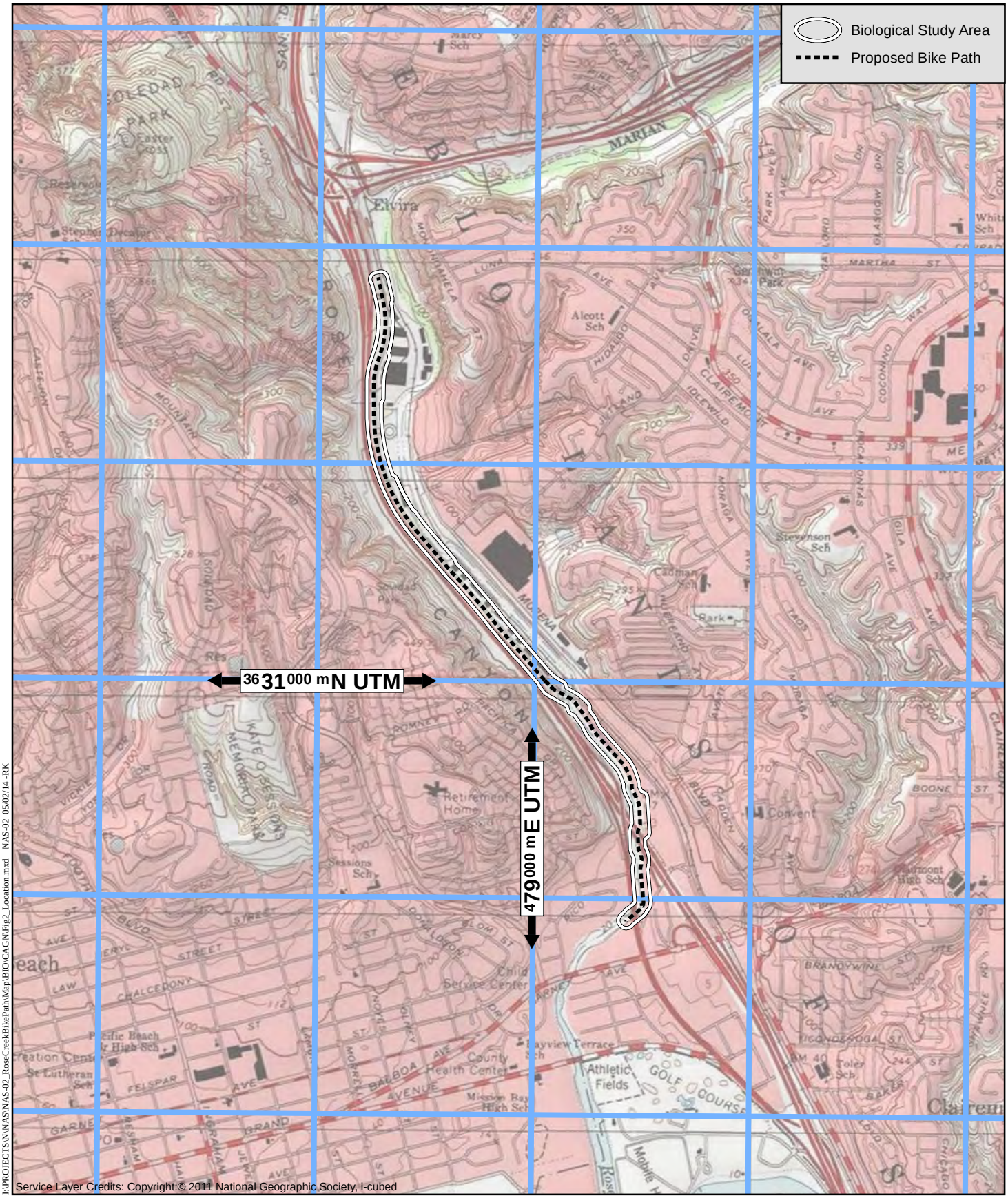
Regional Location Map

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2

Biological Study Area
Proposed Bikeway
California Gnatcatcher Survey Route

Vegetation Communities

Southern Riparian Forest
Southern Willow Scrub
Diegan Coastal Sage Scrub
Eucalyptus Woodland
Disturbed Habitat
Developed Land

