

## 8.2 Biological Resources

### 8.2.1 Introduction

This subsection describes the laws, ordinances, regulations, and standards (LORS) that apply to biological resource protection, the environmental setting and conditions of the affected site, the methods that were used to evaluate the potential presence of special-status species, and the potential adverse impacts on biological resources that could occur as a result of Project construction and demolition activities, as well as operations. It also presents protection and mitigation measures that would avoid, minimize, or compensate for adverse impacts.

The SBRP project consists of three phases:

- **The Construction Phase** – The first phase is the demolition of existing structures and foundations associated with the former Liquefied Natural Gas (LNG) Facility, preparation of construction lay down areas, and the construction of the SBRP. Initial operations of SBRP will include an interim interconnection to the San Diego Gas & Electric Company (SDG&E) transmission system through a new 230-kilovolt ampere (kVA) substation on approximately 0.6 acre (interconnecting to SDG&E's planned new 230-kilovolt [kV] transmission line) and an underground interconnection to the existing SDG&E South Bay 138/69 kV substation.<sup>1</sup>
- **The Demolition Phase** – The second phase of Project construction activities will occur after the SBRP achieves commercial operation. The construction activity during this phase will be the demolition of the existing SBPP facilities, excluding SDG&E's existing South Bay Substation which will remain in service until the new substation is constructed.
- **The New Substation Phase** – The final phase of the Project will involve the construction of the SDG&E substation on approximately 6.5 acres south of and adjacent to the SBRP site. This construction will be performed after the start up of the SBRP and demolition of SBPP. After the new SDG&E substation construction is completed and operational, and the SBRP generator leads are attached to the new facilities, SDG&E could then initiate demolition activities on the South Bay Substation, located north of the SBRP Project site. These demolition activities, however, are not part of the scope of this Application for Certification (AFC). They are part of a separate project of unknown timing and scope.

The reason there are two interconnect steps is to ensure that interconnection can be secured by the proposed SBRP on-line date (2010). Also, SDG&E holds certain obligations associated with a new substation as part of its Memorandum of Understanding with the City of Chula Vista, but these obligations occur after the demolition of SBPP.

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<sup>1</sup> SDG&E was granted a Certificate of Public Convenience and Necessity (CPCN) for the Otay Mesa Power Purchase Agreement (OMPPA) Transmission Project. The CPCN is for the construction of two new 230-kV electric transmission circuits to connect SDG&E's Miguel Substation with both the Sycamore Canyon Substation and the Old Town Substation in San Diego County. The circuit to the Old Town Substation is planned to pass within approximately 100 feet of the proposed SBRP. This project is under construction. The SBRP interconnection plan is based in part on interconnecting to this circuit.

## 8.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The following subsections and Table 8.2-1 (due to size, Tables 8.2-1 through 8.2-4 are located at the end of this subsection) describe the primary LORS that apply to potential impacts on biological resources in the Project area, and list the responsible agencies for these regulations. LORS, including conformance to the LORS, are shown in Table 8.2-1. These LORS were reviewed and contacts with the appropriate agencies were made to determine if the proposed Project could affect sensitive biological resources. Through project design features and systems, and proposed resource protection and mitigation measures, the SBRP Project will conform to all applicable LORS for protection of biological resources. The following sections describe the sensitive biological resources in the South San Diego Bay region designated by federal, state, and regulatory agencies that could be affected by construction, demolition, and operation of the SBRP and SBPP.

Among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the Project with such requirements even though the Applicant understands that they are not applicable to the Project as a matter of law. (See Section 8.4 – Land Use for a discussion of this issue.) The analysis of City LORS in this section is informational and does not address the jurisdictional issues which are discussed in Section 8.4 – Land Use.

### 8.2.2.1 Federal

**Federal Water Pollution Control Act Amendments of 1977 (as amended).** This law, commonly known as the Clean Water Act, established the basic structure for regulating discharges of pollutants into the Waters of the United States. Waters of the United States includes essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Under Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with state water quality standards. The State Water Resources Control Board is responsible for administering Section 401 regulations. Most Certifications are issued in connection with U.S. Army Corps of Engineers (USACE) Section 404 permits for dredge and fill discharges. Section 404 of the Clean Water Act requires approval prior to discharging dredged or fill material into any Water of the United States. The permitting program is designed to minimize the fill of Waters of the United States, and when impacts cannot be avoided, require compensatory mitigation. The USACE is responsible for administering Section 404 regulations. If the USACE takes jurisdiction over Telegraph Canyon Creek and/or seasonally ponding man-made features on site, a Section 404 permit may be required for constructing the gas pipeline under the creek and filling potential wetland areas. The USACE will determine if permits are necessary when they have completed their review of the Project.

**Rivers and Harbors Act of 1899.** Section 10 of the Rivers and Harbors Act requires approval prior to the commencement of any work in or over navigable waters of the United States, or which affects the course, location, condition or capacity of such waters. Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation. Section 10 permits are required for construction and demolition activities in

these waters. The USACE is responsible for administering Section 10 regulations. The USACE will most likely take jurisdiction over the intake and effluent channels that are within the Bay and navigable waters. A Section 10 permit may be required for working along the Bay shoreline during removal of the cooling water intake headwall and restructuring of the shoreline.

**Federal Endangered Species Act (FESA) (16 USC 153 et seq.).** Applicants for projects that could result in adverse impacts on any federally listed species are required to consult with and mitigate potential impacts in consultation with the U.S. Fish and Wildlife Service (USFWS). In addition, the National Marine Fisheries Service (NMFS) would be consulted regarding anadromous fish and marine mammals, and for this Project, the green sea turtle. Adverse impacts are defined as “take,” which is prohibited except through authorization of a FESA Section 7 or Section 10 consultation and Incidental Take Authorization. “Take” under federal definition includes “such act as may include significant habitat modification or degradation” (50 CFR §17.3). Species that are candidates for listing are not protected by FESA; however, USFWS advises that a candidate species (as well as species of concern) could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration. Consultation with USFWS may be required for potential indirect impacts to nesting Western snowy plover, California least tern, and Belding’s savannah sparrow from temporary construction and demolition noise. Consultation with NMFS may be required for potential indirect impacts to the green sea turtle that is attracted to the SBPP warm water effluent in the South San Diego Bay.

