



Initial Study - Appendix B

NATURAL ENVIRONMENT STUDY
(MINIMAL IMPACTS)



Bayshore Bikeway Segment 8B Project Natural Environment Study

(Minimal Impacts)

Along Bay Boulevard between Palomar Street and the main entrance to South Bay
Salt Works in the Cities of San Diego and Chula Vista, San Diego County

Federal Project No. RPSTPLE-6066(102)

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STATE OF CALIFORNIA
Department of Transportation/District 11
San Diego Association of Governments

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Summary

This Natural Environment Study (Minimal Impacts) (NES [MI]) was prepared to evaluate the proposed Bayshore Bikeway Segment 8B project (herein referred to as proposed project) located in the cities of San Diego and Chula Vista, San Diego County. The project would partially fill a gap in the regional bicycle network and contribute to the vision of implementing the Bayshore Bikeway, which consists of a 24-mile regional bicycle facility around San Diego Bay to provide more transportation options and a scenic connection to employment centers, recreation facilities, and tourist destinations along the Bayfront.

The San Diego Association of Governments (SANDAG) proposes to construct a portion of the planned Bayshore Bikeway along the eastern San Diego Bayfront in the cities of San Diego and Chula Vista. The proposed project includes a portion of the Bayshore Bikeway identified within Segment 8B of the *Bayshore Bikeway Plan* (dated March 17, 2006). The proposed project would consist of a Class I bikeway, which is a path that provides a separated right-of-way for the exclusive use of people walking and riding bikes, extending southward approximately 0.25 mile along the west side of Bay Boulevard from the terminus of Segment 8A at Palomar Street in the City of Chula Vista to the main driveway of the South Bay Salt Works facility in the City of San Diego. The proposed bikeway would include an eight-foot-wide bike path with two to three-foot-wide shoulders. The bike path would cross over a drainage ditch near Palomar Street on a bridge structure, and from Palomar Street to Ada Street, it would be constructed as a cantilevered deck over the western side of an existing drainage ditch that runs adjacent to the west side of Bay Boulevard. South of Ada Street, the bike path would be constructed at grade. Additional improvements would include installation of a new storm drain inlet and culvert just north of Palomar Street, curb and gutter, chain link fencing along the west side of the bike path, railing along the east side of the deck, lighting, minor grading, bike lane striping, utilities improvements and relocations, and other improvements as required by the cities of San Diego and Chula Vista and SANDAG.

The 6.86-acre study area for this NES(MI), herein referred to as the Biological Study Area (BSA), consists of an approximately 135-foot-wide corridor along Bay Boulevard from Palomar Street to just past the main entrance to the South Bay Salt Works Facility. The BSA contains developed land, including the Bay Boulevard roadway, South Bay Salt Works, and frontages of commercial properties; disturbed land on vacant properties, and portions of the South Bay Salt Works; vegetated drainage ditches, an inactive railroad corridor that was previously part of the Coronado Belt Line, and utility poles and overhead electrical power lines. The BSA contains five natural communities of concern: coastal brackish marsh, freshwater marsh, herbaceous wetland, open water, and non-native grassland. Potential jurisdictional resources in the BSA include coastal brackish marsh, freshwater marsh, herbaceous wetland, open water, and streambed. No special status plant or animal species were documented in the BSA.

Project impacts (temporary and permanent) would occur to three sensitive natural communities in the BSA, including coastal brackish marsh, open water, and non-native grassland (Table S-1). Mitigation for temporary impacts to coastal brackish marsh and open water is proposed to occur at a 1:1 ratio while permanent impacts are proposed to be mitigated at a 2:1 ratio. Mitigation would occur through off-site restoration, enhancement, and/or establishment with a minimum 1:1 establishment component, or purchase of credits at an approved mitigation bank. No mitigation for temporary impacts to non-native grassland is proposed because impacts would be temporary and limited to small isolated areas within construction staging areas on privately owned parcels characterized by vacant land interspersed with disturbed habitat and surrounded by development. Final mitigation requirements for project impacts would be determined in consultation with the resource agencies.

Table S-1: Vegetation Communities Impacts and Mitigation Summary (acre)*				
VEGETATION COMMUNITY	IMPACT TYPE	IMPACT	MITIGATION RATIO†	REQUIRED MITIGATION†
Coastal Brackish Marsh	T	0.22	1:1	0.22
Coastal Brackish Marsh	P	0.07	2:1	0.14
Open Water	T	0.003	1:1	0.003
Open Water	P	0.002	2:1	0.004
Non-native Grassland	T	0.38	--	0
TOTAL		0.68	--	0.37

*Rounded to the nearest 0.01; thus, total reflects rounding

T=Temporary impacts; P=Permanent impacts

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

The proposed project would result in temporary impacts to 0.22 acre and permanent impacts to 0.07 acre of potential U.S. Army Corps of Engineers (USACE) jurisdictional areas, temporary impacts to 0.24 acre and permanent impacts to 0.10 acre of potential California Department of Fish and Wildlife (CDFW) jurisdictional areas, and temporary impacts to 0.24 acre and permanent impacts to 0.10 acre of potential California Coastal Commission (CCC) jurisdictional areas (Table S-2). Mitigation ratios are anticipated to range from 1:1 to 2:1, with a total mitigation obligation of approximately 0.37 acre for impacts to USACE jurisdictional areas, 0.40 acre for impacts to CDFW jurisdictional, and 0.40 acre for impacts to CCC jurisdictional areas. Final mitigation requirements for impacts to jurisdictional areas would be determined in consultation with the resource agencies.

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 Regional Water Quality Control Board. Impacts to CDFW jurisdictional areas would require a California Fish and Game Code Section 1602 Streambed Alteration Agreement from CDFW. Impacts to CCC jurisdictional areas would require issuance of a Coastal Development Permit (CDP) from the CCC and the City of Chula Vista. While a portion of the BSA is located

within the City of San Diego, it is located within an area of the City of San Diego that does not have an approved Local Coastal Program and therefore a CDP from the CCC would be required.

Table S-2: Jurisdictional Area Mitigation Summary (acre)*

HABITAT	IMPACT TYPE	MITIGATION RATIO†	USACE		CDFW		CCC	
			Impact	Mitigation	Impact	Mitigation	Impact	Mitigation
Coastal Brackish Marsh	T	1:1	0.22	0.22	0.22	0.22	0.22	0.22
Coastal Brackish Marsh	P	2:1	0.07	0.14	0.07	0.14	0.07	0.14
Open Water	T	1:1	0.003	0.003	0.003	0.003	0.003	0.003
Open Water	P	2:1	0.002	0.004	0.002	0.004	0.002	0.004
Streambed	T	--	--	--	0.02	--	0.02	--
Streambed	P	1:1	--	--	0.03	0.03	0.03	0.03
TOTAL			0.30	0.37	0.35	0.40	0.35	0.40

*Rounded to the nearest 0.01; thus, totals reflect rounding

T=Temporary impacts; P=Permanent impacts

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

1 - Introduction

History

The Bayshore Bikeway is a 24-mile bicycle facility around the San Diego Bay beginning at the Broadway Pier in the City of San Diego and ending at the Coronado Ferry Terminal in the City of Coronado. The Bayshore Bikeway passes through the cities of San Diego, National City, Chula Vista, Imperial Beach, and Coronado. This regional bicycle corridor is incomplete and currently exists as a combination of Class I off-street bike paths and on-street Class II and III bike lanes and routes. Approximately 15 miles of bike paths have been built to date and the rest of the facility consists of on-street sections designated as either bicycle lanes or bicycle routes. The objective is to construct a continuous Class I bike path in accordance with the *Bayshore Bikeway Plan* (dated March 17, 2006) that would allow people to ride bicycles or walk all the way around San Diego Bay on a dedicated path separated from city streets. The proposed project would help close the gap between two existing Class I segments of the Bayshore Bikeway (Segments 8A and 9).

Project Purpose and Need

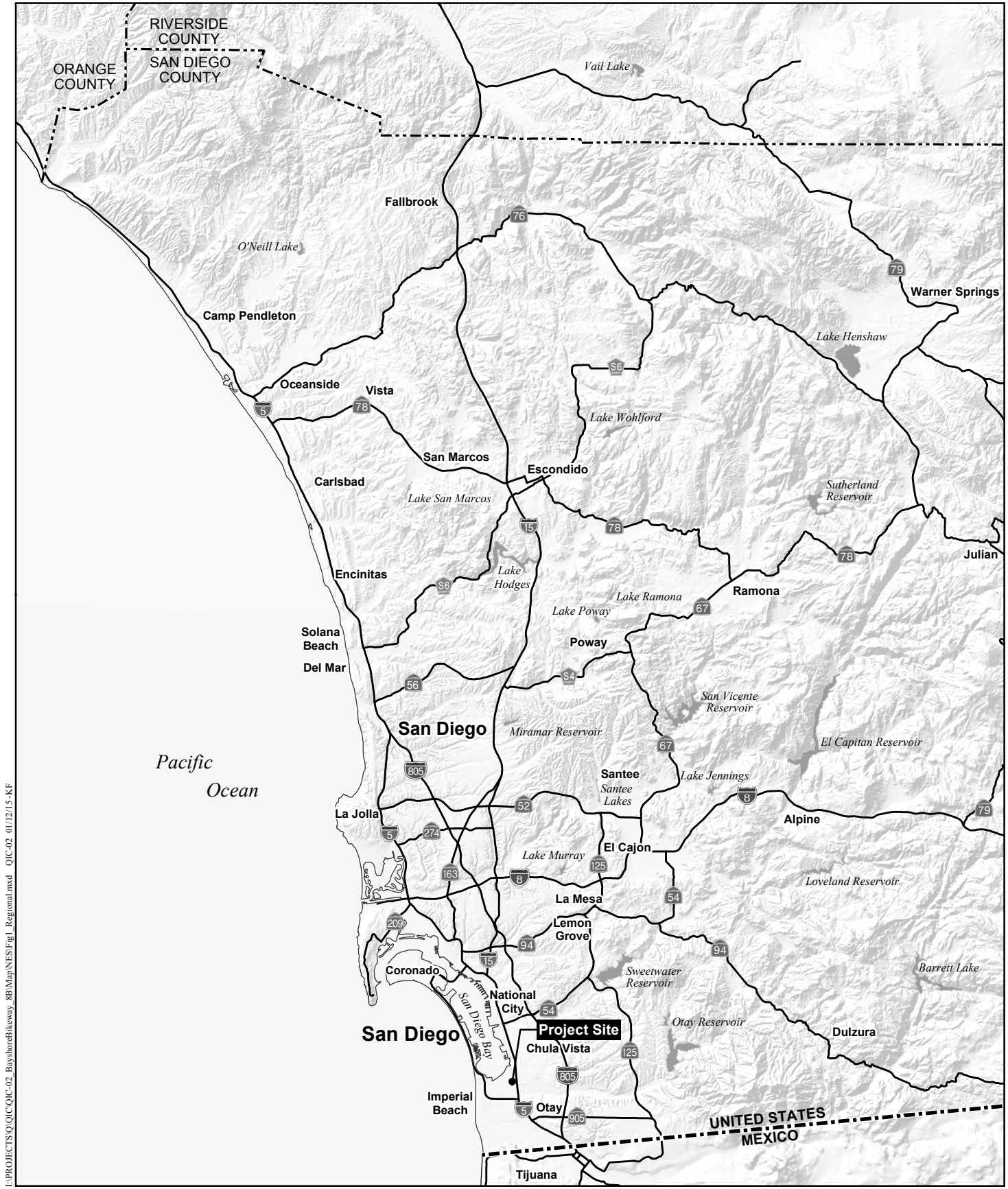
The proposed project would partially fill a 0.8-mile gap in the existing regional bicycle network. The project will contribute to the vision of the Bayshore Bikeway Plan, which consists of construction of a 24-mile bicycle facility around San Diego Bay to provide more transportation options and a scenic connection to employment centers, recreation facilities, and tourist destinations along the Bayfront. The project is anticipated to provide more transportation options and encourage the use of bicycles and walking as alternatives to driving, and, thus, is anticipated to result in a net decrease in air emissions within the region.

Project Description

The project site is generally located in the southwestern portion of San Diego County (Figure 1). More specifically, the project site is located within a 6.86-acre Biological Study Area (BSA) located west of Interstate 5 (I-5), extending from Palomar Street to the main entrance to the South Bay Salt Works facility in the Cities of San Diego and Chula Vista (Figure 2). The BSA occupies a portion of Section 16 within Township 18 South, Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute Imperial Beach quadrangle (Figure 3). The BSA is located within the Coastal Overlay Zone and partially within the City of San Diego's Multiple Habitat Planning Area (MHPA; [Figure 4]).