5

Santa Fe Street

Ariane Drive

Morena Boulevard

Jutland Drive

Jutland Drive

Morena Boulevard

Pacifica Drive

Santa Fe Street

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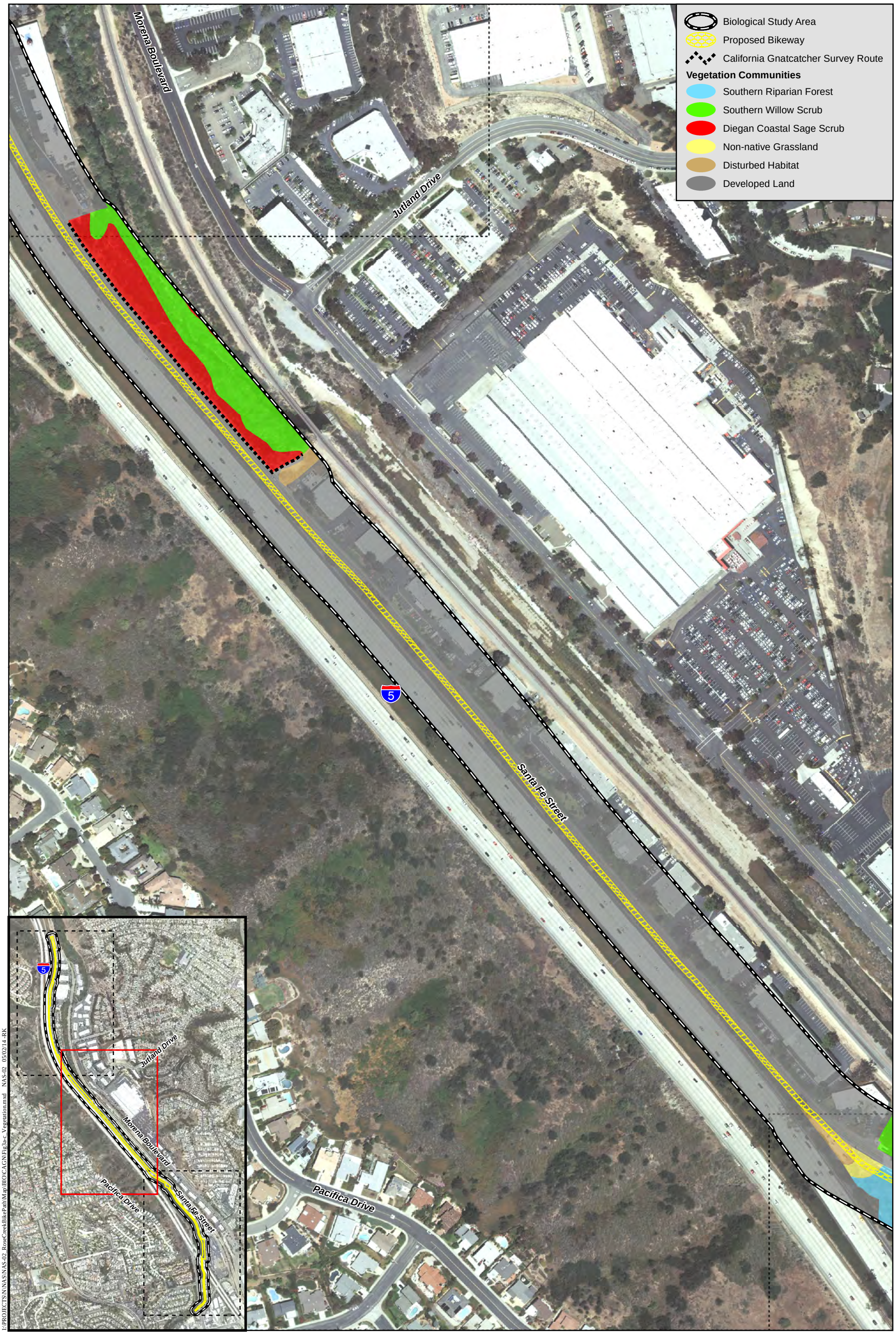
Vegetation Communites and Survey Route

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 250 Feet

Figure 3a



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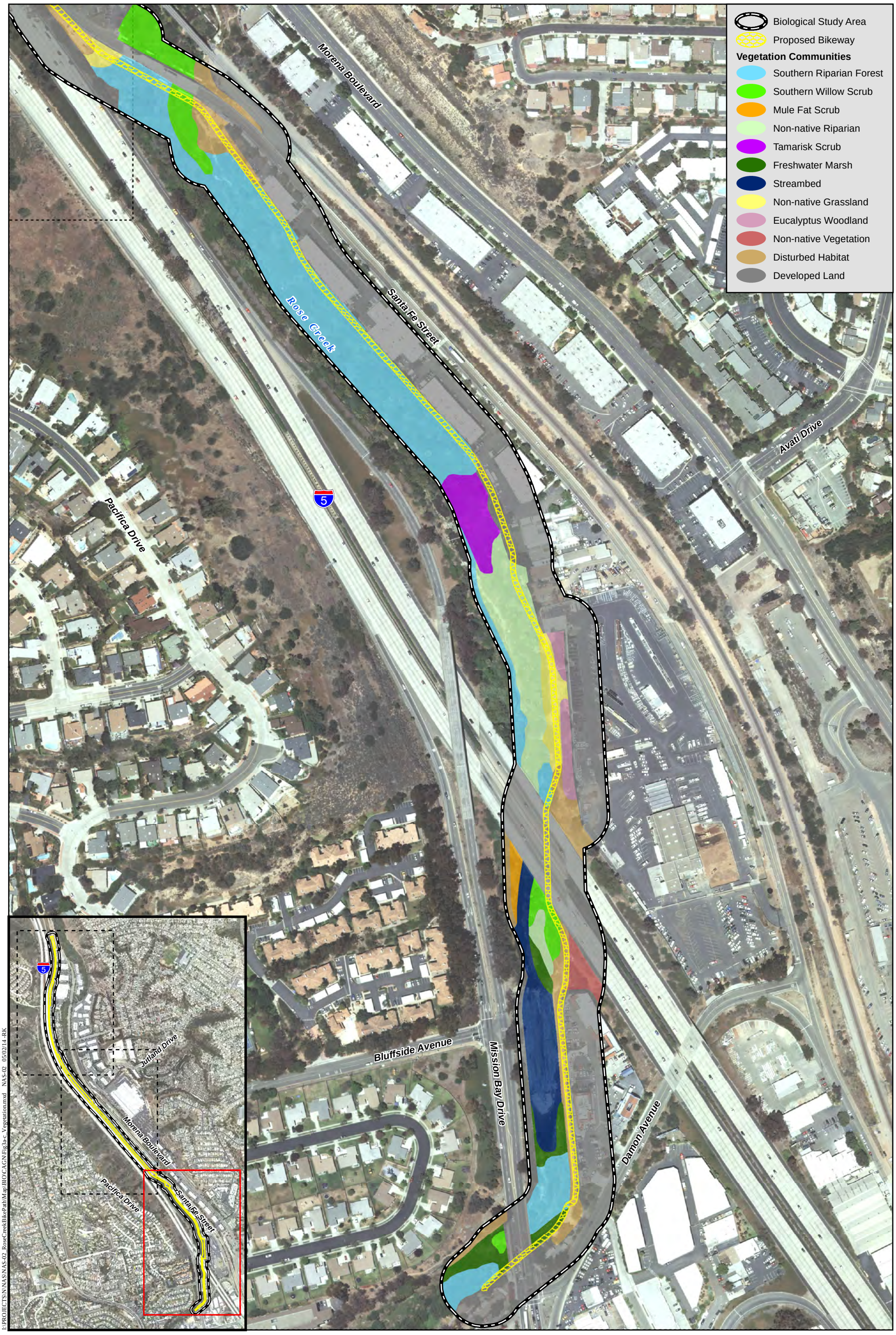
Vegetation Communites and Survey Route

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 250 Feet

Figure 3b



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Vegetation Communites and Survey Route

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 250 Feet

Figure 3c

Appendix G-2 Year 2014 Least Bell's Vireo Survey Report

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

September 4, 2014 NAS-02

Ms. Stacey Love
U.S. Fish and Wildlife Service
2177 Salk Ave., Suite 250
Carlsbad, CA 92008

Subject: 2014 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Report for the Rose Creek Bicycle Facility Project in the City of San Diego, California

Dear Ms. Love:

This letter presents the results of a U.S. Fish and Wildlife Service (USFWS) presence/absence protocol survey conducted for the least Bell's vireo (*Vireo bellii pusillus*) by HELIX Environmental Planning, Inc. (HELIX) for the Rose Creek Bicycle Facility Project (project).