**Critical Habitat for Listed Species.** Critical habitat has been designated under the FESA in San Diego County (County) for several listed species. The closest critical habitat unit is for the Western snowy plover located 3.5 miles west of the site along Silver Strand and Coronado Island and 2.5 miles north of the site at the Sweetwater Marsh National Wildlife Refuge (see Figure 8.2-1; all figures are located at the end of the subsection). The closest tidewater goby Critical Habitat unit (Unit 10 Agua Hedionda Lagoon) is approximately 40 miles north of the site. Consultation with USFWS typically addresses potential impacts to critical habitats, although no critical habitat will be affected by the Project.

**Migratory Bird Treaty Act (MBTA) (16 USC 703 to 711)** protects all migratory birds, including nests and eggs. USFWS will require protection measures for migratory birds, including wintering waterfowl, shorebirds, and raptors. These birds primarily occur adjacent to the site and would not be directly affected. Construction and demolition noise may temporarily disturb roosting migratory birds.

**Bald and Golden Eagle Protection Act (16 USC 668)** specifically protects bald and golden eagles from harm or trade in parts of these species. No eagles were observed in the Project area; however, eagles may fly over the site and potentially forage near the site. No impacts to eagles are expected.

**San Diego Unified Port District Act of 1962.** The San Diego Unified Port District Act provided for the creation of the Port District and contained the provision that the Board of Port Commissioners draft a master plan for harbor and port improvements, and for the use of all tidelands and submerged lands, which are conveyed to the Port. The first Port Master Plan was adopted by the Board in 1964, and underwent several revisions. The California Coastal Act necessitated that the Port Master Plan be brought into conformance with the

Act. After plan certification by the California Coastal Commission, coastal development permit authority for projects occurring within the Port's tidelands jurisdiction resides with the Board of Port Commissioners. The California Coastal Commission certified the Port of San Diego Master Plan in 1981. The District also created the San Diego Bay Integrated Natural Resources Management Plan (available electronically at [http://www.portofsandiego.org/sandiego\\_environment/nrmp/nrmpable.asp](http://www.portofsandiego.org/sandiego_environment/nrmp/nrmpable.asp)). The District has established a draft Mitigation Policy for impacts to the Bay's natural resources (available electronically at [http://www.portofsandiego.org/sandiego\\_environment/Mitigation.asp](http://www.portofsandiego.org/sandiego_environment/Mitigation.asp)). Proposed improvements for the Project site are also addressed in the draft Chula Vista Bay Front Master Plan (available electronically at <http://www.portofsandiego.org/projects/cvbmp/index.asp>).

### **8.2.2.2 State**

#### **California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et seq.).**

Species listed under this act cannot be "taken" or harmed, except under specific permit. At present, "take" means to do or attempt to do the following: hunt, pursue, catch, capture, or kill. The California Department of Fish and Game (CDFG) has jurisdiction over listed state species. Temporary construction and demolition noise may indirectly effect nesting Belding's savannah sparrow; however, protection measures would most likely reduce impacts to less than significant. A permit to "take" a state listed species is most likely not required.

**Fish and Game Code Section 2080.1** - Allows an applicant who has obtained a federal incidental take statement pursuant to a federal Section 7 consultation or a federal Section 10(a) incidental take permit to notify the Director in writing that the applicant has been issued an incidental take statement or an incidental take permit pursuant to the federal Endangered Species Act of 1973. The applicant must submit the federal opinion incidental take statement or permit to the Director of Fish and Game for a determination as to whether the federal document is "consistent" with CESA. Receipt of the application by the Director starts a 30-day clock for processing the Consistency Determination

**Fish and Game Code Section 3511** describes bird species, primarily raptors, that are "fully protected." Fully protected birds may not be taken or possessed, except under specific permit requirements. Fully protected birds in the Project area include peregrine falcon, California least tern, California brown pelican, and light-footed clapper rail. No take of these species will occur from implementation of the Project.

**Fish and Game Code Section 3503** states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

**Fish and Game Code Section 3503.5** protects all birds of prey and their eggs and nests.

**Fish and Game Code Section 3513** makes it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

**Fish and Game Code Sections 4700, 5050, and 5515** lists mammal, amphibian, and reptile species that are fully protected in California.

**Fish and Game Code Sections 1900 et seq.**, the Native Plant Protection Act lists threatened, endangered, and rare plants listed by the state.

**Fish and Game Code (Sections 1601 through 1607)** prohibits alteration of any stream, including intermittent and seasonal channels and many artificial channels, without a permit from CDFG. The limit of CDFG jurisdiction is subject to the judgment of the department, up to the 100-year flood level. This applies to any channel modifications that would be required to meet drainage, transportation, or flood control objectives of the Project.

**California Coastal Act.** Among the state laws applicable to this project is the California Coastal Act. For informational purposes, this section reviews compliance of the Project with the entire Coastal Act, including provisions of Chapter 3 of the Coastal Act that the Applicant understands are not legally applicable to Port property. Chapter 8 of the Coastal Act governs Port properties and contains both procedural and substantive requirements that are distinct from those generally applicable to non-Port properties. (See Section 8.4 – Land Use for a discussion of this issue.) The analysis of Chapter 3 policies in this section is informational and does not address the jurisdictional issues discussed in Section 8.4 – Land Use.

The SBRP site located on 12.9 acres of at the 33-acre former LNG site currently falls under the jurisdiction of the Chula Vista Local Coastal Program; this jurisdiction will shift to the Port and its Port Master Plan in the near future (Lunstedt, 2006).

**Title 14, California Code of Regulations, Sections 670.2 and 670.5** lists animals designated as threatened or endangered in California. California species of special concern (CSC) is a category conferred by the CDFG on those species that are indicators of regional habitat changes or are considered potential future protected species. CSCs do not have any special legal status, but are intended by CDFG for use as a management tool to take these species into special consideration when decisions are made concerning the future of any land parcel.

**California Environmental Quality Act (CEQA) (Public Resources Code Section 15380)** defines “rare” in a broader sense than the definitions of threatened, endangered, or species of special concern. Under this definition, CDFG can request additional consideration of species not otherwise protected. CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.

**Warren Alquist Act** is a CEQA-equivalent process implemented by the California Energy Commission (CEC). Preparation of this application will result in an assessment prepared by the CEC staff to fulfill the requirements of CEQA.