The San Diego Association of Governments (SANDAG) proposes to construct a Class I bikeway facility in the south San Diego Bay area. The proposed Class I facility, which is a path that provides a separated right-of-way for the exclusive use of people walking and riding bikes, is a portion of Segment 8B of the Bayshore Bikeway as described in the *Bayshore Bikeway Plan* dated March 17, 2006. The proposed project would extend a distance of approximately 0.25 mile adjacent to Bay Boulevard between Palomar Street in the City of Chula Vista and the main entrance to the South Bay Salt Works facility in the City of San Diego (Figure 5). The proposed project would help close the gap between two existing Class I facilities, Bayshore Bikeway Segment 8A and Bayshore Bikeway Segment 9, and would contribute to the vision of implementing the Bayshore Bikeway, which consists of a 24-mile regional bicycle facility around San Diego Bay to provide more transportation options and a scenic connection to employment centers, recreation facilities, and tourist destinations along the Bayfront.

The proposed project would extend southward along Bay Boulevard from Palomar Street over an existing drainage ditch near Palomar Street and continue over the drainage ditch adjacent to Bay Boulevard and just east of inactive railroad tracks previously part of the Coronado Belt Line to the main driveway of the South Bay Salt Works facility. The proposed bikeway would include an eight-foot-wide bike path with two to three-foot-wide shoulders. The bike path would cross over the drainage ditch near Palomar Street on a bridge structure, and from Palomar Street to Ada Street, it would be constructed as a cantilevered deck over the western side of the existing drainage ditch that runs adjacent to the west side of Bay Boulevard. South of Ada Street, the



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Regional Location Map

BAYSHORE BIKEWAY SEGMENT 8B



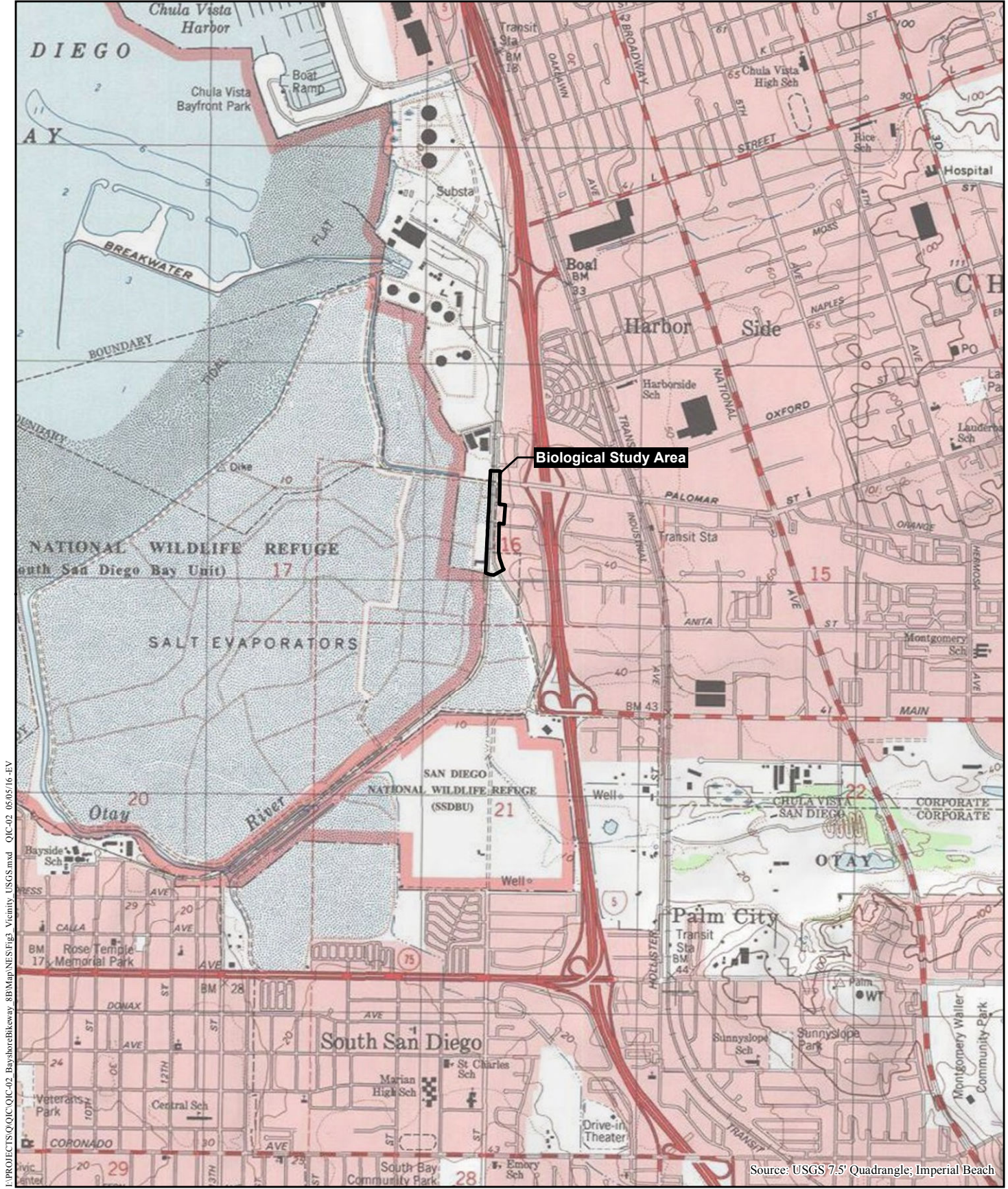
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Project Vicinity Map (Aerial Photograph)

BAYSHORE BIKEWAY SEGMENT 8B



Figure 2



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Source: USGS 7.5' Quadrangle; Imperial Beach

Project Vicinity Map (USGS Topography)

BAYSHORE BIKEWAY SEGMENT 8B

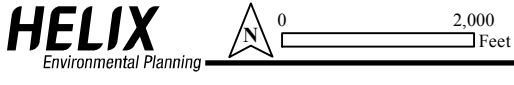
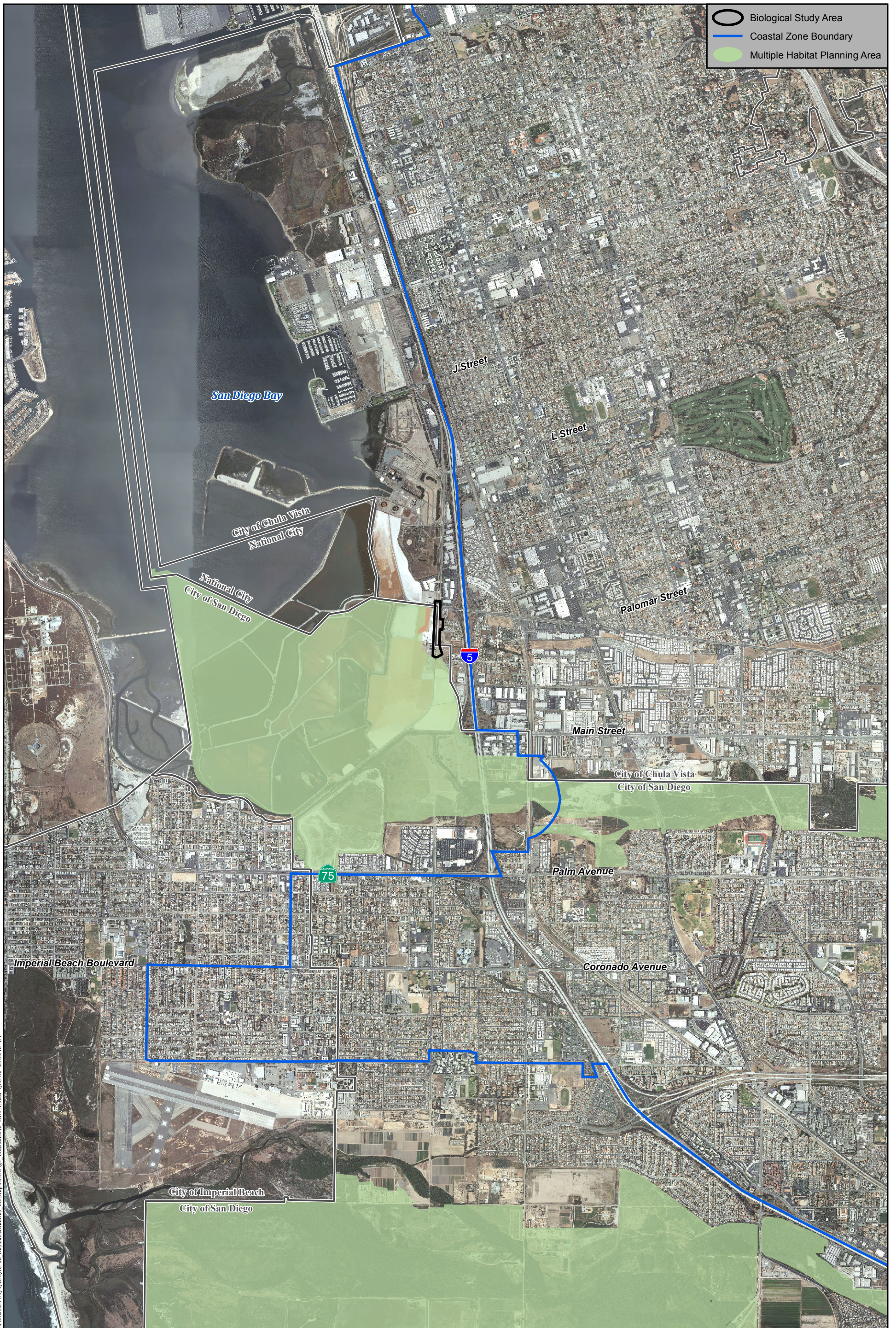


Figure 3







Coastal Zone and MHPA

BAYSHORE BIKEWAY SEGMENT 8B

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-  Biological Study Area
-  Project Alignment
-  Drainage Inlet and Pipe
-  Proposed Curb

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Site Plan

BAYSHORE BIKEWAY SEGMENT 8B

bike path would be constructed at grade on disturbed land. Additional improvements would include installation of a new storm drain inlet and culvert just north of Palomar Street, curb and gutter, chain link fencing along the west side of the bike path, railing along the east side of the deck, lighting, minor grading, bike lane striping, utilities improvements and relocations, and other improvements as required by the cities of San Diego and Chula Vista and SANDAG.

To accommodate the proposed project, acquisition of a portion of one narrow, linear, privately owned parcel adjacent to the west side of Bay Boulevard would be required. This property is mostly undeveloped and contains a vegetated drainage ditch, utility poles and overhead electrical power lines, and disturbed areas between Bay Boulevard and San Diego and Arizona Eastern railroad right-of-way.

Construction of the project is estimated to occur in 2017 and take approximately seven months to complete. Staging is anticipated to occur on vacant property on the east side of Bay Boulevard between Stella Street and Ada Street. Construction access would be provided via Bay Boulevard.

2 - Study Methods

This chapter discusses the methods used to document general biological resources and to assess impacts to special status species and/or their habitats potentially occurring within the BSA.

Regulatory Requirements

Biological resources within the BSA are subject to regulatory administration by the federal and state governments. SANDAG is the lead agency for the California Environmental Quality Act (CEQA) environmental review process in accordance with state law. The California Coastal Commission (CCC) and City of Chula Vista are Responsible Agencies. Regulatory requirements relevant to the project are discussed below.

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 NES(MI) has been prepared in compliance with FHWA guidelines, as the project will receive 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.

The U.S. Army Corps of Engineers (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. Linear transportation projects, such as the proposed project, may be authorized under CWA Section 404 Nationwide Permit (NWP) 14, which does not place a limit on impacts to linear feet of WUS, only on acreage. The proposed project activities are anticipated to require a CWA Section 404 permit from the San Diego Section of the Los Angeles District USACE. The proposed activities would be considered consistent with those covered under NWP 14 for Linear Transportation Projects if impact acreage thresholds of one-half acre for non-tidal waters and one-third acre for tidal waters are not exceeded. Notification to the USACE through the preparation of a Pre-Construction Notification (PCN) requesting authorization under NWP 14 is expected to be required. 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.

Administered by the U.S. Fish and Wildlife Service (USFWS), the federal Endangered Species Act (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. 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. Under Section 7, federal agencies must consult with the USFWS when any action the agency carries out, funds, or authorizes (such as through a permit) may affect a listed endangered or threatened species. This process usually begins as an informal consultation when the federal agency requests to initiate the Section 7 consultation. Discussions between the two agencies typically include what types of listed species may occur in the proposed action area and what effect the proposed action may have on those species. If it is determined through the informal consultation that the proposed action is not likely to affect any listed species in the project area, the Section 7 consultation is complete. If it is determined, however, that the proposed action is likely to adversely affect a listed species, a formal consultation is initiated. A Biological Assessment is required for any major construction activity if it may affect listed species, and take can then 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. Critical habitat is

designated by the USFWS when a species is listed pursuant to the federal ESA. 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.