The project site is located north of Mission Bay, near Interstate (I-) 5, between Balboa Avenue and State Route 52 in the City of San Diego, San Diego County, California (Figure 1). An approximately 64.2-acre Biological Study Area (BSA) was established for the project's biological resources technical study. The BSA is situated within unsectioned portions of the Pueblo Land Grant of the U.S. Geological Survey 7.5-minute La Jolla quadrangle (Figure 2). The BSA occurs within the boundaries of the adopted City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan, outside of the Multi-Habitat Planning Area (MHPA) and outside of the Coastal Zone.

The project represents Segment 9B of the Coastal Rail Trail (CRT), as identified in the Regional Bike Plan (RBP). The CRT is a 44-mile bicycle facility extending from the City of Oceanside's San Luis Rey River Bikeway to the Santa Fe Train Depot in the City of San Diego. The project would connect the currently existing Rose Creek Bicycle Path, located to the north of the project, to an existing Class I bicycle facility, located near the intersection of Mission Bay Drive and Damon Street. In total, the project would occupy a 2-mile segment stretching from the northern terminus of Santa Fe Street to the west side of Mission Bay Drive, crossing over Rose Creek.

METHODS

Eight site visits were performed according to the schedule in Table 1. The survey covered potential vireo habitat within the BSA that consists of approximately 7.9 acres of southern riparian forest, southern willow scrub, and mule fat scrub (Figure 3). Approximately 2.0 acres of non-native riparian areas and tamarisk scrub were also surveyed, although these habitat types were determined to provide only marginal habitat for vireo. The non-native riparian area with the BSA was dominated by giant reed (*Arundo donax*) and eucalyptus (*Eucalyptus* sp.). The rest of the habitat in the BSA does not have the vegetative components or structure necessary for the vireo. The surveys were conducted on foot by walking along the edges of the habitat patches. Binoculars were used when birds could not be readily identified by unaided eyesight or by sound; no recorded vireo vocalizations were played. The surveys were conducted by independent consulting biologist John Konecny and by HELIX biologists Tara Baxter and Ben Rosenbaum.

Table 1
SURVEY INFORMATION

SITE VISIT	BIOLOGIST	SURVEY DATE	START/STOP TIMES	TOTAL ACRES SURVEYED	WEATHER CONDITIONS
1	Ben Rosenbaum	4/22/14	0620-0920	Approximately 9.9 acres (3.3 acres/hour)	85%-100% overcast, 59°-63°F, wind 0-3 mph
2	Ben Rosenbaum	5/2/14	0645-0945	Approximately 9.9 acres (3.3 acres/hour)	0% clear, 63°-81°F, wind 0-3 mph
3	John Konecny	5/20/2014	0610-1040	Approximately 9.9 acres (3.3 acres/hour)	50% overcast, 59°-65°F, wind 5-7 mph
4	John Konecny	6/02/2014	0600-1025	Approximately 9.9 acres (3.3 acres/hour)	50% overcast, 62°-70°F, wind 3-5 mph
5	John Konecny	6/14/2014	0550-1000	Approximately 9.9 acres (3.3 acres/hour)	30% overcast, 62°-68°F, wind 5-7 mph
6	John Konecny	6/26/2014	0600-1010	Approximately 9.9 acres (3.3 acres/hour)	100% overcast, 65°-72°F, wind 7-10 mph
7	John Konecny	7/12/2014	0550-1000	Approximately 9.9 acres (3.3 acres/hour)	75% overcast, 67°-73°F, wind 5-10 mph
8	Tara Baxter	7/22/14	0830-1030	Approximately 9.9 acres (3.3 acres/hour)	5%-60%, 69°-75°F, wind 2-7 mph

SURVEY RESULTS

A single least Bell's vireo, assumed to be an unpaired male, was observed using two locations on either side of the existing Santa Fe Street Bridge over Rose Creek in the southern portion of the BSA (Figure 3c). Brown-headed cowbird (*Molothrus ater*) was also observed during the vireo survey (Figure 3c). In addition to least Bell's vireo, a single sensitive bird species was observed during the survey: yellow warbler (*Setophaga petechia*). A list of all animal species observed or detected is included in Attachment A.