### 8.2.2.3 Local and Other Jurisdictions

#### 8.2.2.3.1 Applicable Habitat Conservation Plans

The Project is located within two existing FESA Section 10 Habitat Conservation Plan Areas: the San Diego Multiple Species Conservation Plan (MSCP) Subregional Plan; and the City of Chula Vista MSCP Subarea Plan. The City of Chula Vista describes these Plans as follows:

*“The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation plan developed to address the needs of multiple species and the preservation of natural vegetation communities in southwestern San Diego County. The MSCP Subregional Plan, a ‘framework’ plan for the 12*

*participating jurisdictions, was adopted by the City of San Diego and County of San Diego in 1997. The MSCP Subregional Plan addresses the potential impacts of urban growth, natural habitat loss and species endangerment, and creates a plan to mitigate for the potential loss of 'covered species' and their habitat due to the direct, indirect and cumulative impacts of future development of both public and private lands within the MSCP's approximately 900-square mile study area. The City of Chula Vista MSCP Subarea Plan is a policy document through which the MSCP Subregional Plan is implemented within the City's jurisdiction. The City's MSCP Subarea Plan provides a blueprint for habitat preservation and forms the basis for federal and state incidental 'take' permits for 86 plant and animal species within the City." (quote from [http://www.chulavistaca.gov/City\\_Services/Development\\_Services/Planning\\_Building/Planning/Environmental/Habitat.asp](http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/Planning/Environmental/Habitat.asp)).*

However, the Site is located in a special management zone (e.g. under Port authority) and is therefore not eligible for inclusion under either MSCP (Lunstedt, 2006).

#### **8.2.2.3.2 San Diego County LORS**

The San Diego County Code of Regulatory Ordinances protects vegetation occurring on public, unincorporated, and County property (Title 6, Division 3, Chapter 3) (available electronically at [http://www.amlegal.com/sandiego\\_county\\_ca/](http://www.amlegal.com/sandiego_county_ca/)). The Project site does not occur within public, unincorporated, or County property. Title 8, Division 7, Chapter 6, protects waterways and Title 8, Division 6, Chapters 1 and 5, protect special-status plants and animals within the San Diego MSCP Subregional Plan Area.

#### **8.2.2.3.3 City of Chula Vista LORS**

As discussed above, among the local LORS discussed in this section are certain ordinances, plans or policies of the City of Chula Vista. For informational purposes, this section reviews compliance of the Project with such requirements even though the Applicant understands that they are not applicable to the Project as a matter of law. (See Section 8.4 – Land Use for a discussion of this issue.) The analysis of City LORS in this section is informational and does not address the jurisdictional issues which are discussed in Section 8.4 – Land Use.

The City of Chula Vista General Plan, Chapter 9 - Conservation Element, states:

*"The overall goal of the Environmental Element is to: Improve sustainability through the responsible stewardship of Chula Vista's natural and cultural resources; promotion of environmental health; and protection of persons and property from environmental hazards and the undesirable consequences of noise."*  
([http://www.chulavistaca.gov/City\\_Services/Development\\_Services/Planning\\_Building/General\\_Plan/documents.asp](http://www.chulavistaca.gov/City_Services/Development_Services/Planning_Building/General_Plan/documents.asp))

The City of Chula Vista Municipal Codes, Title 17 – Environmental Quality, Chapter 17.35 – Habitat Loss and Incidental Take states:

*"The purpose of the habitat loss and incidental take (HLIT) regulations is to protect and conserve native habitat within the city of Chula Vista and the viability of the species supported by those habitats. These regulations are intended to implement the city of Chula Vista multiple species conservation program (MSCP) subarea plan by placing priority on the preservation of biological resources within the planned and*

*protected preserve. These regulations are intended to assure that development occurs in a manner that protects the overall quality of the habitat resources, encourages a sensitive form of development, and retains biodiversity and interconnected habitats. The habitat-based level of protection achieved through implementation of the MSCP is intended to meet the conservation obligations of the covered species identified therein. These regulations are also intended to protect the public health, safety, and welfare while being consistent with sound resource conservation principles and the rights of private property owners. (Ord. 3004 § 1, 2005)."*

*"The applicant shall obtain a HLIT permit in the following mapped areas identified in the Chula Vista MSCP subarea plan, unless exempt pursuant to CVMC 17.35.050: 1. One hundred (100) percent conservation areas; 2. Seventy-five (75) to 100 percent conservation areas. The following are exempt from the requirements of this chapter: A. Development of a project area that is one acre or less in size and located entirely in a mapped development area outside of covered projects."*  
(<http://www.codepublishing.com/CA/ChulaVista/PDF/ChulaVista17.pdf>).

The Site is designated a Development Area and is zoned "general industrial" and is therefore exempt from these ordinances.

The City of Chula Vista Municipal Codes, Title 12 – Streets and Sidewalks, Chapter 12.32 – Street Plantings Chula Vista City Codes deem it unlawful for anyone to remove vegetation from any public right-of-way within the city without permit, and require protection of trees during construction in any public right-of-way (<http://www.codepublishing.com/ca/chulavista.html>). The Site is not within any public right-of-way and is therefore exempt from these ordinances.

## **8.2.3 Environmental Setting**

The following subsections describe the biological conditions of the existing SBPP site and proposed SBRP site, beginning with a regional overview, the vegetation types and habitat present in the Project area, a description of wildlife typical to the area, and a discussion of specific special-status species known to occur in the general region (see Figure 8.2-1 for documented species locations as well as Critical Habitat, Chula Vista Reserve, and National Wildlife Refuges).

### **8.2.3.1 Regional Overview**

The SBPP site and proposed SBRP site are located on Port property within the City of Chula Vista in southern San Diego County. The SBPP is on land parcels currently leased by the Applicant from the Port. The project site is bordered on the north by the Chula Vista Marina, on the west by the Chula Vista Wildlife Reserve and South San Diego Bay, on the south by the South Bay Salt Works (and the South Bay Unit of the San Diego National Wildlife Refuge), and on the east by Bay Boulevard and Interstate 5 (I-5) (Figure 8.2-1). No impacts from construction, demolition, or operations of SBRP would occur to any of the refuges, reserves, or estuaries in the Project vicinity.

The climate in the Project area is Mediterranean, with warm dry summers and mild, wet winters. The climatic conditions in the area of SBPP have been described based on

information reported by the National Oceanic and Atmospheric Administration (NOAA). Based on records from the weather station at the San Diego International Airport, Lindbergh Field (12 miles north of the site), the average annual temperature for the area is approximately 64 degrees Fahrenheit (°F). The average annual daily minimum and maximum temperatures are about 58°F and 71°F, respectively. The average annual precipitation is approximately 9.9 inches per year. Approximately 85 percent of precipitation occurs between November and March, although this amount may vary widely from year to year. The modest annual rainfall accumulation is augmented by frequent fog and marine layers.

The predominant wind directions are from the northwest and west-northwest. Wind speeds less than 12 miles per hour (mph) occur 87 percent of the time. The average wind speed is about 6.8 mph.