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 stipulate specific measures of protection. In common practice, the MBTA is used to place restrictions on disturbance of active bird nests during the nesting season (generally February 15 to August 31). The USFWS has statutory authority and responsibility to enforce the MBTA. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

State of California

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 that 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 hectare (ha; 1.0 acre) 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.

The CCC, through provisions of the California Coastal Act, is authorized to issue a Coastal Development Permit (CDP) for projects located within the Coastal Zone. In areas where a local entity has a certified Local Coastal Program (LCP), the local entity can issue a CDP only if it is consistent with the LCP. The CCC, however, has appeal authority for portions of LCPs and retains jurisdiction over certain public trust lands and in areas without an LCP. The BSA is within the Coastal Zone (Figure 4) and project approval would require issuance of a CDP from the CCC and the City of Chula Vista. While a portion of the BSA is located within the City of San Diego, it is located within an area of the City of San Diego that does not have an approved LCP and therefore a CDP from the CCC would be required.

Multiple Species Conservation Program – Cities of Chula Vista and San Diego

The Multiple Species Conservation Program (MSCP) is a multi-jurisdictional planning program designed to develop an ecosystem preserve within San Diego's incorporated and unincorporated areas. Preserve areas identified under the MSCP are identified as the

Multi-Habitat Planning Area (MHPA) in the City of San Diego and as Conservation Areas in the City of Chula Vista.

In accordance with the City of San Diego's Land Development Code, the City's Environmentally Sensitive Lands (ESL) regulations defines sensitive biological resources as those lands included within the MHPA, 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. Impacts to ESL typically require a Site Development Permit (SDP). City of San Diego 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.

The BSA is located within the MSCP planning area and portions of the BSA are within the City of San Diego's MHPA. The portions of the BSA located within the City of Chula Vista are located within a Development Area pursuant to Chula Vista's MSCP Subarea Plan, outside of any Conservation Area (City of Chula Vista 2003).

However, SANDAG is not a signatory of the MSCP, and are therefore not subject to the City of San Diego's MHPA adjacency guidelines or the MSCP mitigation ratios.

Studies Required

The following studies were conducted within the BSA: vegetation mapping; general botanical and zoological surveys; rare plant survey; and jurisdictional delineation.

Literature Search

In addition to conducting biological surveys, a review of existing literature and biological databases was conducted to identify the existence or potential occurrence of special-status biological resources (e.g., plants, animals, and vegetation communities) in or within the vicinity of the BSA. Special-status species are those that are federally and/or state-listed, proposed for listing, or candidate species (CDFW 2015a); species listed as species of concern by the CDFW Special Animals List (CDFW 2015b) and Special Plants List (CDFW 2015c); and/or those species with a California Rare Plant Ranking (CRPR).

Databases reviewed consisted of the following:

- California Natural Diversity Data Base (CNDDDB) information (Version 5 [CDFW 2015a]), which is administered by the CDFW. This database covers special-status plant and animal species, as well as special-status natural communities that occur within California. Species information for the U.S. Geological Survey (USGS) 7.5-minute *Imperial Beach, California*; *National City, California*; and *Point Loma, California* topographic quadrangles was reviewed.

- The California Native Plant Society's (CNPS) On-Line Inventory of Rare and Endangered Plants of California (Version 8-02, CNPS Inventory [2015]).
- The San Diego Natural History Museum's San Diego County Plant Atlas online searchable database (SDNHM 2015).

Additionally, the USFWS's Information, Planning, and Conservation (IPAC) System website was used to generate a list species to be considered in the effects analysis for the project (USFWS 2015b).

Nomenclature for this report is from Baldwin et al. (2012), the CNPS (2015), Holland (1986), and Oberbauer (2008) for vegetation communities; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2013) for birds; and Baker et al. (2003) for mammals. Sensitive plant species status is taken from CNPS (2015). Sensitive animal species status is taken from CDFW's CNDDDB (2015).

Field Reviews and Survey Methods

General Biological Survey and Vegetation Mapping

A general biological survey, including vegetation mapping, was conducted by LSA Associates, Inc. biologists Jaime Morales and Dan Rosie on January 23 and 30, 2012 and May 22, 2013 (Table 1). This previous survey was conducted within the BSA as well as additional areas to the south because a bike path was previously proposed to extend to Main Street to connect with the existing Bayshore Bikeway Segment 9. HELIX biologists Stacy Nigro and Laura Moreton conducted a general biological survey and vegetation mapping for the BSA on July 30, 2014 (Table 1), which also included the BSA and the same additional areas to the south that were part of the study area surveyed for the earlier surveys conducted in 2012 and 2013. Data collected by LSA Associates was used as a baseline for the 2014 survey (LSA Associates 2013a). The 2014 survey was conducted to verify conditions and results of the 2012 and 2013 surveys. Vegetation was mapped on a 1"=100'-scale aerial photograph. The BSA was surveyed on foot with the aid of binoculars, and 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. 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 of San Diego'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 using ArcGIS 9.2.

Rare Plant Survey

A rare plant survey was conducted in the BSA on May 31, 2012 and May 22, 2013 by LSA Associates, Inc. biologists, and on June 24, 2014 by HELIX biologist Amy Mattson (Table 1). These rare plant surveys were conducted within the BSA as well as additional areas to the south because a bike path was previously proposed to extend to Main Street to connect with the existing Bayshore Bikeway Segment 9. 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.

Jurisdictional Delineation

HELIX biologists conducted a jurisdictional delineation of the BSA on July 30, 2014 (Table 1). This previous survey was conducted within the BSA (refer to Figure 3) as well as additional areas to the south because a bike path was previously proposed to extend to Main Street to connect with the existing Bayshore Bikeway Segment 9. Data collected by LSA Associates on February 2, 2012 and May 22, 2013 was used as a baseline for the jurisdictional delineation. Prior to beginning fieldwork, aerial photographs (1"=100' scale), topographic maps (1"=100' scale), and previous jurisdictional delineation results from LSA Associates, Inc. (LSA Associates 2013b) were reviewed to determine the location of potential jurisdictional areas that may be affected by the proposed project. The 2014 jurisdictional delineation was conducted to verify conditions and results of the jurisdictional delineation conducted 2012 and 2013.

Areas with depressions or drainage channels were evaluated for the presence of potential 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.

Potential 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.

Potential CCC jurisdictional boundaries were determined based on the “one-parameter” definition, which only requires evidence of a single parameter to establish wetland conditions: “Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate” (CCR Title 14, Section 13577).

Wetland affiliations of plant species follow the National Wetland Plant List (Lichvar 2014) for data collected in 2014. 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).

Personnel and Survey Dates

A list of survey personnel and dates of surveys is provided in Table 1.

Table 1: Survey Information		
Survey Date(s)	Personnel/Qualifications¹	Purpose
2012		
January 23	J. Morales and D. Rosie	General biological survey, vegetation mapping, jurisdictional delineation
January 30	J. Morales and D. Rosie	General biological survey, vegetation mapping, jurisdictional delineation
February 2	J. Morales and D. Rosie	Jurisdictional delineation
May 31	J. Morales and D. Rosie	Rare plant survey
2013		
May 22	J. Morales and D. Rosie	General biological survey, vegetation mapping, jurisdictional delineation, rare plant survey
2014		
June 24	A. Mattson	Rare plant survey
July 30	S. Nigro and L. Moreton	General biological survey, vegetation mapping, jurisdictional delineation

¹J. Morales – B.S. in Environmental Systems, and over 9 years of experience as a biologist in California.
 D. Rosie – B.S. in Environmental, Population, and Organismic Biology, and over 10 years of experience as a biologist in California.
 A. Mattson – B.S. Biology, M.S. Marine Biology, and over 14 years of experience as a biologist in California.
 S. Nigro – B.S. Forest Resources and Conservation, and over 10 years of experience as a biologist in California.
 L. Moreton – B.S. Biology, M.S. Biodiversity Survey, and over 7 years of experience as a biologist in California.

Agency Coordination and Professional Contacts

A site visit to review the proposed project location and discuss the initial project design was conducted on April 8, 2011. Attendees included representatives from USFWS, CDFW, Caltrans, SANDAG, South Bay Salt Works, and the consultant team.

Coordination with the USFWS occurred in June 2014 for access to survey areas near the salt evaporation ponds and the San Diego Bay National Wildlife Refuge.

A site visit to review the proposed alignment and discuss the project design was conducted on April 25, 2016. Attendees included representatives from USFWS, CDFW, CCC, Caltrans, SANDAG, and the consultant team.

Limitations That May Influence Results

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

3 - Results: Environmental Setting

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

Description of the Existing Biological and Physical Conditions

Study Area

The approximately 6.86-acre BSA consists of an approximately 135-foot-wide corridor along Bay Boulevard from Palomar Street to just past the main entrance to the South Bay Salt Works Facility. The BSA contains developed land, including the Bay Boulevard roadway, South Bay Salt Works, and frontages of commercial properties; disturbed land on vacant properties and portions of the South Bay Salt Works; vegetated drainage ditches; an inactive railroad corridor that was previously part of the Coronado Belt Line; and utility poles and overhead electrical power lines.

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). Topography within the BSA is relatively flat, with elevations ranging from approximately 4 to 27 feet above mean sea level (refer to Figure 3).

A series of roadside earthen ditches comprising an unnamed drainage are situated adjacent to Bay Boulevard in the BSA, each with multiple reaches connected by culverts. These ditches connect downstream to San Diego Bay to the west of the BSA, and ultimately the Pacific Ocean. The roadside ditches on the west side of Bay Boulevard, as well as the northern portion of the ditch on the east side of Bay Boulevard (just south of Ada Street) in the BSA appear to be subject to tidal influence based on elevation, representative plant species, and proximity to the San Diego Bay. These wetland areas within the BSA, which total 0.34 acre, are considered to be tidally influenced.

A total of two soil types are mapped within the study area: Huerhuero loam, 5 to 9 percent slopes, eroded and Water (Bowman 1973).

Surrounding land uses consist of commercial, industrial, and residential lands to the north and east of the study area; salt evaporation ponds and South Bay Salt Works processing facilities and an inactive railroad corridor to the west; and salt evaporation ponds and commercial, industrial, and residential lands to the south.

Biological Conditions in the Study Area

The BSA consists primarily of disturbed habitat and developed lands (Table 2). The ditches adjacent to Bay Boulevard support wetland vegetation communities, including coastal brackish marsh, freshwater marsh, and herbaceous wetland, in addition to open water. The BSA also contains small areas of non-native grassland and ornamental vegetation. Disturbed habitat within the BSA consists primarily of dirt roads and previously disturbed lands characterized by bare ground or non-native, weedy vegetation including garland daisy (*Glebionis coronaria*), Russian thistle (*Salsola tragus*), Australian saltbush (*Atriplex semibaccata*), and white sweetclover (*Melilotus alba*). Developed lands include paved roads and commercial development.

Table 2: Existing Vegetation Communities within the BSA	
VEGETATION COMMUNITY	ACREAGE*
Coastal Brackish Marsh	0.31
Freshwater Marsh	0.02
Herbaceous Wetland	0.06
Open Water	0.02
Non-native Grassland	0.91
Ornamental	0.18
Disturbed Habitat	3.29
Developed Land	2.07
TOTAL	6.86

*Rounded to the nearest 0.01; thus, total reflects rounding

Habitat Connectivity

The BSA is located just east of the South Bay Salt Works, which contains a series of salt evaporation ponds that are part of the South San Diego Bay Unit of the San Diego Bay National Wildlife Refuge. The ponds provide relatively isolated nesting, resting, and foraging habitat for several species of birds. Solar salt production has occurred in this location for over 100 years, and the salt ponds have been an important stopover point for large numbers of migratory and wintering birds (USFWS 2015c). In addition, the salt pond levees provide regionally important nesting habitat for seven species of colonial seabirds (USFWS 2015c) and portions of the levees are USFWS Critical Habitat for the federally threatened western snowy plover (*Charadrius alexandrinus nivosus*). Additional areas designated as USFWS Critical Habitat for the western snowy plover occur approximately three miles to the north at the Sweetwater River outlet and approximately three miles to the southwest at the Tijuana River outlet (Figure 6).

A small portion (approximately 0.18 acre) at the southern terminus of the BSA is within the City of San Diego's MHPA. This portion of the MHPA within the BSA is part of a large contiguous MHPA area that encompasses the southern portion of the San Diego Bay and through the Otay River corridor and Otay Valley Regional Park to the eastern part of San Diego County.