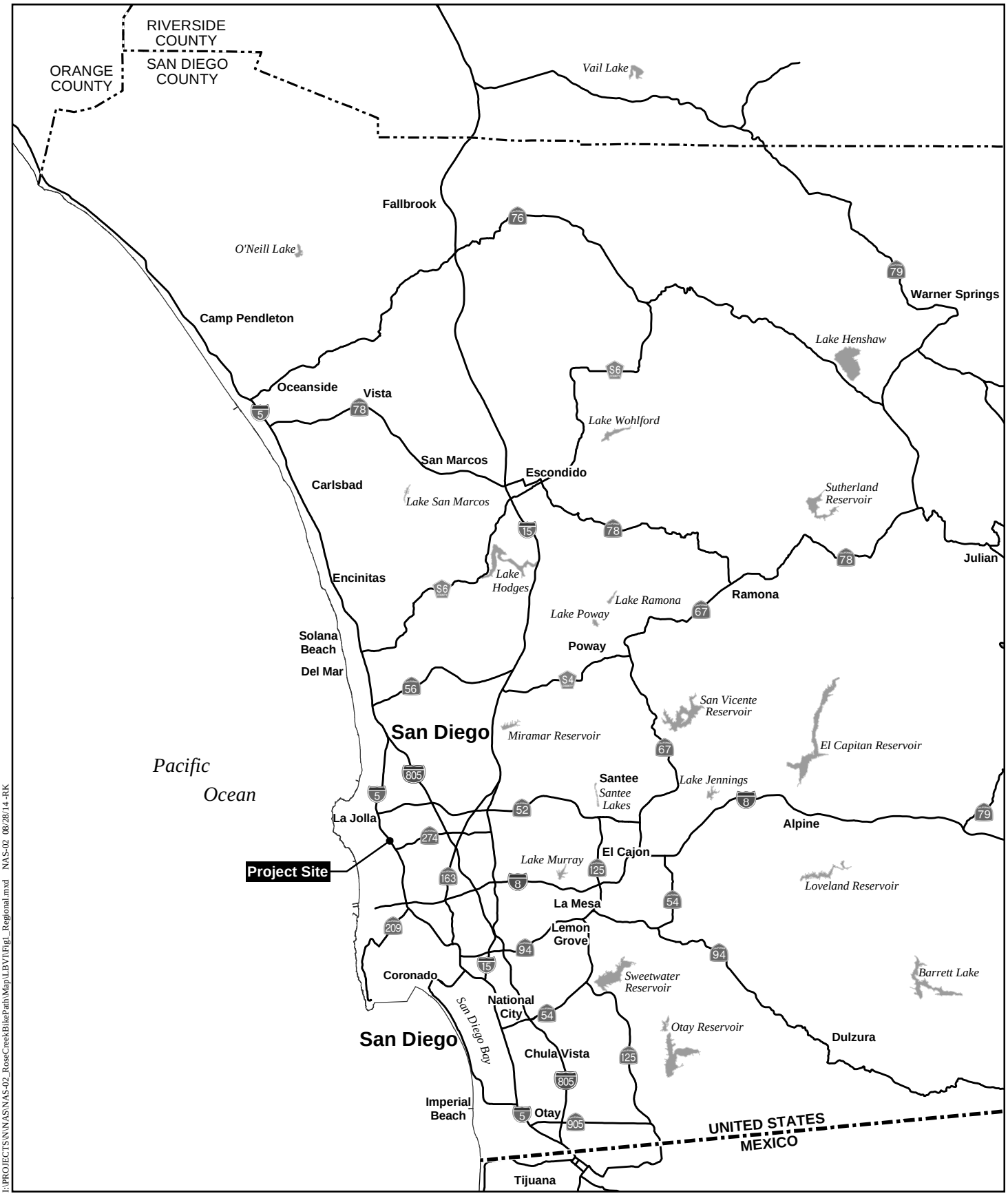
We certify that the information in this report and attached exhibits fully and accurately represent our work. Please contact us if you have any questions.

Sincerely,

John Konecny	Tara Baxter	Ben Rosenbaum
Biologist	Biologist	Biologist

Enclosures:

Figure 1	Regional Location Map
Figure 2	Project Vicinity Map (USGS Topography)
Figures 3a-3c	Least Bell's Vireo Survey Results
Attachment A	Animal Species Observed or Detected



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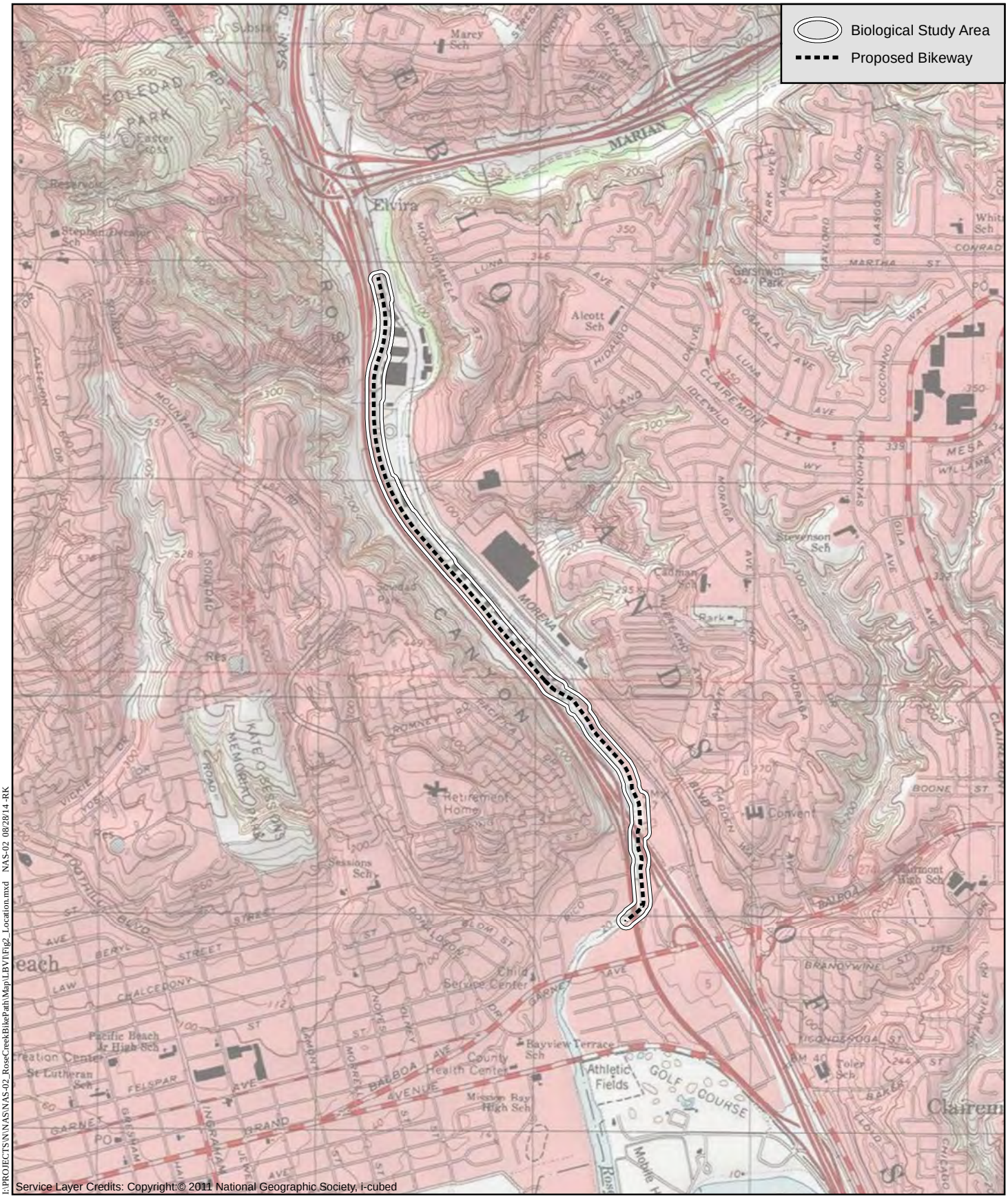
Regional Location Map