The primary land uses in the Project vicinity are industrial and commercial with residential areas primarily east of Interstate 5. The Project site is zoned general industrial by the City of Chula Vista. The site is at 25 feet in elevation. The primary water conveyance features in the Project area are Telegraph Canyon Creek, an unnamed channel, and various stormwater drainages that flow to the Bay.

There are no Significant Natural Areas or Designated Ecological Reserves within the Project disturbance boundary area, however, two reserves, Chula Vista Wildlife Reserve and the South Bay Unit of the San Diego National Wildlife Refuge (NWR) are adjacent to the site (Figure 8.2-1). The Chula Vista Wildlife Reserve was created by constructing an access levee/road and a ring levee system in a subtidal area of south San Diego Bay. Dikes were designed to erode down over time (U.S. Department of the Navy and San Diego Unified Port District, 1999). The dikes and salt pond areas supports nesting least terns, roosting brown pelicans, and many shorebirds and waterfowl during winter migrations. Currently, a fence separates the Reserve area from public access. This fence will remain in place during and after construction of SBRP. Access to the Reserve would be coordinated through Reserve managers. No casual public access will occur through the SBRP site.

The South Bay Unit of the San Diego Bay National Wildlife Refuge encompasses 3,940 acres, and habitats consist primarily of coastal salt marsh, tidal flats, and salt ponds ([http://www.fws.gov/sandiegorefuges/South\\_bay.htm](http://www.fws.gov/sandiegorefuges/South_bay.htm)). The property was purchased by the Port and turned over to the USFWS for inclusion in the NWR system. The NWR supports a large number of migratory and resident birds. The green sea turtle (*Chelonian mydas*) also inhabits the South Bay where it has been attracted to the warm water effluent of the existing SBPP since the 1960s.

The Sweetwater Marsh Unit of the San Diego Bay National Wildlife Refuge, 2.5 miles north of the site, consists primarily of coastal salt marshes and tidal flats (<http://www.fws.gov/sandiegorefuges/Sweetwater.htm>). The 316-acre Sweetwater Marsh National Wildlife Refuge is home to nine rare and endangered species: Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*), Burrowing Owl (*Athene cunicularia*), California Brown Pelican (*Pelecanus occidentalis californicus*), Coastal California Gnatcatcher (*Poliophtila californica californica*), California Least Tern (*Sterna antillarum browni*), Light-footed Clapper Rail (*Rallus longirostris levipes*), and Western Snowy Plover (*Charadrius alexandrinus nivosus*). The Reserve also supports populations of Salt Marsh Birds Beak and Yerba Reuma.

The salt marsh outside the northwest fenceline of the SBPP site is informally known as the J Street Marsh by USFWS NWR managers. This area is within the South San Diego Bay Unit approved acquisition boundary (SDNWR 2005).

The following subsections describe the types of habitat found in the Project areas of potential effect (APE). Special-status species that are known or have the potential to occur in the Project's APE areas are listed in Table 8.2-4 and described in Subsection 8.2.3.7. A comprehensive list of special-status species obtained from USFWS, CDFG, and local experts that was used to evaluate Project impacts to sensitive biological resources is included in Appendix 8.2A.

### **8.2.3.2 SBPP 115-Acre Area Proposed for Demolition**

The existing SBPP is located on 115-acres leased by the Applicant from the Port. The SBPP and supporting building structures within the 115-acre parcel will be demolished after SBRP achieves commercial operations. The land parcel, located west of Bay Blvd, consists largely of hydraulic fill dredged from the San Diego Bay that was placed around the margins of the bay to create land areas. Also present throughout the SBPP site are localized areas of conventionally placed, compacted fill. During construction of the SBPP in the late 1950s, the hydraulic fill was removed to 10 feet below sea level and replaced with approximately 80,000 cubic yards of fine Coronado sand from the Silver Strand.

Figures 8.2-2a through 8.2-2h include Project feature locations and biological resources within 1 mile of the SBPP and SBRP sites. The habitats and biological features are identified on aerial photo base maps at 1:6,000 scale.

Vegetation communities on the 115-acre parcel primarily include ruderal sandy open areas with pockets of non-native annual grassland. The sandy, compacted, and graded soil on the site does not support significant vegetation or wildlife habitat. The old northern tank farm area collects water during high precipitation years and cattails grow in small, deeper areas of one of the tank excavations (Figure 8.2-3). Another small excavated pit (30-foot diameter) in this area holds water long enough to support a large population of mosquitofish. This pit also supports a small population of exotic African clawed frogs, most likely escapees from local resident's fish tanks.

Currently, permitted discharge of surface-water runoff from the SBPP occurs via a storm drain system which flows through the circulating water discharge channel and Telegraph Canyon Creek into the San Diego Bay (Figure 8.2-3). The creek consists of a concrete lined section entering the site from the eastern residential and commercial area, and an unlined section where it empties into the San Diego Bay. A stormwater drainage (Channel Creek) similar in structure and purpose to Telegraph Canyon Creek occurs immediately outside the northern site boundary that will not be affected by the Project (Figure 8.2-3).

### **8.2.3.3 SBRP 33-Acre Site**

The 33-acre land parcel located south of the SBPP held tanks of LNG for operation of SBPP (Figure 8.2-2a). Approximately 19.4 acres of this 33-acre parcel will be used for construction and operation of SBRP. This includes 12.9 acres for the SBRP plant footprint and 6.5 acres for the relocated SDG&E substation. The remaining 13.6 acres includes a planned Port 100-foot buffer between the SBRP site and western property fenceline that borders the salt ponds,

and a 300-foot SDG&E easement in which various transmission towers owned by SDG&E are located along the eastern portion of the property.

The 33-acre former LNG site has been maintained as an industrial facility subject to modification by future redevelopment. The site contains cement foundations and compacted, relatively impervious base material that supports weedy, ruderal vegetation. Access roads and paths are still present and show signs of occasional use.

The LNG tank farm was closed and mostly dismantled in 1989. Two large tank foundations and several cement building foundations are still present. The existing berm that surrounded the large tanks is also still present and contains a degraded asphalt cover along the rim that allows vegetation to grow through the cracks. As part of site preparation activities, the cement and asphalt will be removed in preparation for construction of SBRP and recycled and used to fill low/excavated areas on SBRP and/or the 115-acre parcel. The berm would be leveled and the entire area graded and the foundations of the former LNG tanks will be removed.

The land area primarily supports non-native annual grassland that surround the old LNG tank containment berm. A few small ponding areas occur in the grassland south of the bermed area. These ponding areas and the area inside the LNG containment berm hold water during unusually high precipitation years, which allow marginal wetland vegetation (primarily non-native) to grow.