The Tijuana River Valley approximately three miles to the south functions as a major wildlife corridor that is part of the City of San Diego's MHPA. Areas within this corridor are designated USFWS Critical Habitat for the western snowy plover (as described above) and for the federally listed endangered least Bell's vireo (*vireo belli pusillus*; [Figure 6]).

Regional Species and Habitats and Natural Communities of Concern

A total of 92 regional species of concern have been reported as occurring in the vicinity of the BSA, including plants, invertebrates, amphibians, reptiles, birds, and mammals. These species are identified in Appendix A, along with their habitat requirements, status, and potential to occur within the BSA. A listing and explanation of status codes is provided in Appendix B.

Plant Species

One listed plant species has potential to occur in the BSA: the federal and state listed endangered salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*; [Appendix A]). Salt marsh bird's beak occurs in salt marshes along coastal California from Santa Barbara County to northern Baja. Suitable marsh habitat for salt marsh bird's beak is present in the BSA, and this species has been documented approximately 1.5 miles west of the BSA (CNDDDB 2015). Therefore, there is moderate potential for this species to occur within the BSA. However, project-specific surveys conducted in 2012, 2013, and 2014 during the blooming period for this species were negative.



USFWS Critical Habitat

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Animal Species

One listed animal species has potential to occur in the BSA based on presence of suitable habitat and/or records of the species in the general vicinity: the state listed endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi* [Appendix A]). Pickleweed-dominated coastal brackish marsh ditches in the BSA provide potential habitat for Belding's savannah sparrow, which is known from marshes to the west of the BSA in the vicinity of the salt evaporation ponds. Individuals of this species may occasionally forage in the on-site ditches but are not expected to nest in the BSA or otherwise establish territories due to the fragmented nature of the habitat and adjacency to urban development. This species is much more likely to nest in the more extensive marshlands located further west of the BSA.

Regional Habitats of Concern

Three regional habitats of concern (San Diego Mesa Hardpan Vernal Pool, Southern Coastal Salt Marsh, and Southern Willow Scrub) have been reported as occurring in the vicinity of the BSA. These habitats are identified in Appendix C, along with their presence or absence within the BSA.

4 - Results: Biological Resources, Discussion of Impacts & Mitigation

Habitats and 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, five sensitive natural communities occur within the BSA: coastal brackish marsh, freshwater marsh, herbaceous wetland, open water, and non-native grassland (Figure 7).

For the proposed project, permanent impacts include the bikeway and associated structures. Temporary impacts include construction access and staging areas. Proposed project impacts (temporary and permanent) would occur to three sensitive natural communities in the BSA: coastal brackish marsh, open water, and non-native grassland (Table 3; Figure 7), further described below. Proposed project-related impacts (temporary and permanent) would also occur to ornamental, disturbed habitat, and developed land (Table 3). These three vegetation communities are not considered natural communities of special concern and are not further discussed below.

-  Biological Study Area
 -  Permanent Impacts
 -  Temporary Impacts
 -  Coastal Brackish Marsh
 -  Freshwater Marsh
 -  Herbaceous Wetland
 -  Open Water
 -  Non-native Grassland
 -  Ornamental
 -  Disturbed Habitat
 -  Developed Land
- Note: Vegetation community mapping revised from LSA 2013.



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Vegetation/Impacts

BAYSHORE BIKEWAY SEGMENT 8B

Table 3: Proposed Project Impacts to Vegetation Communities (acre)*			
VEGETATION COMMUNITY	IMPACTS		
	Temporary	Permanent	TOTAL
Coastal Brackish Marsh	0.22	0.07	0.29
Open Water	0.003	0.002	0.005
Non-native Grassland	0.38	0	0.38
Ornamental	0.01	0.01	0.02
Disturbed Habitat	0.79	0.41	1.20
Developed Land	0.01	0.01	0.02
TOTAL	1.41	0.50	1.92

*Rounded to the nearest 0.01; thus, total reflects rounding

COASTAL BRACKISH MARSH

Survey Results

Approximately 0.31 acre of coastal brackish marsh occurs in the BSA within ditches along the west side of Bay Boulevard (Table 2; Figure 7). Characteristic species observed include pickleweed (*Salicornia pacifica*), with lesser coverage by saltmarsh bulrush (*Bolboschoenus maritimus* ssp. *paludosus*), saltmarsh fleabane (*Pluchea odorata*), flat sedge (*Cyperus eragrostis*), spearscale (*Atriplex prostrata*), California bulrush (*Schoenoplectus californicus*), cocklebur (*Xanthium strumarium*), five-hook bassia (*Bassia hyssopifolia*), and castor-bean (*Ricinus communis*).

Project Impacts

Project implementation would result in temporary impacts to 0.22 acre and permanent impacts to 0.07 acre of coastal brackish marsh for grading and construction of the bike path (Table 3; Figure 7).

Avoidance and Minimization Efforts/Compensatory Mitigation

The project has been designed to minimize impacts to coastal brackish marsh to the greatest extent practicable, including avoidance of 0.24 acre of the 0.31 acre (77 percent) of coastal brackish marsh mapped in the BSA. Impacts could not be completely avoided due to the location of ditches supporting coastal brackish marsh and the narrow area within which the path could be located. Impacts to coastal brackish marsh would be minimized by constructing a bridge over the existing ditch at the northern end of the path alignment (near Palomar Street) and a cantilevered deck over the western side of the existing drainage ditch that runs adjacent to the west side of Bay Boulevard between Palomar Street and Ada Street. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be periodically monitored to protect adjacent areas from equipment

access during construction. Before construction activities occur within or adjacent to areas containing sensitive biological resources, workers would be briefed by the biological monitor to recognize and avoid areas adjacent to and outside of the project limits that have been marked as sensitive biological resources.

Mitigation for temporary impacts to coastal brackish marsh is proposed to occur at a 1:1 ratio while permanent impacts is proposed to be mitigated at a 2:1 ratio (Table 4). Mitigation would occur through off-site restoration, enhancement, and/or establishment with a minimum 1:1 establishment component, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to coastal brackish marsh would be determined in consultation with the resource agencies.

Table 4: Proposed Mitigation Requirements for Impacts to Vegetation Communities (acre)*

VEGETATION COMMUNITY	IMPACT TYPE	IMPACT	MITIGATION RATIO†	REQUIRED MITIGATION†
Coastal Brackish Marsh	T	0.22	1:1	0.22
Coastal Brackish Marsh	P	0.07	2:1	0.14
Open Water	T	0.003	1:1	0.003
Open Water	P	0.002	2:1	0.004
Non-native Grassland	T	0.38	--	--
TOTAL		0.68	--	0.37

*Rounded to the nearest 0.01; thus, total reflects rounding

T=Temporary impacts; P=Permanent impacts

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

FRESHWATER MARSH

Survey Results

Approximately 0.02 acre of freshwater marsh occurs within the BSA, consisting of a single stand of habitat within near the southwest corner of Ada Street and Bay Boulevard (Table 2; Figure 7). Characteristic species observed include cattail (*Typha* sp.) and flat sedge (*Cyperus eragrostis*).

Project Impacts

The proposed project would avoid impacts to freshwater marsh.

Avoidance and Minimization Efforts/Compensatory Mitigation

The proposed project would avoid impacts to freshwater marsh; therefore, no mitigation is required.

HERBACEOUS WETLAND

Survey Results

Approximately 0.06 acre of herbaceous wetland occurs within the BSA within a ditch parallel to the east side of Bay Boulevard (Table 2; Figure 7). Characteristic species observed include curly dock (*Rumex crispus*), flat sedge (*Cyperus eragrostis*), creeping wild rye (*Elymus triticoides*), and cattail.

Project Impacts

The proposed project would avoid impacts to herbaceous wetland.

Avoidance and Minimization Efforts/Compensatory Mitigation

The proposed project would avoid impacts to herbaceous wetland; therefore, no mitigation is required.

OPEN WATER

Survey Results

Approximately 0.02 acre of open water occurs within the BSA (Table 2), consisting of portions of drainages that lack vegetation and have standing water for all or portions of the year. This community type is found along portions of the drainage ditches in the BSA and is interspersed with coastal brackish marsh, freshwater marsh, and herbaceous wetland (Figure 7).

Project Impacts

Project implementation would result in temporary impacts to 0.003 acre and permanent impacts to 0.002 acre of open water for grading and construction of the bike path (Table 3; Figure 7).

Avoidance and Minimization Efforts/Compensatory Mitigation

The project has been designed to minimize impacts to open water to the greatest extent practicable, including avoidance of 0.018 acre of the 0.02 acre (90 percent) of open water mapped in the BSA. Impacts could not be completely avoided due to the location of ditches supporting open water and the narrow area within which the path could be located. This resulted in the need to cross an existing ditch at the northern end of the path alignment (near Palomar Street), impacting open water habitat. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be periodically monitored to protect adjacent areas from equipment access during construction. Before construction activities occur within or adjacent to areas containing sensitive biological resources, workers would be briefed by the biological monitor to recognize and avoid areas adjacent to and outside of the project limits that have been marked as sensitive biological resources.

Mitigation for temporary impacts to open water is proposed to occur at a 1:1 ratio while permanent impacts are proposed to occur at a 2:1 ratio (Table 4). Mitigation would occur through off-site restoration, enhancement, and/or establishment with a minimum 1:1 establishment component, or purchase of credits at an approved mitigation bank. Final mitigation requirements for impacts to open water would be determined in consultation with the resource agencies.

NON-NATIVE GRASSLAND

Survey Results

Approximately 0.91 acre of non-native grassland occurs within the BSA along the eastern side of Bay Boulevard south of Stella Street (Table 2; Figure 7). Characteristic species observed include ripgut grass (*Bromus diandrus*), ryegrass (*Festuca perennis*), Bermuda grass (*Cynodon dactylon*), and western ragweed.

Project Impacts

Project implementation would result in temporary impacts to 0.38 acre of non-native grassland. No permanent impacts to non-native grassland would occur.

Avoidance and Minimization Efforts/Compensatory Mitigation











The project has been designed to minimize impacts to non-native grassland to the greatest extent practicable. Permanent impacts to non-native grassland would be avoided. Impacts would be temporary and limited to a relatively small area (0.38 acre) on a vacant parcel on the east side of Bay Boulevard that is anticipated to be utilized for construction staging.

No mitigation for temporary impacts to non-native grassland is proposed because impacts would be temporary and limited to small isolated areas within construction staging areas on privately owned parcels characterized by vacant land interspersed with disturbed habitat and surrounded by development.

Wetlands and Waterways

Survey Results

Potential federal (USACE) jurisdictional areas within the BSA total 0.42 acre and include 0.31 acre of coastal brackish marsh, 0.02 acre of freshwater marsh, 0.06 acre of herbaceous wetland, 0.02 acre of open water, and 0.007 acre of non-wetland WUS/streambed (Figure 8). Potential CDFW jurisdictional areas within the BSA total 0.54 acre and include 0.31 acre of coastal brackish marsh, 0.02 acre of freshwater marsh, 0.06 acre of herbaceous wetland, 0.02 acre of open water, and 0.13 acre of streambed (Figure 9). Potential CCC jurisdictional areas within the BSA total 0.54 acre and include 0.31 acre of coastal brackish marsh, 0.02 acre of

-  Biological Study Area
-  Permanent Impacts
-  Temporary Impacts
-  Culvert
- Wetlands**
-  Coastal Brackish Marsh
-  Freshwater Marsh
-  Herbaceous Wetland
-  Herbaceous Wetland (width in feet)
- Non-wetland Waters**
-  Open Water
-  Non-wetland Waters of the U.S. (width in feet)

Note: Jurisdictional habitat mapping revised from LSA 2013.



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USACE Jurisdictional Areas/Impacts

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CDFW Jurisdictional Areas/Impacts

BAYSHORE BIKEWAY SEGMENT 8B

freshwater marsh, 0.06 acre of herbaceous wetland, 0.02 acre of open water, and 0.13 acre of streambed (Figure 10). These results are based on the jurisdictional delineation, which included two sampling points (HELIX 2016).

The roadside ditches on the west side of Bay Boulevard, as well as the northern portion of the ditch on the east side of Bay Boulevard (just south of Ada Street) in the BSA appear to be subject to tidal influence based on elevation, representative plant species, and proximity to the San Diego Bay. These wetland areas within the BSA (comprised of coastal brackish marsh, freshwater marsh, open water, and streambed) are considered to be tidally influenced and total 0.34 acre.