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map (USGS Topography)

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2

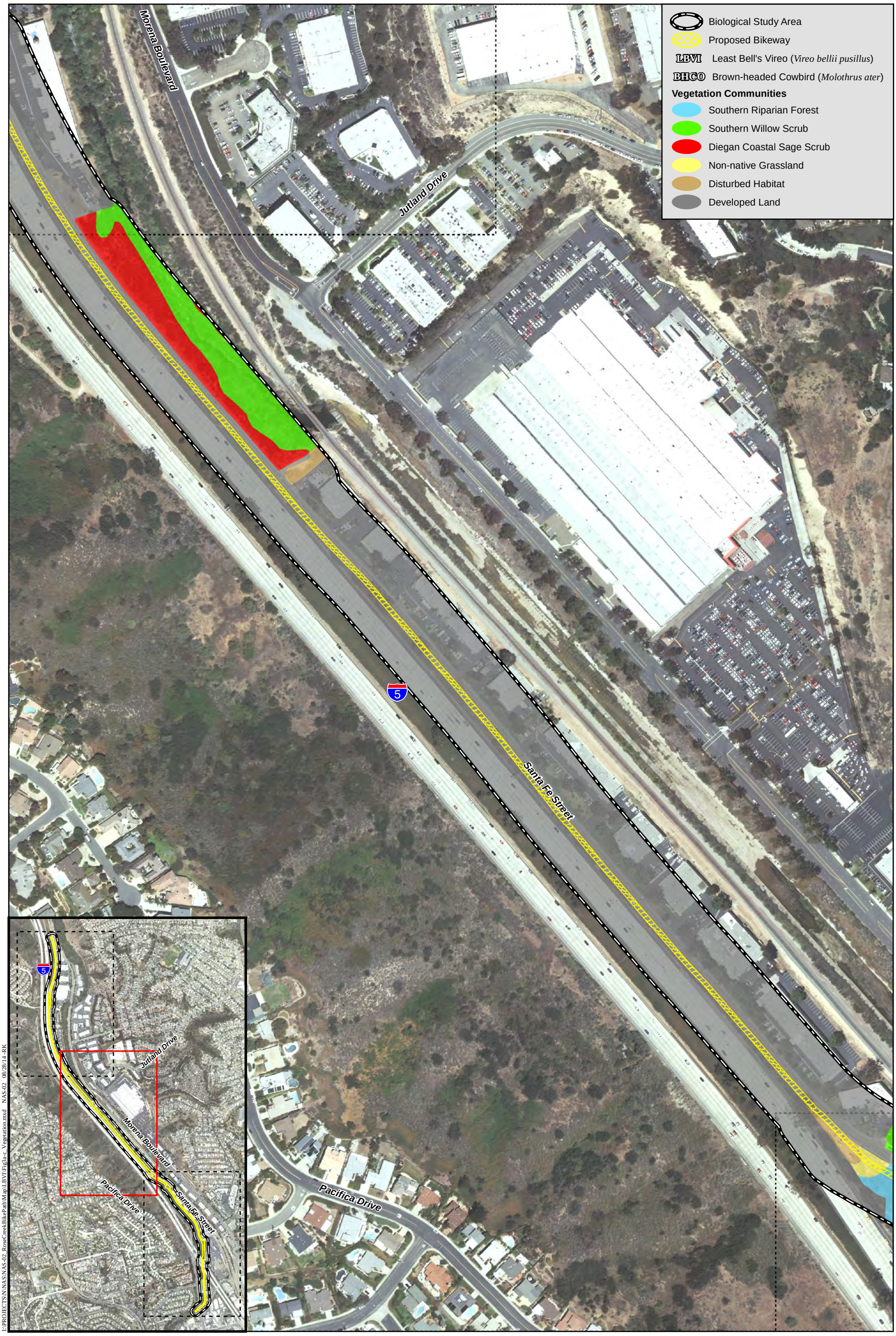
Least Bell's Vireo Survey Results

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 250 Feet

Figure 3a



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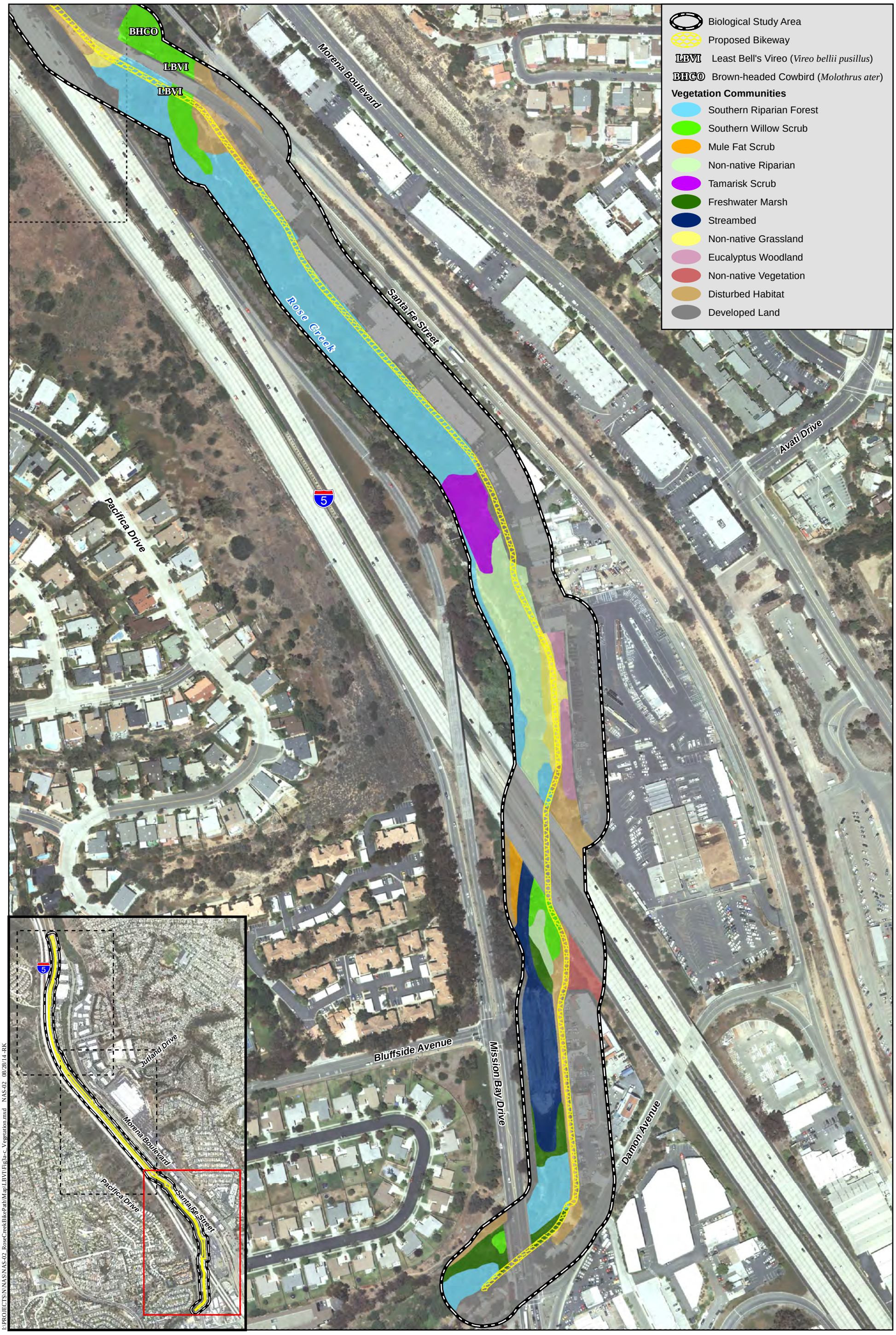
Least Bell's Vireo Survey Results

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

Figure 3b



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Least Bell's Vireo Survey Results

ROSE CREEK BICYCLE FACILITY

HELIX Environmental Planning

N 0 250 Feet

Figure 3c

Attachment A
ANIMAL SPECIES OBSERVED OR DETECTED
ROSE CREEK BICYCLE FACILITY PROJECT

TAXON		SCIENTIFIC NAME	COMMON NAME
VERTEBRATES			
Birds			
Order	Family		
Accipitriformes	Accipitridae	*Buteo jamaicensis*	Red-tailed Hawk
Anseriformes	Anatidae	*Anas platyrhynchos*	Mallard
		Anas strepera	Gadwall
Apodiformes	Trochilidae	*Calypte anna*	Anna's Hummingbird
Columbiformes	Columbidae	*Columba livia*	Rock Pigeon
		Zenaida macroura	Mourning Dove
Falconiformes	Falconidae	*Falco sparverius*	American Kestrel
Passeriformes	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Corvidae	*Aphelocoma californica*	Western Scrub-Jay
		Corvus brachyrhynchos	American Crow
		Corvus corvax	Common Raven
	Emberizidae	*Melospiza melodia*	Song Sparrow
		Melozone crissalis	California Towhee
		Pipilo maculatus	Spotted Towhee
	Fringillidae	*Carduelis psaltria*	Lesser Goldfinch
		Carpodacus mexicanus	House Finch
	Hiruninidae	*Stelgidopteryx serripennis*	Northern Rough-winged Swallow
	Icteridae	*Molothrus ater*	Brown-headed Cowbird
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Parulidae	*Cardellina pusilla*	Wilson's Warbler
		Geothlypis trichas	Common Yellowthroat
		Setophaga petechia†	Yellow Warbler
		Setophaga townsendi	Townsend's Warbler