#### **8.2.3.4 Biological Survey Methods**

Biological resources evaluated for project impacts include vegetation communities, wetlands, wildlife, and wildlife habitats in all the temporary and permanent project impact locations. The surveyed areas include the 33-acre LNG site, the 115-acre site, and an area 1-mile out from the site. All linear features (gas pipeline, water supply and discharge pipelines, electric transmission lines) are well within 1-mile of the site. The general project vicinity is dominated by industrial and commercial use, so survey efforts concentrated on "edge" areas where natural habitat may persist or where native species may persist. The field surveys were aided by aerial photographic interpretation, which helped identify land uses. The presence, or potential presence, of sensitive biological resources was determined from information gathered during field surveys conducted for the Project, published and unpublished literature, and natural resource agency databases.

General habitat and wildlife field surveys were performed by CH2M HILL biologists November 29, 2005, and February 14-16, 2006. Wildlife surveys included evening periods to observe nocturnal animals. Results of wildlife surveys include observations of scat, tracks, and other sign. A focused special-status species survey was conducted by CH2M HILL biologists on May 18, 2006 for special-status species, including nesting peregrine falcon, Belding's savannah sparrow, and other nesting birds that occur only seasonally in the area. Botanical surveys were performed by botanist Fred Roberts on February 15 and May 26, 2006 during blooming periods for rare species. The qualifications of field biologists are provided in Appendix 8.2B. California Natural Diversity Data Base (CNDDDB) "California Native Species Field Survey Forms" that record observations of special-status species on the Project site are included in Appendix 8.2C.

Previous studies and portions of information from the following documents were used as references for additional occurrences of species at the site:

- Duke Engineering & Services. 2001. Environmental Assessment Report for the Port of San Diego Former Liquefied Natural Gas Facility, Chula Vista, California. Appendix A: Biological Assessment of Proposed Core Sampling Sites. Prepared for Duke Energy South Bay, LLC. Prepared by Duke Engineering & Services, Sacramento, California.
- URS. 2005. Biology Technical Report for the Duke South Bay Energy Facility Project, Final Report. Prepared for Duke Energy, South Bay LLP, Chula Vista, CA. Prepared by URS, San Diego, CA.
- San Diego Bay National Wildlife Refuge Sweetwater Marsh and South San Diego Bay Units, Draft Comprehensive Conservation Plan and Environmental Impact Statement, July 2005.
- U.S. Department of the Navy, Southwest Division (USDoN, SWDIV). 1999. San Diego Bay Integrated Natural Resources Management Plan, and San Diego Unified Port District Draft. September 1999. San Diego, CA. Prepared by Tierra Data Systems, Escondido, CA.

### **8.2.3.5 Vegetation Communities and Wildlife Habitats**

Habitat types that would be affected during construction and demolition activities in the Project area consist of primarily ruderal habitat with areas of annual grassland, baccharis scrub, landscape, and drainage features (see Figure 8.2a). Table 8.2-2 (at the end of this section) presents a list of plant species observed on the site during botanical surveys. Table 8.2-3 (at the end of this section) presents a list of wildlife species observed on the site during on-site field surveys.

#### **8.2.3.5.1 Ruderal Habitat**

The dominant habitat type on the 115-acre SBPP site is ruderal, consisting of bare or disturbed ground with weedy or non-native plant species. Typical species in this habitat on site include tumbleweed, telegraph weed, mustard, and non-native atriplex species. This area is periodically maintained to control vegetation overgrowth, primarily with spot weed killer. The Port recently manually removed excessive overgrowth of vegetation around the cement foundations in the 33-acre area. Most of the property has had disturbance from past development and maintenance activities and does not provide suitable habitat for special-status plants or wildlife; however, ground nesters such as horned lark (*Eremophila alpestris*) and killdeer (*Charadrius vociferous*) may nest in ruderal areas, in particular, north of Telegraph Canyon Creek where sparse vegetation still exists.

#### **8.2.3.5.2 Urbanized and Landscape Communities**

Several landscape berms were established on the SBPP and within the 300-foot transmission line easement east of the proposed SBRP sites (Figure 8.2-2a). These berms are approximately 6 to 7 feet high and 20 feet wide. They support mature landscape trees and shrubs such as California fan palm, eucalyptus, Brazilian pepper, natal plum, and sand spurry. The vegetation is used by nesting songbirds such as Anna's hummingbirds (*Calypte anna*), mourning dove (*Zenaidura macroura*), house finch (*Carpodacus mexicanus*), and savannah sparrows (*Passerculus sandwichensis*).

There are residences and industrial, commercial, and urban uses within 1 mile east of the Project site in the City of Chula Vista. Houses, streets, and parking lots tend to be planted with garden plants (e.g., prickly pear, azalea, oleander, bottlebrush, rose, palm trees, eucalyptus, and other ornamental species). The availability of water, shady cover, and insects makes the yards and landscaping around urban areas attractive to certain adaptable species, but these tend not to include many native or sensitive species. Dominant wildlife in these areas include common species (e.g., house sparrow (*Passer domesticus*), house finch, Northern mockingbird (*Mimus polyglottos*), western meadowlark (*Sturnella neglecta*), mourning dove, American crow (*Corvus brachyrhynchos*), and American robin (*Turdus migratorius*). Mammal species attracted to landscape and human residences include raccoon (*Procyon lotor*) opossum (*Didelphis virginiana*), house mice (*Mus musculus*), Norway rats (*Rattus norvegicus*), California ground squirrels (*Spermophilus beechyi*), as well as domestic or feral cats (*Felis sylvestrus catus*) and dogs (*Canis familiaris*). These species tend to be those that are highly adaptable, widespread, and common. Landscape and urban habitats dominate the area east of the Project site.

#### 8.2.3.5.3 Annual Grassland Community

Disturbed grasslands at the SBRP site are dominated by nonnative annual grass species such as foxtail chess (*Bromus madritensis rubens*), soft chess (*B. hordaceus*), ripgut grass (*B. diandrus*), and slender wild oat (*Avena barbata*). Other common plants include the nonnative hottentot-fig, Australian saltbush (*Atriplex semibaccata*), white-stemmed filaree (*Erodium cicutarium*), bull thistle (*Cirsium vulgare*), telegraph weed, wild lettuce (*Lactuca seriola*), and bush mallow (*Malacothamnus fascicularis*). A few small, shallow depressions in the grassland are dominated by non-native species such as ryegrass (*Lolium perenne*), grass poly (*Lythrum hyssopifolium*), red-stemmed filaree (*Erodium cicutarium*), yellow sweetclover (*Melilotus indicus*), and Bermuda grass (*Cynodon dactylon*).