Project Impacts

The proposed project would result in temporary impacts to 0.22 acre and permanent impacts to 0.07 acre of potential USACE jurisdictional areas, temporary impacts to 0.24 acre and permanent impacts to 0.10 acre of potential CDFW jurisdictional areas, and temporary impacts to 0.24 acre and permanent impacts to 0.10 acre of potential CCC jurisdictional areas (Table 5; Figures 8, 9, and 10).

Table 5: Proposed Project Impacts to Potential Jurisdictional Areas						
HABITAT	IMPACT (acre)*					
	USACE		CDFW		CCC	
	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Coastal Brackish Marsh	0.22	0.07	0.22	0.07	0.22	0.07
Open Water	0.003	0.002	0.003	0.002	0.003	0.002
Streambed	--	--	0.02	0.03	0.02	0.03
TOTAL	0.22	0.07	0.24	0.10	0.24	0.10

*Rounded to the nearest 0.01; thus, totals reflect rounding

Avoidance and Minimization Efforts/Compensatory Mitigation

The proposed project has been designed to avoid and/or minimize impacts to USACE, CDFW, and CCC jurisdictional areas. Complete avoidance of impacts to potential jurisdictional areas is not feasible due to the lack of available space in the adjacent uplands to support an alternate alignment. The proposed limits of disturbance would be clearly identified in the field with orange exclusionary fencing and construction activities would be periodically monitored to protect adjacent areas from equipment access during construction. Before construction activities occur within or adjacent to areas containing sensitive biological resources, workers would be briefed by the biological monitor to recognize and avoid areas adjacent to and outside of the project limits that have been marked as sensitive biological resources.



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California Coastal Commission Jurisdictional Areas/Impacts

BAYSHORE BIKEWAY SEGMENT 8B

The proposed project has been designed to reduce temporary construction-related impacts to potential jurisdictional 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 include 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 Best Management Practices (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.

Permanent impacts are proposed to be mitigated at a 2:1 ratio for coastal brackish marsh and open water, and at a 1:1 ratio for streambed. Temporary impacts are proposed to be mitigated at a 1:1 ratio for coastal brackish marsh and open water. No mitigation for temporary impacts to streambed would be required, as the impacts would result only from construction access within unvegetated portions of the drainage along Bay Boulevard and would not alter the contours of the drainage or otherwise necessitate restoration activities. Based on these ratios, 0.37 acre of mitigation is proposed for impacts to potential USACE jurisdiction, 0.40 acre of mitigation is proposed for impacts to potential CDFW jurisdiction, and 0.40 acre of mitigation is proposed for impacts to potential CCC jurisdiction (Table 6). Final mitigation requirements would be determined in consultation with the resource agencies.

Table 6: Jurisdictional Area Mitigation Summary (acre)*								
HABITAT	IMPACT TYPE	MITIGATION RATIO†	USACE		CDFW		CCC	
			Impact	Mitigation	Impact	Mitigation	Impact	Mitigation
Coastal Brackish Marsh	T	1:1	0.22	0.22	0.22	0.22	0.22	0.22
Coastal Brackish Marsh	P	2:1	0.07	0.14	0.07	0.14	0.07	0.14
Open Water	T	1:1	0.003	0.003	0.003	0.003	0.003	0.003
Open Water	P	2:1	0.002	0.004	0.002	0.004	0.002	0.004
Streambed	T	--	--	--	0.02	--	0.02	--
Streambed	P	1:1	--	--	0.03	0.03	0.03	0.03
TOTAL			0.30	0.37	0.35	0.40	0.35	0.40

*Rounded to the nearest 0.01; thus, totals reflect rounding

T=Temporary impacts; P=Permanent impacts

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

Special Status Plant Species

Plants searched for within the BSA are considered to be of special concern based on (1) federal, state, or local laws regulating their protection; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site.

A total of 88 plant species were observed in the BSA during project surveys, including 26 native species and 62 non-native species (Appendix D). No federally or state listed endangered or threatened or CRPR plant species were found to be present within the BSA during project-specific surveys conducted in 2012, 2013, and 2014 during the blooming period.

Special Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their protection; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site.

A total of 22 animal species were detected in the BSA during project surveys, including three butterfly species, one lizard species, 15 bird species, and three species of mammal (Appendix E). No special status animal species were detected in the BSA during biological surveys to date.

5 - Conclusions & Regulatory Determinations

Federal Endangered Species Act Consultation Summary

Federally listed species are not likely to occur and are currently presumed to be absent from the BSA. Consultation with the USFWS is not required for this project, as the project is expected to have no effect on federally listed species.

State Endangered Species Act Consultation Summary

State listed species are not likely to occur and are currently presumed to be absent from the BSA. Consultation with CDFW is not required for this project, as the project is expected to have no effect on State listed species.

Essential Fish Habitat Consultation Summary

The BSA does not contain Essential Fish Habitat and consultation with NOAA Fisheries is not required.

Wetlands and Other Waters Coordination Summary

Impacts to wetland and non-wetland WUS would require permitting with the USACE pursuant to Section 404 of the CWA. The project proposes temporary impacts to 0.22 acre and 0.07 acre of permanent impacts to potential USACE jurisdictional areas. Based on these values, project impacts would be expected to be authorized by the USACE under Nationwide Permit 14 (Linear Transportation Projects). No coordination with the USACE regarding regulatory permitting has been performed to date.

Water Quality Certification would be required from the RWQCB pursuant to Section 401 of the CWA. The project proposes temporary impacts to 0.22 acre and 0.07 acre of permanent impacts to potential RWQCB jurisdiction/WUS. A Section 401 Water Quality Certification would be required prior to USACE issuance of Nationwide Permit 14 authorization. No coordination with the RWQCB regarding regulatory permitting has been performed to date.

Impacts to CDFW jurisdictional areas would require permitting with the CDFW pursuant to Sections 1600 et seq. of the California Fish and Game Code. The project proposes temporary impacts to 0.24 acre and 0.10 acre of permanent impacts to potential CDFW jurisdictional areas. Project impacts would be expected to be authorized by the CDFW under a Standard 5-Year Streambed Alteration Agreement. No coordination with the CDFW regarding regulatory permitting has been performed to date.

Impacts to CCC jurisdictional areas would require issuance of a CDP from the CCC and the City of Chula Vista. While a portion of the BSA is located within the City of San Diego, it is located within an area of the City of San Diego that does not have an approved LCP and therefore a CDP from the CCC would be required. The project proposes temporary impacts to 0.24 acre and permanent impacts to 0.10 acre of potential CCC jurisdictional areas. No coordination with the CCC or City of Chula Vista regarding a CDP has been performed to date.

Invasive Species

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 BSA (Appendix D). They include four species with a rating of “High” on the California Invasive Plant Council (Cal-IPC) database (2007): fennel (*Foeniculum vulgare*), red brome (*Bromus madritensis* ssp. *rubens*), pampas grass (*Cortaderia* sp.), and tamarisk (*Tamarix ramosissima*). A total of 16 species with a Cal-IPC rating of “Medium”, including crystalline iceplant (*Mesembryanthemum crystallinum*), garland daisy (*Glebionis coronaria*), Australian saltbush (*Atriplex semibaccata*), hollowstem asphodel (*Asphodelus fistulosus*), and several species of annual grass, also were observed in the BSA. Twelve species rated as “Limited” by Cal-IPC were documented in the BSA, including Brazilian pepper, curly dock, castor bean, Russian thistle, and wild radish (*Raphanus sativus*), among others.

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

- Invasive species within the project footprint would be removed by project construction.
- Invasive species within temporary wetland impact areas would be removed during the plant establishment period.
- A qualified biologist shall review the project revegetation/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.

Migratory Bird Treaty Act

Several bird species were detected in the BSA during the biological surveys conducted for the project, including great egret (*Ardea alba*), great blue heron (*Ardea herodias*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), California towhee (*Pipilo crissalis*), and Cassin's kingbird (*Tyrannus vociferans*), among others (Appendix E). Migratory birds are protected under the MBTA, which places restrictions on the disturbance of active nests during the nesting season. Although no nesting birds were observed during the biological surveys, vegetation within the BSA could support nesting birds. If project construction starts during the bird nesting season (February 15 to August 31), a pre-construction survey of potential nesting habitat would be conducted by a qualified biologist to determine absence or presence of active nests within three days prior to the start of construction. If active nests are detected within or adjacent to the impact area, construction within 300 feet of the active nest would be postponed until after the young have fledged or the nest is no longer active.