		Vermivora celata	Orange-crowned Warbler
	Passeridae	*Passer domesticus*	House Sparrow
	Sturnidae	*Sturnus vulgaris*	European Starling
	Timaliidae	*Chamaea fasciata*	Wrentit
	Troglodytidae	*Thryomanes bewickii*	Bewick’s Wren
		Troglodytes aedon	House Wren

Attachment A (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
ROSE CREEK BICYCLE FACILITY PROJECT

TAXON		**SCIENTIFIC NAME**	**COMMON NAME**
VERTEBRATES (cont.)			
Birds (cont.)			
Order	Family		
Passeriformes	Tyrannidae	*Contopus sordidulus*	Western Wood-Pewee
		Sayornis nigricans	Black Phoebe
		Tyrannus vociferans	Cassin's Kingbird
	Vireonidae	*Vireo bellii pusillis*†	Least Bell's Vireo
Pelecaniformes	Ardeidae	*Ardea alba*	Great Egret
		Ardea herodias	Great Blue Heron
		Egretta thula	Snowy Egret
Piciformes	Picidae	*Picoides nuttallii*	Nuttall's Woodpecker

†Sensitive Species

Appendix G-3 Year 2014 Southwestern Willow Flycatcher Survey Report

Konecny Biological Services
Biological Consulting, Research, Conservation

August 11, 2014

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, California, 91942

Attn: Ms. Shana Rodriguez

Re: Results of a Focused Survey for the Southwestern Willow Flycatcher at the Rose Creek Bicycle Path Project Site, City of San Diego, San Diego County, California, 2014.

Dear Ms. Rodriguez:

This letter report presents the results of a focused survey for the southwestern willow flycatcher (*Empidonax traillii extimus*) (flycatcher) at the Rose Creek Bicycle Path project site in the City of San Diego, San Diego County, California. The flycatcher is listed as an endangered species by the United States Fish and Wildlife Service (USFWS). The California Department of Fish and Wildlife (CDFW) has listed the willow flycatcher (*E. traillii*) as an endangered species; thus, the entire species, not just the *E.t. extimus* subspecies is protected under the California Endangered Species Act.