Wildlife observed in the annual grasslands include Western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis melanoleucus*), black-tailed hare (*Lepus californicus*), California ground squirrel, coyote (*Canis latrans*)(scat), savannah sparrow, Western meadowlark, and mourning dove.

#### 8.2.3.5.4 Baccharis Scrub Community

Baccharis scrub vegetation occurs in the southern portion of the site and mixed in with riparian species at the mouth of Telegraph Canyon Creek. The baccharis scrub vegetation found along the LNG containment berm is not a true representation of the habitat as it is not natural, but has some of the typical species, such as coyote bush (*Baccharis pilularis*), mulefat (*Baccharis salicifolia*), and broom baccharis (*Baccharis sarothroides*). Additional species include yellow sweetclover, Brazilian pepper, bull thistle, wild lettuce, summer mustard, tree tobacco (*Nicotiana glauca*), and coast goldenbush (*Isocoma menziesii* var. *vernonoides*). This habitat has been growing since the removal of the LNG tanks in 1989. Periodic maintenance of the area does not seem to include the berm as dense vegetation persists.

Wildlife observed in the LNG containment berm habitat include Anna's hummingbird, savannah sparrow, desert cottontail (*Sylvilagus audubonii*), opossum, blue-grey gnatcatcher (*Polioptila caerulea*), and foraging Cooper's hawk (*Accipiter cooperii*). Small mammal burrows and a coyote den was observed in the berm. Soils at the entrances to the burrows contain marine snail and bivalve shells, indicating the berm contains dredge materials from the Bay.

### 8.2.3.5.5 Marine and Inter-Tidal Zone Communities

The marine environment of south San Diego Bay consists of open water (sub-tidal), soft-bottom subtidal and intertidal areas, mud flats, tidal salt marshes, and salt ponds. Salt marsh vegetation is present along the coastal, northwest edge of the Demolition Area, surrounding the Chula Vista Wildlife Reserve, and the canals of the Salt Ponds (Figures 8.2-2a and 8.2-3). Coastal salt marsh bordering the Project site supports saltwort (*Batis maritima*), woody pickleweed (*Salicornia virginica*); estuary seabligh (*Suaeda esteroa*); woolly seabligh (*Suaeda taxifolia*); and cordgrass (*Spartina foliosa*). Salt marsh habitat provides excellent nesting, feeding, and escape habitat for a variety of species, including Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) and light-footed clapper rail (*Rallus longirostris levipes*)(USFWS, 1998).

Eel grass (*Zostera marina*) beds are a submerged plant community that fringes the entire south San Diego Bay intertidal zone (USFWS, 1998). Eel grass beds provide food and cover for many species of invertebrates and fish, which in turn, provide a food base for many bird species such as the least tern. Pacific green sea turtles, which are herbivorous, also feed on eel grass. Mudflats typically have anaerobic sediments that do not support vegetation but are a crucial link in the marine food chain and provide habitat for invertebrates and microorganisms that shorebirds feed on.

Hardshore habitat, created by depositing fill (e.g. riprap) and dredged material, is abundant but not natural to the San Diego Bay (U.S. Navy and SDUPD, 1999). Hardshore habitat is found along the Chula Vista Wildlife Reserve, salt pond margins, mouth of Telegraph Canyon Creek, and SBPP water intake/effluent channels. These dikes were originally created to stop the cool intake water from mixing with the heated effluent. Hardshore habitats provide nesting, resting, and foraging habitat for many birds and other wildlife. California least terns and other birds are known to nest on this landscape feature within the salt ponds and Reserve. California brown pelican, great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and common egret (*Ardea alba*) were observed roosting and/or foraging from the dikes.

The region commercially used by the Western Salt Company/South Bay Salt Works was once the largest expanse of tidal salt marsh in south San Diego Bay. It has been incorporated into the South Bay Unit of the San Diego Bay NWR (Figure 8.2-1). The San Diego Bay Integrated Natural Resources Management Plan describes the habitat function of the Salt Works:

*"The Salt Works cover approximately 1,451 acres (587 ha), producing sodium chloride and magnesium chloride for industrial use. Primary ponds are approximately 3 ft (1 m) deep at their center, and are the least salty, representing the first stage of the extraction process. Secondary ponds are up to 5 ft (2 m) deep. These ponds are slightly more saline than sea water and are used for commercial brine shrimp production. Pickling ponds have the second-highest salinities. The final step in the extraction process occurs in crystallizer ponds, which support the highest salinity levels. The evaporation process takes 12 to 18 months, depending on rainfall, with each crystallization pond harvested once per year. Brine shrimp thrive in the secondary system; shrimp eggs hatch beginning in mid-May and mature shrimp are collected through mid-December. These are harvested commercially. Most birds use*

*the southern side of these secondary ponds. Salinity in the salt ponds contributes to an abundance of brine flies, an important food for many birds."*

*"The dikes and ponds provide an escape area from rising tides, as well as feeding and resting areas for shorebirds and waterfowl. Different bird species preferentially select different areas of levees by the amount or proximity of vegetation or bare ground, or some other unknown factor about the substrate .... Gulls, terns, black skimmers, and pelicans, including the California brown pelican, use the dikes for evening roosts. Dikes separating the ponds support significant nesting colonies of western snowy plover, Belding's savannah sparrow, black-necked stilt, black skimmer, and Caspian, Forster's, gull-billed, royal, and California least terns" (U.S. Department of the Navy and San Diego Unified Port District, 1999).*

#### **8.2.3.5.6 Riparian Habitat**

Non-native riparian habitat occurs at the mouth of Telegraph Canyon Creek. The banks of the creek are primarily fill material. California fan palm, myoporum, Brazilian pepper, atriplex species, and baccharis species dominate the riparian area. The estuary seablite is found in the tidal mudflats at the base of the rip rap portion of the creek.

Riparian vegetation established on the banks of Telegraph Canyon Creek provide shelter for migratory songbirds during migration and nesting birds such as savannah sparrow, red-winged blackbirds (*Agelaius phoeniceus*), Anna's hummingbird, and black phoebe (*Sayornis nigricans*). This habitat also supports small mammals such as house mouse, Norway rat, California ground squirrel, and desert cottontail, which in turn provide prey for other wildlife. Surveys included observations or evidence of gopher snake (skin), coyote (scat), raccoon (tracks), opossum (skeleton), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk using the habitat for forage.