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Appendix A

REGIONAL SPECIES OF CONCERN



**Appendix A
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS					
<i>Acanthomintha ilicifolia</i>	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: Clay soils near vernal pools and in grasslands, chaparral and coastal sage scrub between 33 and 3,000 feet	A	Suitable habitat not present on site and BSA is outside of species elevation range.
<i>Acmispon prostratus</i>	Nuttall's acmispon	--/-- CRPR 1B.1 MSCP Covered	Distribution: Coastal San Diego County and Baja California Habitat: Coastal sand dunes and within sandy coastal scrub from sea level to 35 feet elevation	A	Suitable habitat not present on site.
<i>Adolphia californica</i>	California adolphia	--/-- CRPR 2B.1	Distribution: Coastal San Diego County and Baja California Habitat: Coastal sage scrub and chaparral communities, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4 or 5 feet	A	BSA is outside the elevation range for this species, suitable habitat not present.
<i>Agave shawii</i>	Shaw's agave	--/-- CRPR 2B.1 MSCP NE MSCP Covered	Distribution: Coastal San Diego County and Baja California Habitat: Coastal sage scrub and maritime succulent scrub, often on volcanic soils	A	BSA is outside the elevation range for this species, suitable habitat not present.
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	--/-- CRPR 2B.1	Distribution: Southwestern San Diego County and Baja California Habitat: Canyon slopes mostly in open maritime succulent scrub and coastal scrub with little herbaceous cover; 180 to 510 feet elevation	A	BSA is outside the elevation range for this species, suitable habitat not present.
<i>Ambrosia monogyra</i>	Singlewhorl burrobrush	--/-- CRPR 2B.2	Distribution: Southwestern San Diego County and Northern Baja; also known from the Sonoran Desert to Texas, Nevada, and northern Mexico Habitat: Coastal sage scrub, and dry riverbeds and washes	A	Suitable habitat not present on site.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Ambrosia pumila</i>	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 feet	A	BSA is outside the elevation range for this species, suitable habitat not present.
<i>Aphanisma blitoides</i>	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.
<i>Artemisia palmeri</i>	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	A	BSA is outside the elevation range for this species, suitable habitat not present.
<i>Astragalus deanei</i>	Dean's milk-vetch	--/-- CRPR 1B.1	Distribution: Limited to southwestern San Diego County Habitat: Dry hillsides in open coastal sage scrub, chaparral, or oak woodland between 245 and 2,280 feet	A	No suitable habitat occurs within the BSA, which is outside the elevation range for this species.
<i>Astragalus tener</i> var. <i>titi</i>	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 dune habitat occurs within the BSA.
<i>Atriplex coulteri</i>	Coulter's saltbush	--/-- CRPR 1B.2	Distribution: Coastal southern California and the Channel Islands; may be extirpated from San Diego County Habitat: Dunes, coastal strand, grasslands, and desert slopes	HP	Potential suitable habitat occurs in the BSA. Species was not observed in 2012, 2013, or 2014 surveys.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Atriplex pacifica</i>	South coast saltscare	--/-- 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.
<i>Bergerocactus emoryi</i>	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.
<i>Bloomeria clevelandii</i>	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	A	No suitable habitat occurs within the BSA.
<i>California macrophylla</i>	Round-leaved filaree	--/-- CRPR 1B.1	Distribution: Western California Habitat: Clay soils in open areas of sage scrub and grassland in coastal valleys	A	No suitable habitat occurs within the BSA.
<i>Ceanothus verrucosus</i>	Wart-stemmed ceanothus	--/-- CRPR 2B.2 MSCP Covered	Distribution: Limited to San Diego County Habitat: Occurs among mesic coastal chaparral vegetation	A	No suitable habitat occurs within the BSA.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	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.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	Salt marsh bird's beak	FE/SE CRPR 1B.2 MSCP Covered	Distribution: Coastal California from Santa Barbara County to northern Baja Habitat: Hummocks in salt marshes	HP	Suitable marsh habitat is present in the BSA. Species was not observed in 2012, 2013, or 2014 surveys. Nearest data point for this species is approximately 1.5 miles west (CNDDB 2015).
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	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	A	No suitable habitat occurs within the BSA.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	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.
<i>Cylindropuntia californica</i> var. <i>californica</i>	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	Coastal sage scrub occurs within the BSA, however, BSA is outside of species elevation range.
<i>Deinandra conjugens</i>	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	Clay soils are not present in the BSA. Species was not observed in 2012, 2013, or 2014 surveys.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak	--/-- CRPR 2B.1 MSCP Covered	Distribution: Southwestern San Diego County and northern Baja Habitat: Seasonally dry drainages and uplands adjacent to riparian areas	A	No suitable habitat occurs within the BSA.
<i>Dudleya attenuata</i> ssp. <i>attenuata</i>	Orcutt's dudleya	--/-- CRPR 2B.1	Distribution: Southwestern San Diego County (Border Field State Park) and northern Baja Habitat: Rocky or gravelly mesas, canyons, and ridges within coastal scrub, coastal bluff scrub, and chaparral	A	No suitable habitat occurs within the BSA.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	--/-- CRPR 1B.1	Distribution: Coastal southern California from Ventura County to Baja Habitat: Open, rocky slopes; often on clay soils over serpentine, in coastal scrub, coastal bluff scrub, and grassland	A	No suitable habitat occurs within the BSA.
<i>Dudleya variegata</i>	Variiegated 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	A	No suitable habitat occurs within the BSA.
<i>Ericameria palmeria</i> var. <i>palmeri</i>	Palmer's goldenbush	--/-- CRPR 1B.1 MSCP NE MSCP Covered	Distribution: Southwestern San Diego County and Baja Habitat: Coastal drainages in mesic chaparral sites; rarely in coastal sage scrub	A	No suitable habitat occurs within the BSA.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	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 feet	A	BSA is outside the elevation range of this species. No suitable habitat occurs within the BSA.
<i>Euphorbia misera</i>	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.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Ferocactus viridescens</i>	San Diego barrel cactus	--/-- CRPR 2.1 MSCP Covered	Distribution: Below 660 feet 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 feet	A	Suitable habitat not present on site.
<i>Frankenia palmeri</i>	Palmer's frankenia	--/-- CRPR 2B.1	Distribution: Coastal southwestern San Diego County, Baja, and Sonora, Mexico Habitat: Margins of salt marshes; coastal dunes	HP	Suitable marsh habitat present in the BSA. Species was not observed in 2012, 2013, or 2014 surveys.
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	FE/SR CRPR 1B.1	Distribution: Known from 2 locations in southwestern San Diego County (Otay Mountains); also northern Baja Habitat: Closed-cone coniferous forest, chaparral	A	No suitable habitat occurs within the BSA.
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	Beach goldenaster	--/-- CRPR 1B.1	Distribution: Coastal San Diego and Santa Barbara counties, Baja Habitat: Coastal chaparral, coastal dunes, coastal scrub	A	Suitable habitat not present on site.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	Decumbent goldenbush	--/-- CRPR 1B.2	Distribution: Coastal Orange and San Diego Counties, southern Channel Islands, Baja Habitat: Sandy soils in disturbed areas of coastal sage scrub and chaparral	A	Suitable habitat not present on site.
<i>Iva hayesiana</i>	San Diego marsh-elder	--/-- CRPR 2B.2	Distribution: San Diego County and Baja Habitat: Intermittent creeks, sandy alluvial embankments with cobbles	A	Suitable habitat not present in the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Juncus acutus</i> <i>ssp. leopoldii</i>	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	HP	Suitable marsh habitat present in the BSA. This highly visible species was not observed in 2012, 2013, or 2014 surveys and would likely have been observed if present.
<i>Lasthenia glabrata</i> <i>ssp. coulteri</i>	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	HP	Suitable marsh habitat is present in the BSA. This species was not observed in 2012, 2013, or 2014 surveys.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's peppergrass	--/-- CRPR 4.3	Distribution: Southwestern California, Channel Islands Habitat: Dry soils in coastal sage scrub and chaparral	A	Suitable habitat not present on site.
<i>Leptosyne maritima</i>	Sea dahlia	--/-- CRPR 2B.2	Distribution: Coastal San Diego County, Baja Habitat: Coastal bluff scrub on sandstone bluffs	A	No suitable habitat occurs within the BSA.
<i>Navarretia fossalis</i>	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 feet	A	BSA is outside the elevation range of this species. No suitable habitat occurs within the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Navarretia prostrata</i>	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	A	No suitable habitat occurs within the BSA.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	Coast woolly-heads	--/-- CRPR 1B.2	Distribution: Los Angeles, Orange, and San Diego counties and Baja Habitat: Coastal dune communities	A	No coastal dunes occur within the BSA.
<i>Orcuttia californica</i>	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	No suitable habitat occurs within the BSA.
<i>Ornithostaphylos oppositifolia</i>	Baja California birdbush	--/-- CRPR 2B.1	Distribution: Southwestern San Diego County (Border Field State Park), northern Baja Habitat: Chaparral	A	No suitable habitat occurs within the BSA.
<i>Orobanche parishii</i> ssp. <i>brachyloba</i>	Short-lobed broomrape	--/-- CRPR 4.2	Distribution: Coastal San Diego County, Channel Islands Habitat: Coastal bluff scrub and coastal dunes	A	No suitable habitat occurs within the BSA.
<i>Phacelia stellaris</i>	Brand's star phacelia	FC/-- CRPR 1B.1	Distribution: Coastal Los Angeles and San Diego Counties, Baja Habitat: Sandy openings in coastal sage scrub, dunes	A	Suitable habitat not present on site.
<i>Pogogyne nudiuscula</i>	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 feet	A	No vernal pools occur within the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
PLANTS (cont.)					
<i>Quercus dumosa</i>	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 from 50 to 1,300 feet	A	BSA is outside the elevation range of this species. No suitable habitat occurs within the BSA.
<i>Ribes viburnifolium</i>	Santa Catalina Island currant	--/-- CRPR 1B.2	Distribution: Coastal San Diego County, Santa Catalina Island, Baja Habitat: Coastal canyons in sage scrub and chaparral exposed to ocean breezes and fog	A	No suitable habitat occurs within the BSA.
<i>Rosa minutifolia</i>	Small-leaved rose	--/SE CRPR 2B.1 MSCP Covered	Distribution: Southwestern San Diego County (Otay Mesa), Baja Habitat: Cobbly soil in coastal sage scrub and chaparral from 490 to 525 feet elevation	A	BSA is outside the elevation range of this species. No suitable habitat occurs within the BSA.
<i>Senecio aphanactis</i>	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 from 50 to 2,625 feet elevation	A	BSA is outside the elevation range of this species. No suitable habitat occurs within the BSA.
<i>Suaeda esteroa</i>	Estuary seablite	--/-- CRPR 1B.2	Distribution: Occurs along immediate coast from Santa Barbara County to Baja California Habitat: In clay, silt, and sand substrates of coastal salt marshes below 15 feet elevation	HP	Suitable habitat occurs within the BSA, although species was not observed during 2012, 2013, or 2014 surveys. Species has been documented north and west of the BSA (SDNHM 2015).

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE					
Invertebrates					
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/-- MSCP Covered	Distribution: San Diego County Habitat: Inhabits vernal pools or basins capable of holding water	A	No vernal pools occur in the BSA.
<i>Cicindela gabbii</i>	Western tidal-flat tiger beetle	--/SA	Distribution: Coastal southern California Habitat: Mud in the lower zone of tidal estuaries and mudflats	HP	Drainage ditches in the BSA are tidal and provide marginal habitat.
<i>Cicindela hirticollis gravida</i>	Sandy beach tiger beetle	--/SA	Distribution: Coastal California from San Francisco to Baja Habitat: Dry, light-colored sand in the upper zone of dunes; near fresh water	A	No dunes are present in the BSA.
<i>Cicindela latesignata latesignata</i>	Western beach tiger beetle	--/SA	Distribution: Coastal southern California, Baja Habitat: Mudflats and beaches	A	No mudflats or beaches are present in the BSA.
<i>Cicindela senilis frosti</i>	Senile tiger beetle	--/SA	Distribution: Coastal central and southern California to San Diego County Habitat: Marine shorelines where it inhabits dark-colored mud in the lower zone and salt pans in the upper zone	A	Marine shoreline is not present in the BSA.
<i>Coelus globosus</i>	Globose dune beetle	--/SA	Distribution: Pacific coast from Sonoma County to Ensenada, Mexico Habitat: Coastal foredunes and sand hummocks	A	No dunes are present in the BSA.
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/-- MSCP NE	Distribution: Southwestern Riverside County, southern San Diego County, northern Baja Habitat: Open sites with low-growing, sparse vegetation; larval host plants include dwarf plantain (<i>Plantago erecta</i>), woolly plantain (<i>P. patagonica</i>), and white snapdragon (<i>Antirrhinum coulterianum</i>)	A	BSA is well outside the survey area for this species.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Invertebrates (cont.)					
<i>Panoquina errans</i>	Saltmarsh skipper	--/SA	Distribution: Coastal southern California from Santa Barbara County to San Diego County Habitat: Estuaries and brackish waters; larval host plant is saltgrass (<i>Distichlis spicata</i>)	HP	Brackish water supporting saltgrass is present in the BSA.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE/-- MSCP NE MSCP Covered	Distribution: Southwestern Riverside County, Orange County, southwestern San Diego County Habitat: Vernal pools at least 30 cm deep	A	No vernal pools occur in the BSA.
Vertebrates					
Amphibians and Reptiles					
<i>Anniella pulchra pulchra</i>	Silvery legless lizard	--/SSC	Distribution: Central California to Baja Habitat: Moist, loose soils and humus under sparse vegetation including oak woodland, chaparral, and desert scrub	A	No suitable soils or vegetation in the BSA.
<i>Charina trivirgata</i>	Rosy boa	--/--	Distribution: Transverse and Peninsular Ranges from Los Angeles to northern Baja Habitat: Rocky outcrops in coastal sage scrub, chaparral, and desert scrub	A	No rocky outcrops in coastal sage scrub in the BSA.
<i>Cnemidophorus hyperythrus beldingi</i>	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	Open, disturbed areas are present in the BSA, along with small areas of coastal sage scrub in the southern end.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Amphibians and Reptiles (cont.)					
<i>Phrynosoma coronatum blainvillei</i>	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 feet. Not common where Argentine ants (<i>Linepithema humile</i>) have excluded native harvester ants (<i>Pogonomyrmex</i> sp.)	A	Native ants have been almost entirely extirpated from urban areas of California by Argentine ants.
<i>Plestiodon skiltonianus interparietalis</i>	Coronado Island skink	--/SSC	Distribution: West of the deserts from Riverside County to Baja Habitat: Coastal sage, mesic chaparral, oak woodlands, pinyon-juniper, and riparian woodlands to pine forests	A	Suitable habitat not present in the BSA.
<i>Spea hammondi</i>	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 (<i>Rana catesbiana</i>) or crayfish (<i>Procambarus</i> sp.).	A	No suitable seasonal pools or friable soils in the BSA.
<i>Thamnophis hammondi</i>	Two-striped garter snake	--/SSC	Distribution: Monterey County to southern Baja Habitat: In or near permanent sources of water, such as streams with rocky beds supporting willows or other riparian vegetation	A	No permanent freshwater streams with riparian areas occur in the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds					
<i>Accipiter cooperi</i>	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	A	Suitable habitat not present in the BSA.
<i>Aimophila ruficeps canescens</i>	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	A	Suitable habitat not present in the BSA.
<i>Athene cunicularia</i>	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	Undeveloped and open lands in and adjacent to the BSA provide potential habitat, though habitat within the BSA is extremely limited.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	Coastal cactus wren	BCC/SSC MSCP NE MSCP Covered	Distribution: Coastal lowlands in San Diego County Habitat: Cactus thickets	A	No cactus thickets occur in the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	FT/SSC MSCP Covered	Distribution: Coastal California from north of the Bay Area south into Baja Habitat: Inhabits sandy beaches, dunes and salt flats.	A	No beaches, dunes, or salt flats occur in the BSA. USFWS critical habitat for this species occurs along levees in the salt evaporation ponds west of the BSA.
<i>Circus cyaneus</i>	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	Undeveloped and open lands in and adjacent to the BSA provide potential foraging habitat, though habitat within the BSA is extremely limited.
<i>Elanus leucurus</i>	White-tailed kite	--/FP	Distribution: Coastal slopes in San Diego County Habitat: Riparian woodland; oak or sycamore groves adjacent to grassland	A	No riparian woodland occurs in the BSA.
<i>Eremophila alpestris actia</i>	California horned lark	--/WL	Distribution: Throughout San Diego County Habitat: Coastal strand, arid grasslands, sandy desert floor	HP	Suitable habitat is present in the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
<i>Empidonax traillii extimus</i>	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	A	No riparian woodland occurs in the BSA.
<i>Falco peregrinus anatum</i>	Peregrine falcon	Delisted/ Delisted	Distribution: Occasional in San Diego County near the coast in winter Habitat: Nests on cliff ledges; hunts in agricultural fields, meadows, marshes, and lakes	HP	No cliffs or ledges in the BSA; adjacent open land provides potential foraging habitat, though foraging habitat within the BSA is extremely limited.
<i>Lanius ludovicianus</i>	Loggerhead shrike	BCC/SSC	Distribution: Throughout San Diego County Habitat: grasslands, open chaparral and sage scrub, desert scrub	A	Suitable habitat not present in the BSA.
<i>Laterallus jamaicensis coturniculus</i>	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	No suitable wetland habitat of sufficient area occurs in the BSA Species believed to be extirpated from San Diego County.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Birds (cont.)					
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	--/SE MSCP NE	Distribution: Santa Barbara County to northern Baja Habitat: Inhabits coastal salt marshes dominated by pickleweed (<i>Salicornia</i> spp.)	HP	Suitable marsh habitat occurs in the BSA but may be too fragmented and restricted in size to support this species.
<i>Polioptila californica californica</i>	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	A	Suitable habitat not present in the BSA.
<i>Rallus obsoletus</i> [= <i>longirostris</i>] <i>levipes</i>	Light-footed Ridgway's (formerly 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	A	No suitable cordgrass or tule habitat in the BSA.
<i>Sterna antillarum browni</i>	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 beaches or dunes in the BSA, suitable habitat not present.
<i>Vireo bellii pusillus</i>	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	A	No riparian forests, woodland, or scrub occurs in the BSA.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Mammals					
<i>Antrozous pallidus</i>	Pallid bat	--/SSC	Distribution: Western North America Habitat: Deserts and canyons; roosts in buildings and crevices	A	No desert or canyon habitat is present in the BSA.
<i>Chaetodipus fallax fallax</i>	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	Small areas of coastal sage scrub occur in the southern end of the BSA, though habitat is likely too fragmented to support this species.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	--/SSC	Distribution: Extreme southern California, southern Arizona, southwestern New Mexico, Sonora and Baja, Mexico Habitat: Arid scrub, mixed forests, and canyons in desert mountains; roosts in caves and mines	A	No arid scrub or mixed forest in the BSA.
<i>Lasiurus cinereus</i>	Hoary bat	--/SA	Distribution: Throughout California Habitat: Open habitat with access to trees and water	A	BSA does not provide suitable habitat.