No flycatchers were detected during the 2014 surveys. Surveys for the flycatcher were conducted following protocol approved by the USFWS (Sogge et al 2010). The surveys were conducted by wildlife biologist John Konecny, and authorized by USFWS section 10(a) permit number TE837308-6, and a CDFW Memorandum of Understanding (MOU).

INTRODUCTION

The flycatcher is a small, insectivorous passerine that migrates north in the spring from South America, Mexico, and Central America, to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. The flycatcher has a grayish-green back, whitish throat, pale yellowish belly, and two white wingbars. The flycatcher occurs in riparian woodland habitat that is characterized by a dense growth of willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), arrowweed (*Pluchea* sp.), buttonbush (*Cephalanthus* sp.), cottonwood (*Populus fremontii*), sycamore (*Plantanus racemosa*), and tamarisk (*Tamarix* sp.). In addition to willow riparian woodland, the flycatcher also nests in coast live oak (*Quercus agrifolia*) woodland on the upper San Luis Rey River, San Diego County, California; in dense stands of tamarisk on the lower Colorado River, Imperial and Riverside Counties, California; and in stands of mixed willow and white alder (*Alnus rhombifolia*) on Mill Creek in San Bernardino County, California. Surface water or saturated soils are usually present in or adjacent to nesting thickets.

The flycatcher is one of the rarest birds in San Diego County. Loss and degradation of breeding habitat has been the greatest contributor to the decline of the flycatcher in California. Habitat conversion for agricultural purposes has removed much of the original riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the flycatcher as well as other riparian birds. The significant reduction in the population size and range of the southwestern subspecies of willow flycatcher lead to the flycatcher being federally listed as endangered in March 1986 (USFWS 1995). The willow flycatcher was listed by the State of California as endangered in 1990.

PROJECT LOCATION

The Rose Creek Bicycle Path site is located north of Mission Bay Park in the City of San Diego (Figure 1). The majority of the site lies immediately east of Interstate-5 and west of Santa Fe Street. Just north of Garnet Avenue, the right-of-way crosses under Interstate-5 and continues southwest to its downstream terminus at Mission Bay Drive.

PROJECT SITE DESCRIPTION

Rose Creek is a north to south running creek at the bottom of Rose Canyon in the western portion of the City of San Diego. A mosaic of habitats is present, beginning with southern riparian forest, characterized by black willow (*Salix gooddingii*), red willow (*S. laevigata*), *arroyo* willow (*S. lasiolepis*) and mule fat, with sycamore and cottonwood mixed in. Poison oak (*Toxicodendron diversilobum*) is present in the understory. The southern riparian forest transitions southward into tamarisk scrub and open water before transitioning back to southern riparian forest at its southern terminus. Rose Creek is channelized between Interstate-5 and Mission Bay Drive.

The length of the bicycle path project is approximately 4,000 feet (1,220 meters). Elevation of the Rose Creek Bicycle Path site is approximately 20-40 feet (6-12 meters) above mean sea level.

METHODS

Pursuant to USFWS protocol, five focused flycatcher surveys were conducted in appropriate habitat at the Rose Creek Bicycle Path site between May 20th and July 12th, 2014. The surveys were conducted by walking slowly along the riparian habitat and stopping at approximately 50-foot (15-meter) intervals and listening for flycatchers. If flycatchers were not detected passively, a digital vocalization (call-prompt) of the species was played for approximately 20 seconds with an iPod player and amplified speakers and a response was listened for. If flycatchers were not detected, this procedure was repeated once again before proceeding to the next station. Surveys were typically initiated prior to 0600, and lasted approximately four hours. A summary of the environmental conditions on the five survey dates is provided in Table 1 below.

Table 1. Summary of Weather Conditions During Five Southwestern Willow Flycatcher Surveys at the Rose Creek Bicycle Path Project Site in 2014.

Survey #	Date	Surveyor (Species)*	Time	Weather Conditions
1	05/20/2014	JK (SWWF)	0610-1040	50% overcast, 59-65°F, wind 5-7 mph
2	06/02/2014	JK (SWWF)	0600-1025	50% overcast, 62-70°F, wind 3-5 mph
3	06/14/2014	JK, (SWWF)	0550-1000	30% overcast, 62-68°F, wind 5-7 mph
4	06/26/2014	JK (SWWF	0600-1010	100% overcast, 65-72°F, wind 7-10 mph
5	07/12/2014	JK (SWWF	0550-1000	75% overcast, 67-73°F, wind 5-10 mph

* JK-John Konecny; SWWF-Southwestern Willow Flycatcher

RESULTS

No southwestern willow flycatchers or other willow flycatcher subspecies were detected in 2014. No other endangered or threatened species were detected. One bird species detected during the surveys, the yellow warbler (*Dendroica petechia*) is considered to be a California Species of Special Concern by CDFW. A total of 29 species of birds were detected during the survey (Table 2).

DISCUSSION

No southwestern willow flycatchers were detected during the 2014 surveys. There are records of breeding flycatchers (southwestern subspecies) in the general vicinity of western Mission Valley to the south (Unitt 2004). The closest current breeding records are from the San Diego River at the upper end of El Capitan Reservoir, approximately nine miles (14 kilometers) to the east. Potential flycatcher breeding habitat is present on the Rose Creek Bicycle Path site, particularly in the upper reach.

CERTIFICATION

I certify that the information in this survey report and attached exhibits fully and accurately represents my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFG. If you have any questions or require additional information, please call me at (760) 489-5276.

Sincerely,

John K. Konecny
Wildlife Biologist
TE837308-6

REFERENCES CITED

Sogge, M.K., Ahlers, Darrell, and S.J. Sferra. 2010. *A natural history summary and survey protocol for the southwestern willow flycatcher*. U.S. Geological Survey Techniques and Methods 2A-10. 38 p.

Unitt, P. 2004. San Diego Bird Atlas. Proceedings of the San Diego Society of Natural History. Ibis Publishing Company. 639pp.

USFWS. 1995. Endangered and Threatened Wildlife and Plants: Determination of Endangered Status for the Southwestern Willow Flycatcher. Fed. Reg. 60:10693-10715.