#### **8.2.3.5.7 Water Resources, Drainages, and Potential Wetlands**

None of the water features currently on the site are in a natural, undisturbed state. Portions of the combined 115-acre and 33-acre sites were elevated with soil dredged from the South Bay during construction of the power plant in the late 1950s (Figure 8.2-3).

The natural drainages that flow into San Diego Bay in the vicinity of the Project site (e.g. Telegraph Canyon Creek, Otay River, Sweetwater Creek, and Channel Creek) have been severely reduced and channelized by urbanization and water diversions and little freshwater discharges into the Bay (U.S. Department of the Navy and San Diego Unified Port District, 1999). These creeks drain stormwater from residential and commercial developments east of the site to the Bay. Freshwater wetland and riparian habitats still occur in these drainages where concrete does not dominate, primarily at the mouths of the drainages where they meet the Bay. Riverine wetland vegetation consists primarily of cattails, rushes, and reeds.

Only Telegraph Canyon Creek flows through the SBPP site. Telegraph Canyon Creek is cement-lined through most of the site with hard shore rip rap at the mouth entering into the South Bay. Sediments from stormwater discharges upstream collect at the eastern section of the creek where it enters the site. This sediment area supports sparse wetland vegetation such as cattails (*Typha* sp.), fennel (*Foeniculum vulgare*), castor bean (*Ricinus communis*), and small willows (*Salix* sp.), which are suitable for limited wildlife use. Black phoebe and red-winged blackbirds were observed using the vegetation as forage and shelter and could

potentially use the area as nest sites (until the creek is cleared during maintenance). The mouth of the creek supports coastal salt marsh habitat at water levels and riparian vegetation along the rip rap banks (Figure 8.2-2a). The estuary seabird was observed in this area during surveys (Figure 8.2-1). Wildlife that use the lined portion of the drainage include shore birds, song birds, raccoon, opossum, and coyote that feed on aquatic insects, crustaceans, and/or small mosquito fish. Dabbling ducks, such as teals (*Anas spp.*), northern shoveler (*Anas clypeata*), American wigeon (*Anas americana*), gadwall (*Anas strepera*), northern pintail (*Anas acuta*), and mallard (*Anas platyrhynchos*), are found primarily in shallow brackish water near the mouth of the drainage (U.S. Department of the Navy and San Diego Unified Port District, 1999).

Telegraph Canyon Creek most likely falls under the jurisdiction of the USACE, since it drains the watershed upstream and is connected to navigable waters (San Diego Bay). The Telegraph Canyon Creek channel and the bridge that crosses the creek would remain in place and not be affected by construction or demolition. The proposed metered gas pipeline providing fuel gas to SBRP will be constructed by SDG&E. Depending on the construction technique used by SDG&E, a Section 404 Nationwide Permit 12 may be required by the USACE, and a 401 water quality certification from the CRWQCB.

The channelized Channel Creek flows between the northern site boundary and the Marina Park into the J Street Marsh northwest of the site. This creek is similar in structure and habitats to Telegraph Canyon Creek. It is cement-lined at the eastern end and tidally influenced at the mouth with salt marsh pickleweed habitat lining the banks. Wildlife observed using this area includes great-blue heron, common egret, American coot (*Fulica Americana*), mallard, and striped skunk (*Mephitis mephitis*). All construction and demolition activities will occur within the existing fence line surrounding the SBPP and SBRP sites and no direct or indirect impacts would occur to Channel Creek.

The intake and effluent channels that were constructed as part of SBPP are directly connected to the San Diego Bay. The channels were excavated along the southeast shoreline of the Bay in 1958. Dredged material was also brought in from the Bay and placed on site in various locations to elevate portions of the site to build the power plant. Currently the shoreline is lined with rip rap. Once the SBPP is decommissioned and once-through cooling system dismantled, the headwall at the intake/effluent channel will be removed. Demolition of the headwall will require some in-water work at this location. This work may require a Rivers and Harbors Act Section 10 authorization from the USACE.

Several man-made drainages occur on the SBPP and SBRP sites that collect and convey stormwater to the Bay. The stormwater drainages were excavated in non-native upland soils (lack hydric characteristics), lack vegetation (no hydrophytic vegetation), and are maintained solely for stormwater runoff (i.e., no significant natural hydrology) (Figure 8.2-3). The stormwater drainages are lined with degraded, fractured asphalt and/or cement and do not have an ordinary high water mark (OHWM). There is no natural hydrologic connection to San Diego Bay or waters of the U.S. or State, as they flow to storm drains and a stormwater collection system on site. These drains eventually flow to the Bay through the circulating water discharge channel. The drainages will be replaced and/or modified during construction of SBRP to convey stormwater from SBRP to the Bay. No special-status plant or animal species were observed or are known or expected to inhabit the stormwater drainages in the Project impact areas.

Several man-made, industrial features (primarily the old tank farms) constructed for SBPP and the LNG tanks, pond water during high precipitation years. Some of the features pond water long enough to promote wetland vegetation in some years. Categories of wetland vegetation include: (1) obligate wetland plants (OBL) that almost always occur in wetlands; (2) facultative wetland plants (FACW) that occur in wetlands, but occasionally occur in non-wetlands; (3) facultative wetland plants (FAC) that are equally likely to occur in wetlands or non-wetlands; (4) facultative upland plants (FACU) that usually occur in non-wetlands, but occasionally are found in wetlands; and (5) obligate upland plants (UPL) that almost always occur in non-wetlands. Non-indicator (NI) status are upland species. During field investigations, the percentage of wetland species was determined based on the ratio of wetland indicator species present to the total number of species present. More than 50 percent of the dominant (at least 20 percent cover) plant species must be FAC, FACW, or OBL to meet the wetland vegetation criterion. The bermed containment area was left abandoned and minimally maintained since removal of the tanks in 1989, which has allowed vegetation to colonize inside the berm. Although water is not present in the berm most years, non-native tamarisk (*Tamarix ramosissima*) and native sea purslane (*Sesuvium verrucosum*) have colonized a low lying portion of the bermed area. Sea purslane (OBL) is a wetland indicator plant and tamarisk (FAC) is a marginal wetland indicator plant, suggesting the area is developing marginal wetland characteristics. However, the soils are primarily hard packed, sandy fill (often with marine snail shells) that does not show wetland indicators. This bermed area holds water only during high precipitation years (the LNG bermed areas do not flow off site, it just ponds). The containment area is an industrial facility constructed in upland soil, does not have an OHWM, and most likely does not fall under the jurisdiction of the USACE.