**Appendix A (cont.)
REGIONAL SPECIES OF CONCERN**

SCIENTIFIC NAME	COMMON NAME	STATUS*	GENERAL HABITAT DESCRIPTION	HABITAT OR SPECIES PRESENT/ ABSENT†	RATIONALE
WILDLIFE (cont.)					
Vertebrates (cont.)					
Mammals (cont.)					
<i>Neotoma lepida intermedia</i>	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	A	Small areas of coastal sage scrub occur in the southern end of the BSA; conspicuous nests were not observed during surveys.
<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	--/SSC	Distribution: Southern California, southern Arizona, Baja Habitat: Desert; roosts in rock outcrops	A	No rock outcrops occur in the BSA.
<i>Perognathus longimembris pacificus</i>	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 feet 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	A	The BSA is more than 50 miles from the only known locations of this species; no coastal strand, dunes, or alluvial terraces in the BSA.

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

†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 2015. *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 Imperial Beach, California USGS 7.5 Minute Quadrangle.*



Appendix B

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES



Appendix B
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
SA Special Animal. Any animal monitored by the CNDDDB, regardless of its legal or protection status
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 B (cont.)
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

California Rare Plant Rank (CRPR) Codes

List	Threat Code Extension
1A = Presumed extinct.	.1 = Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.	.2 = Fairly threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.	.3 = Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat, or no current threats known)
3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.	A CA Endemic entry corresponds to those taxa that only occur in California.
4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.	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 C

REGIONAL HABITATS OF CONCERN



**Appendix C
REGIONAL HABITATS OF CONCERN**

NATURAL COMMUNITY	GLOBAL RANKING	STATE RANKING	HABITAT PRESENT OR ABSENT
San Diego Mesa Hardpan Vernal Pool	G2	S2.1	Absent
Southern Coastal Salt Marsh	G2	S2.1	Absent
Southern Willow Scrub	G3	S3.2	Absent

SOURCE: CDFW 2015. 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 Imperial Beach, 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.



Appendix D

PLANT SPECIES OBSERVED WITHIN THE BSA



Appendix D
PLANT SPECIES OBSERVED WITHIN THE BSA

FAMILY	SPECIES NAME	COMMON NAME	HABITAT¹
<u>Native Species</u>			
Asteraceae	<i>Ambrosia psilostachya</i>	western ragweed	HW, NNG
	<i>Baccharis salicifolia</i>	mule fat	HW
	<i>Erigeron canadensis</i>	horseweed	DH
	<i>Euthamia occidentalis</i>	western goldenrod	CBM, FWM
	<i>Heterotheca grandiflora</i>	telegraph weed	DH
	<i>Jaumea carnosa</i>	fleshy jaumea	CBM
	<i>Pluchea odorata</i>	salt marsh fleabane	CBM
	<i>Symphotrichum subulatum</i>	slim aster	CBM
	<i>Xanthium strumarium</i>	cocklebur	CBM
Bataceae	<i>Batis maritima</i>	beachwort	CBM
Boraginaceae	<i>Heliotropium curassavicum</i>	salt heliotrope	DH
Chenopodiaceae	<i>Arthrocnemum subterminale</i>	Parish's pickleweed	CBM
	<i>Salicornia pacifica</i>	Pacific pickleweed	CBM
Crassulaceae	<i>Crassula connata</i>	pygmy-weed	DH
	<i>Cressa truxillensis</i>	alkali weed	CBM
Cyperaceae	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	prairie bulrush	CBM
	<i>Cyperus eragrostis</i>	tall flatsedge	CBM, FWM, HW
	<i>Schoenoplectus americanus</i>	American rush	CBM
	<i>Schoenoplectus californicus</i>	California bulrush	CBM, FWM
Frankeniaceae	<i>Frankenia salina</i>	alkali-heath	CBM
Plumbaginaceae	<i>Limonium californicum</i>	western marsh- rosemary	CBM
Poaceae	<i>Elymus triticoides</i>	beardless wild ryegrass	CBM, HW, NNG
	<i>Monanthochloe littoralis</i>	shoregrass	CBM
Polygonaceae	<i>Polygonum aviculare</i>	common knotweed	DH
	<i>Rumex salicifolius</i>	willow dock	HW
Typhaceae	<i>Typha</i> sp.	cattail	FWM, HW
<u>Non-native Species²</u>			
Aizoaceae	<i>Aptenia cordifolia</i>	red apple ice plant	DH
	<i>Malephora crocea</i>	coppery mesemb	DH
	Mesembryanthemum crystallinum	crystalline iceplant	DH
	<i>Mesembryanthemum nodiflorum</i>	slender-leaved iceplant	DH

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

FAMILY	SPECIES NAME	COMMON NAME	HABITAT ¹	
<u>Non-native Species</u>² (cont.)				
Anacardiaceae	<i>Schinus terebinthifolius</i>	Brazilian pepper tree	ORN	
Apiaceae	<i>Foeniculum vulgare</i>	fennel	DH	
Apocynaceae	<i>Nerium oleander</i>	oleander	ORN	
Arecaceae	<i>Washingtonia robusta</i>	Mexican fan palm	DH	
Asphodelaceae	<i>Asphodelus fistulosus</i>	hollow-stem asphodel	DH	
Asteraceae	<i>Centaurea melitensis</i>	star thistle	DH, NNG	
	<i>Cotula coronopifolia</i>	African brass- buttons	DH	
	<i>Erigeron bonariensis</i>	flax-leaf fleabane	DH	
	<i>Glebionis coronaria</i>	garland daisy	DH	
	<i>Hedypnois cretica</i>	Crete hedypnois	DH	
	<i>Helminthotheca echioides</i>	bristly ox-tongue	CBM, DH	
	<i>Lactuca serriola</i>	wild lettuce	DH	
	<i>Osteospermum fruticosum</i>	African daisy	DH	
	<i>Pseudognaphalium luteoalbum</i>	everlasting cudweed	DH	
	<i>Sonchus asper</i>	prickly sow thistle	DH	
	<i>Sonchus oleraceus</i>	common sow thistle	DH	
	Brassicaceae	<i>Hirschfeldia incana</i>	perennial mustard	DH
		<i>Raphanus sativus</i>	wild radish	DH
Caryophyllaceae	<i>Spergularia sp.</i>	sand-spurry	DH	
Chenopodiaceae	<i>Atriplex prostrata</i>	triangle orache	CBM	
	<i>Atriplex semibaccata</i>	Australian saltbush	DH	
	<i>Bassia hyssopifolia</i>	fivehook bassia	CBM, DH	
	<i>Chenopodium album</i>	pigweed	DH	
	<i>Chenopodium murale</i>	nettle-leaf goosefoot	DH	
Chenopodiaceae	<i>Salsola tragus</i>	Russian thistle	DH	
Convolvulaceae	<i>Convolvulus arvensis</i>	bindweed	DH	
Cyperaceae	<i>Cyperus involucratus</i>	umbrella plant	CBM, FWM	
Euphorbiaceae	<i>Chamaesyce maculata</i>	spotted spurge	DH	
	<i>Ricinus communis</i>	castor-bean	CBM, FWM	
Fabaceae	<i>Acacia sp.</i>	acacia	ORN	
	<i>Medicago polymorpha</i>	bur-clover	DH	
	<i>Melilotus albus</i>	white sweet clover	CBM, DH, NNG	
	<i>Melilotus indicus</i>	Indian sweet clover	NNG	

**Appendix D (cont.)
PLANT SPECIES OBSERVED WITHIN THE BSA**

FAMILY	SPECIES NAME	COMMON NAME	HABITAT ¹
<u>Non-native Species</u>² (cont.)			
Geraniaceae	<i>Erodium moschatum</i>	green-stem filaree	DH
Lythraceae	<i>Lythrum hyssopifolia</i>	grass poly	CBM
Malvaceae	<i>Malva parviflora</i>	cheeseweed	DH
Myrsinaceae	<i>Anagallis arvensis</i>	scarlet pimpernel	DH, NNG
Myrtaceae	<i>Eucalyptus</i> sp.	eucalyptus	ORN
Oxalidaceae	<i>Oxalis pes-caprae</i>	Bermuda-buttercup	DH, NNG
Plumbaginaceae	<i>Limonium perezii</i>	statice	DH
Poaceae	<i>Avena</i> sp.	oats	NNG
	<i>Brachypodium distachyon</i>	purple falsebrome	NNG
	<i>Bromus diandrus</i>	common ripgut grass	CBM, NNG
	<i>Bromus madritensis</i>	foxtail chess	DH, NNG
	<i>Cortaderia selloana</i>	pampas grass	DH
	<i>Cynodon dactylon</i>	Bermuda grass	FWM, NNG
	<i>Ehrharta erecta</i>	veldt grass	NNG
	<i>Festuca perennis</i>	Italian ryegrass	HW, NNG
	<i>Hordeum murinum</i>	barley	NNG
	<i>Paspalum dilatatum</i>	dallis grass	FWM
	<i>Pennisetum setaceum</i>	fountain grass	DH
	<i>Phalaris minor</i>	canary grass	DH
	<i>Polypogon monspeliensis</i>	annual beard grass	CBM, HW
	<i>Polypogon viridis</i>	water bentgrass	FWM
	<i>Stipa miliacea</i>	smilo grass	DH, NNG
Polygonaceae	<i>Rumex crispus</i>	curly dock	CBM, HW, NNG
Scrophulariaceae	<i>Myoporum parvifolium</i>	creeping myoporum	DH
Tamaricaceae	<i>Tamarix ramosissima</i>	French tamarisk	DH

¹CBM=coastal brackish marsh; DH=disturbed habitat; FWM=freshwater marsh; HW=herbaceous wetland; NNG=non-native grassland; ORN=ornamental

²Species rated as High, Moderate, or Limited as by the California Invasive Plant Inventory (Cal-IPC) Database are in **boldface**.



Appendix E

ANIMAL SPECIES OBSERVED OR DETECTED
WITHIN THE BSA



Appendix E
ANIMAL SPECIES OBSERVED OR DETECTED WITHIN THE BSA

SCIENTIFIC NAME

COMMON NAME

INVERTEBRATES

Lepidoptera – Butterflies and Moths

Brephidium exilis

western pygmy blue

Colias sp.

sulphur sp.