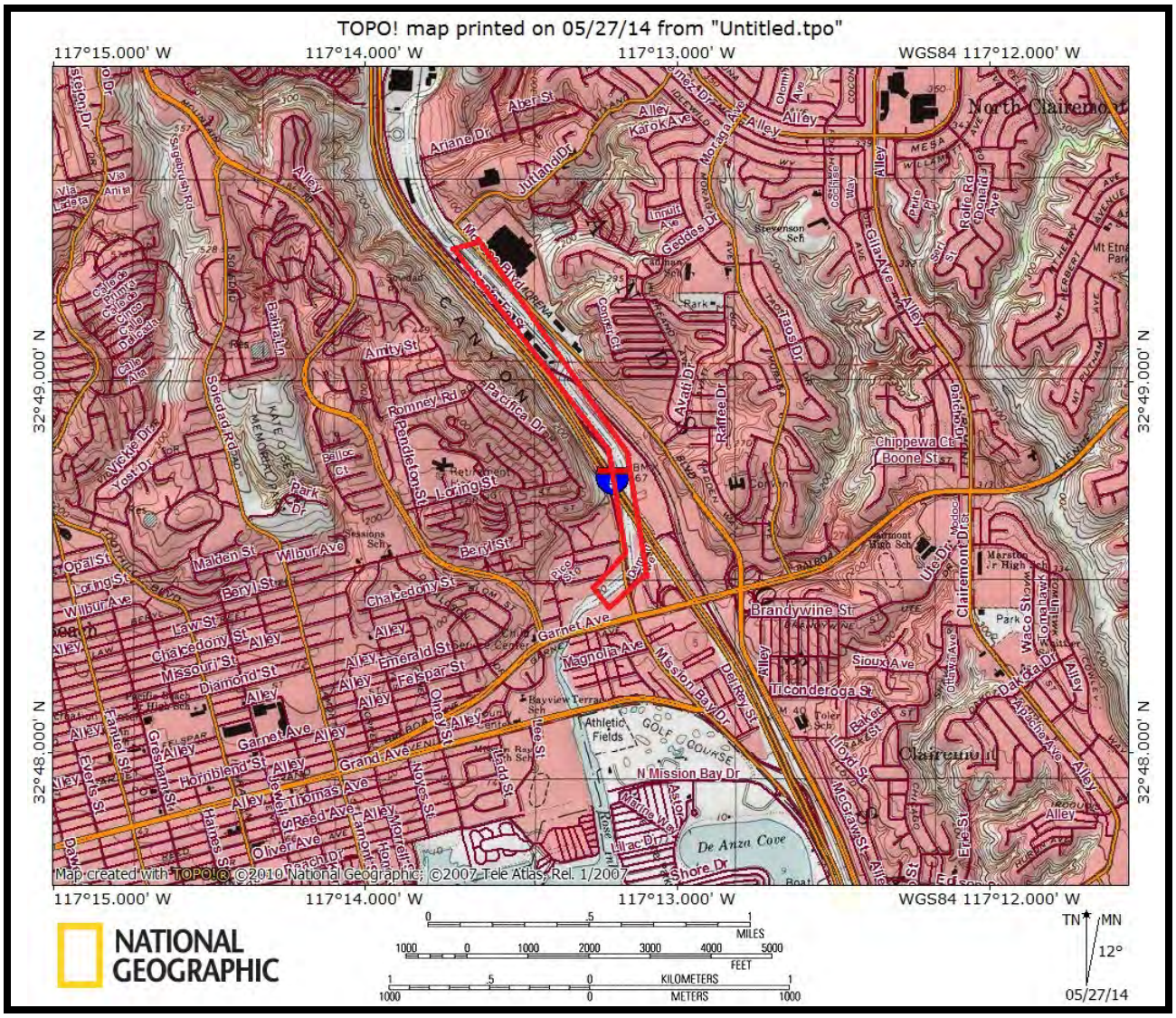

Figure 1. **Location of the Rose Creek Bicycle Path Project Site (survey area in red), City of San Diego, San Diego County, California, 2014.**

Table 2. Bird Species Detected During Five Surveys of Riparian Habitat at the Rose Creek Bicycle Path Project Site, City of San Diego, San Diego County, 2014.

Class Aves	
Family Anatidae	
Mallard	*Anas platyrhynchos*
Gadwall	*Anas zonorhyncha*
Family Ardeidae	
Great Blue Heron	*Ardea herodias*
Great Egret	*Ardea alba*
Snowy Egret	*Egretta thula*
FamilyAccipitridae	
Red-tailed Hawk	*Buteo lineatus*
Family Falconidae	
American Kestrel	*Falco sparverius*
Family Columbidae	
Mourning Dove	*Zenaida macroura*
Rock Pigeon	*Columba livia*
Family Trochilidae	
Anna's Hummingbird	*Calypte anna*
Family Picidae	
Nuttall's Woodpecker	*Picoides nuttallii*
Family Tyrannidae	
Western Wood Pewee	*Contopus sordidulus*
Black Phoebe	*Sayornis nigricans*
Cassin's Kingbird	*Tyrannus vociferus*
Family Corvidae	
Common Raven	*Corvus corax*
American Crow	*Corvus brachyrhynchos*
Family Hirundinidae	
Northern Rough-winged Swal	*Stelgidopteryx serripennis*
Family Aegithalidae	
Bushtit	*Psaltiparus minimus*
Family Troglodytidae	
Bewick's Wren	*Thryomanes bewickii*
Family Mimidae	

Northern Mockingbird	*Mimus polyglottos*
Family Parulidae	
Common Yellowthroat	*Geothlypis trichas*
Orange-crowned Warbler	*Vermivora celata*
Yellow Warbler	*Dendroica petechia*
Family Emberizidae	
Spotted Towhee	*Pipilo maculates*
California Towhee	*Pipilo crassalis*
Song Sparrow	*Melospiza melodia*
Family Icteridae	
Brown-headed Cowbird	*Molothrus ater*
Family Fringillidae	
Lesser Goldfinch	*Carduelis psaltria*
House Finch	*Carpodacus mexicanus*