Pontia protodice

common white

VERTEBRATES

Reptiles

Phrynosomatidae – Earless, Spiny, Tree, Side-blotched, and Horned Lizards

Uta stansburiana

side-blotched lizard

Birds

Accipitridae – Hawks, Old World Vultures, Kites, Harriers, and Eagles

Buteo jamaicensis

red-tailed hawk

Ardeidae – Bitterns, Herons, and Allies

Ardea alba

great egret

Ardea herodias

great blue heron

Bubulcus ibis

cattle egret

Butorides virescens

green heron

Egretta thula

snowy egret

Charadriidae – Plovers and Lapwings

Charadrius vociferus

killdeer

Columbidae – Doves

Zenaida macroura

mourning dove

Corvidae – Jays, Magpies, and Crows

Corvus brachyrhynchos

American crow

Emberizidae – Sparrows, Longspurs, and Emberiza Buntings

Zonotrichia leucophrys

white-crowned sparrow

Fringillidae – Finches

Carpodacus mexicanus

house finch

Parulidae – Wood-warblers

Geothlypis trichas

common yellowthroat

Trochilidae – Hummingbirds

Calypte anna

Anna's hummingbird

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

SCIENTIFIC NAME

COMMON NAME

VERTEBRATES (cont.)

Birds (cont.)

Tyrannidae – Flycatchers

Sayornis nigricans

Tyrannus vociferans

black phoebe

Cassin's kingbird

Mammals

Geomyidae – Gophers

Thomomys bottae

Botta's pocket gopher

Leporidae – Rabbits and Hares

Sylvilagus auduboni

desert cottontail

Sciuridae – Squirrels, Chipmunks, and Marmots

Spermophilus beecheyi

California ground squirrel



Appendix F

U.S. FISH AND WILDLIFE SERVICE
SPECIES LIST





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008

PHONE: (760)431-9440 FAX: (760)431-5901

URL: www.fws.gov/carlsbad/

Consultation Code: 08ECAR00-2016-SLI-0616

May 13, 2016

Event Code: 08ECAR00-2016-E-00903

Project Name: Bayshore Bikeway Segment 8B

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Official Species List

Provided by:

Carlsbad Fish and Wildlife Office
2177 SALK AVENUE - SUITE 250
CARLSBAD, CA 92008
(760) 431-9440
<http://www.fws.gov/carlsbad/>

Consultation Code: 08ECAR00-2016-SLI-0616

Event Code: 08ECAR00-2016-E-00903

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Name: Bayshore Bikeway Segment 8B

Project Description: The San Diego Association of Governments (SANDAG), in cooperation with Caltrans, proposes to construct a portion of the Bayshore Bikeway along the eastern San Diego Bayfront in the cities of San Diego and Chula Vista. Project is federally funded and would consist of a Class I bikeway, which is a path that provides a separated right-of-way for the exclusive use of people walking and riding bikes, extending southward approximately 0.25 mile along the west side of Bay Boulevard from the terminus of Segment 8A at Palomar Street in the City of Chula Vista to the main driveway of the South Bay Salt Works facility in the City of San Diego. The proposed bikeway would include an eight-foot-wide bike path with two to three-foot wide shoulders. The bike path would cross over a drainage ditch near Palomar Street on a bridge structure, and from Palomar Street to Ada Street, it would be constructed as a cantilevered deck over the western side of an existing drainage ditch that runs adjacent to the west side of Bay Boulevard. South of Ada Street, the bike path would be constructed at grade. Additional improvements would include installation of a new storm drain inlet and culvert just north of Palomar Street, curb and gutter, chain link fencing along the west side of the bike path, railing along the east side of the deck, lighting, minor grading, bike lane striping, utilities improvements and relocations, and other improvements as required by the cities of San Diego and Chula Vista and SANDAG.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-117.09279820926893 32.604800346550036, -117.09290549762954 32.60176839128723, -117.09268115795567 32.600881000964755, -117.09246658123449 32.60087277622235, -117.09259339615528 32.60374858261866, -117.09246658123449 32.604767448049934, -117.09279820926893 32.604800346550036)))

Project Counties: San Diego, CA



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Endangered Species Act Species List

There are a total of 18 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
California Least tern (<i>Sterna antillarum browni</i>)	Endangered		
Coastal California gnatcatcher (<i>Polioptila californica californica</i>) Population: Entire	Threatened	Final designated	
Least Bell's vireo (<i>Vireo bellii pusillus</i>) Population: Entire	Endangered	Final designated	
Light-Footed Clapper rail (<i>Rallus longirostris levipes</i>) Population: Entire	Endangered		
Southwestern Willow flycatcher (<i>Empidonax traillii extimus</i>) Population: Entire	Endangered	Final designated	
western snowy plover (<i>Charadrius nivosus ssp. nivosus</i>) Population: Pacific coastal pop.	Threatened	Final designated	
Crustaceans			



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Riverside fairy shrimp (<i>Streptocephalus woottoni</i>) Population: Entire	Endangered	Final designated	
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	Endangered	Final designated	
Flowering Plants			
California Orcutt grass (<i>Orcuttia californica</i>)	Endangered		
Otay mesa-mint (<i>Pogogyne nudiuscula</i>)	Endangered		
Otay tarplant (<i>Deinandra (=hemizonia) conjugens</i>)	Threatened	Final designated	
Salt Marsh bird's-beak (<i>Cordylanthus maritimus ssp. maritimus</i>)	Endangered		
San Diego ambrosia (<i>Ambrosia pumila</i>)	Endangered	Final designated	
San Diego button-celery (<i>Eryngium aristulatum var. parishii</i>)	Endangered		
San Diego thornmint (<i>Acanthomintha ilicifolia</i>)	Threatened	Final designated	
Spreading navarretia (<i>Navarretia fossalis</i>)	Threatened	Final designated	
Insects			
Quino Checkerspot butterfly (<i>Euphydryas editha quino (=e. e. wrighti)</i>) Population: Entire	Endangered	Final designated	



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Mammals			
Pacific Pocket mouse (<i>Perognathus longimembris pacificus</i>) Population: Entire	Endangered		



United States Department of Interior
Fish and Wildlife Service

Project name: Bayshore Bikeway Segment 8B

Critical habitats that lie within your project area

There are no critical habitats within your project area.



Appendix G

WETLAND DELINEATION FORMS



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bayshore Bikeway Segment 8B City/County: Chula Vista/San Diego Sampling Date: July 30, 2014
 Applicant/Owner: SANDAG State: CA Sampling Point: 1
 Investigator(s): S. Nigro, L. Moreton Section, Township, Range: 16/18S/2W
 Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR): C Lat: 32.6025 Long: -117.0924 Datum: _____
 Soil Map Unit Name: HrC2 Huerhuero loam, 5 to 9 percent slopes, eroded NWI classification: Not on NWI maps
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: USACE, CDFW, and CCC wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10' x 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>N/A</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0</u> = Total Cover				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 = _____
Sapling/Shrub Stratum (Plot size: <u>10' x 20'</u>)				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>10' x 20'</u>)				
1. <u>Typha sp.</u>	<u>75</u>	<u>X</u>	<u>OBL</u>	
2. <u>Bolboschoenus maritimus ssp paludosus</u>	<u>20</u>		<u>OBL</u>	
3. <u>Polypogon monspeliensis</u>	<u>5</u>		<u>FACW</u>	
4. <u>Euthamia occidentalis</u>	<u>5</u>		<u>FACW</u>	
5. <u>Schoenoplectus californicus</u>	<u>5</u>		<u>OBL</u>	
6. _____				
7. _____				
8. _____				
<u>110</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10' x 20'</u>)				
1. <u>N/A</u>				
2. _____				
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No _____

Remarks:
 Hydrophytic vegetation present. Vegetation community = freshwater marsh.
 Photos 21 and 22.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
no pit								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

³Indicators 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 criterion assumed met - plot with standing water in dry season, dominated by obligate vegetation with an abrupt wetland edge.

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): 4
 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:

Remarks:

Wetland hydrology criterion met.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Bayshore Bikeway Segment 8B City/County: Chula Vista/San Diego Sampling Date: July 30, 2014
 Applicant/Owner: SANDAG State: CA Sampling Point: 2
 Investigator(s): S. Nigro, L. Moreton Section, Township, Range: 16/18S/2W
 Landform (hillslope, terrace, etc.): drainage bottom Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR): C Lat: 32.6033 Long: -117.0923 Datum: _____
 Soil Map Unit Name: HrC2 Huerhuero loam, 5 to 9 percent slopes, eroded NWI classification: Not on NWI maps

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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: USACE, CDFW, and CCC wetland.	

VEGETATION – Use scientific names of plants.

<p><u>Tree Stratum</u> (Plot size: <u>10' x 20'</u>)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%;">Absolute % Cover</th> <th style="width:10%;">Dominant Species?</th> <th style="width:10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>N/A</u></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td align="right" colspan="4"><u>0</u> = Total Cover</td></tr> </tbody> </table> <p><u>Sapling/Shrub Stratum</u> (Plot size: <u>10' x 20'</u>)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u>N/A</u></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td align="right" colspan="4"><u>0</u> = Total Cover</td></tr> </tbody> </table> <p><u>Herb Stratum</u> (Plot size: <u>10' x 20'</u>)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u>Elymus triticoides</u></td><td align="center"><u>40</u></td><td align="center"><u>X</u></td><td align="center"><u>FAC</u></td></tr> <tr><td>2. <u>Festuca perennis</u></td><td align="center"><u>20</u></td><td align="center"><u>X</u></td><td align="center"><u>FAC</u></td></tr> <tr><td>3. <u>Rumex crispus</u></td><td align="center"><u>15</u></td><td></td><td align="center"><u>FAC</u></td></tr> <tr><td>4. <u>Ambrosia psilostachya</u></td><td align="center"><u>15</u></td><td></td><td align="center"><u>FACU</u></td></tr> <tr><td>5. <u>Typha sp.</u></td><td align="center"><u>5</u></td><td></td><td align="center"><u>OBL</u></td></tr> <tr><td>6. <u>Cyperus eragrostis</u></td><td align="center"><u>5</u></td><td></td><td align="center"><u>FACW</u></td></tr> <tr><td>7. _____</td><td></td><td></td><td></td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td align="right" colspan="4"><u>100</u> = Total Cover</td></tr> </tbody> </table> <p><u>Woody Vine Stratum</u> (Plot size: <u>10' x 20'</u>)</p> <table style="width:100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u>N/A</u></td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td align="right" colspan="4"><u>0</u> = Total Cover</td></tr> </tbody> </table> <p>% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u></p>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>N/A</u>				2. _____				3. _____				4. _____				<u>0</u> = Total Cover				1. <u>N/A</u>				2. _____				3. _____				4. _____				5. _____				<u>0</u> = Total Cover				1. <u>Elymus triticoides</u>	<u>40</u>	<u>X</u>	<u>FAC</u>	2. <u>Festuca perennis</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	3. <u>Rumex crispus</u>	<u>15</u>		<u>FAC</u>	4. <u>Ambrosia psilostachya</u>	<u>15</u>		<u>FACU</u>	5. <u>Typha sp.</u>	<u>5</u>		<u>OBL</u>	6. <u>Cyperus eragrostis</u>	<u>5</u>		<u>FACW</u>	7. _____				8. _____				<u>100</u> = Total Cover				1. <u>N/A</u>				2. _____				<u>0</u> = Total Cover				<p>Dominance Test worksheet:</p> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
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<u>0</u> = Total Cover																																																																																																	
<p>Prevalence Index worksheet:</p> 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 = _____																																																																																																	
<p>Hydrophytic Vegetation Indicators:</p> <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																																																																																																	
<p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>																																																																																																	
<p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____</p>																																																																																																	

Remarks:
 Hydrophytic vegetation present. Vegetation community = herbaceous wetland
 Photos 26 and 27.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	7.5 YR 2.5/2	93	7.5 YR 2/4	7	C	M	snd cly lm	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Hydric soil criterion met.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Wetland hydrology criterion met.



Appendix H

SITE PHOTOS

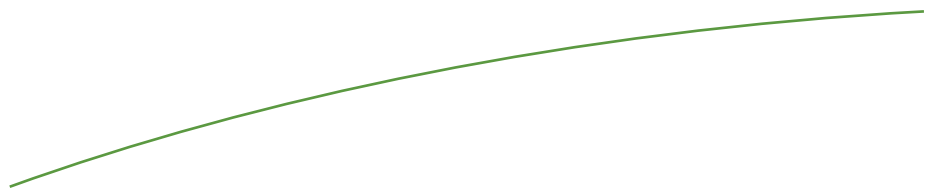




Photo 1. Looking north at USACE, CDFW, and CCC coastal brackish marsh wetland within Drainage 1A in the northern portion of the study area.



Photo 2. Looking northwest at USACE, CDFW, and CCC herbaceous wetland along Drainage 1C in the southern portion of the study area.

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Photo 3. Looking south at USACE, CDFW, and CCC coastal brackish marsh wetland along Drainage 1D in the northern portion of the study area.