SBPP tank farm bermed areas are regularly drained after major storm events. Since SDG&E demolished the LNG site, it's likely that the berm area has never been pumped (it will not drain). Average rainfall for the area is approximately 10 inches. Rainfall from 1999 through 2003 averaged 6.8 inches. The 2004-2005 wet season rainfall was extraordinarily high with approximately 22 inches. This level of annual rainfall has only been exceeded during two other years: 24 inches in 1940-41 and 25 inches in 1893-94. A preliminary estimate of 2005-2006 rainfall from September 2005 through May 2006 is approximately 5.4 inches (CDWR 2006). Although standing water was observed during extremely high rainfall in 2004-2005 (URS 2005), little was observed during surveys in November 2005 and only for a short period.

The land area outside the bermed LNG containment area is primarily non-native annual grassland. A few depressions south of the bermed area formed since the site was filled and graded for construction of the LNG tanks (Figure 8.2-3). In addition, two small depressions north of Telegraph Canyon Creek developed after construction of SBPP between and adjacent to dirt access roads on Bay fill material (Figure 8.2-3). These depression areas were evaluated for wetland indicators as they have been observed to pond water during very high precipitation years (although not during surveys in 2005-2006). Water is not present in these areas in most years (URS, 2005). The soils typically contained small gravel, rocks, and marine snail shells (indicating fill material from the Bay) and did not show indicators of hydric soil. Dominate plant species observed in 2006 included primarily non-native species such as ryegrass (*Lolium perenne*)(FAC), grass poly (*Lythrum hyssopifolium*)(FACW), red-stemmed fileree (*Erodium cicutarium*)(NI), yellow sweetclover (*Melilotus indicus*)(FAC),

rabbit's foot grass (*Polypogon monspeliensis*)(FACW+), and Bermuda grass (*Cynodon dactylon*)(FACU). Although the depressions pond water some years and contain marginal wetland plant species, they do not have distinct boundaries (except the depression outlined by dirt roads) or an OHWM, and do not connect to natural water bodies (Bay or creeks) through swales or sheet flow. Elevation at the fenceline that separates the grassland from the salt ponds in the Bay is slightly higher than the site and the relatively low amounts of rainwater from the grassland area would not flow to the stormwater drainage or Bay. These ponding areas most likely do not fall under the jurisdiction of the USACE.

### 8.2.3.6 Biological Resources of Commercial or Recreational Value

The San Diego Bay attracts thousands of migratory birds in the winter months. This South San Diego Bay area is a prized recreational bird watching area within a highly developed city, particularly during the winter migration season. The South Bay Unit of the San Diego NWR has been designated a Globally Important Bird Area by the American Bird Conservancy. Birding tours are given by the refuge and Chula Vista Nature Center in February and October, but not during the nesting season. There are no public trails at the Salt Works and there is no public access. Hundreds of waterfowl and shorebirds were found to concentrate at the mouth of Telegraph Canyon Creek during February 2006. Great-blue heron, common egret, and California brown pelicans roost along the shoreline feeding on fish, reptiles, and small mammals. Raptors such as osprey (*Pandion haliaetus*), peregrine falcon (*Falco peregrinus anatum*), and red-tailed hawk forage along the Bay and Chula Vista Wildlife Reserve during winter. Nesting birds such as California least tern, Western snowy plover, and Belding's savannah sparrow nest in the salt marsh habitat of the Salt Works and J Street Marsh. In addition, many fish species occur in the Bay and provide recreational fishing opportunities for the public.

### 8.2.3.7 Special-Status Species

A list of special-status plant and animal species was compiled for the Project area based upon the following references: the 2006 CDFG California Natural Diversity Data Base (CNDDDB); California Native Plant Society's (CNPS) Electronic Inventory; a USFWS species list requested for San Diego County; Carlsbad USFWS Listed Species; informal consultations with agency personnel; and project-specific onsite field surveys. A comprehensive list of special-status species compiled from the agency lists is provided in Appendix 8.2A. The list includes species listed as threatened or endangered that have special requirements under the FESA and CESA and other non-listed special-status species that could become listed in the future. The table includes the habitat types that could support these species as well as the potential for occurrence in the Project area.

Preliminary surveys, habitat evaluations, and aerial photographs suggest that the site and proposed linear project features are not directly located in important sensitive areas; however, the site is adjacent to the San Diego Bay, which is an important area for the green sea turtle and many water birds. Table 8.2-4 presents a pared-down list of the special-status species that were evaluated as potentially occurring in the Project area. Table 8.2-4 also includes any special-status species whose habitat(s) and/or known distribution are present in the SBRP Project area evaluated for potential impacts from construction, demolition, and SBRP operations. Other special-status species that were included on the USFWS, CDFG, and

CNPS lists whose habitats or known distribution do not occur in the Project area are included in Appendix 8.2A, but were not evaluated further.

The reference information is based on known occurrences, historical records, or the presence of suitable habitat for any given life stage of a particular species. The known locations of special-status species identified in the CNDDDB records for the associated Imperial Beach and National City U.S. Geological Survey (USGS) quadrangles and from on-site field surveys are shown on Figure 8.2-1.

Additional analyses for potential impacts from temporary construction and demolition noise on special-status species may be required for nesting California least terns, Western snowy plover, and Belding's savannah sparrow in the San Diego South Bay Unit NWR and J Street Marsh. If formal consultation is required, a Biological Assessment would be prepared that would be used in consultation (most likely under Section 7 of the ESA) with the USFWS. In addition, a Consistency Determination under California Fish and Game Code 2080.1 may be required by CDFG for state-listed species.

#### **8.2.3.7.1 Special-Status Plants**

Information acquired from the CNDDDB, CNPS, and other sources resulted in a list of special-status plant species that could occur in San Diego County (Appendix 8.2A). Most of these species are associated with natural habitats that were once prevalent in the South San Diego Bay and Project vicinity (sand dunes, coastal salt marsh, coastal sage scrub, riparian habitats) but have since been lost to extensive development. Field surveys were conducted during the appropriate blooming periods for the special-status plants to determine if they occur in the Project impact areas and to further characterize the potential of available habitat in the vicinity. Extensive habitat modification, weed control, and drainage practices have kept the SBRP and SBPP sites unsuitable for many plant species. Figure 8.2-1 and Table 8.2-4 presents the list of special-status plants that were evaluated for the Project site, including the habitat requirements and potential to occur on the site.

Two special status plant species were observed during the botanical surveys from February through May 26, 2006 – estuary seablite and woolly seablite. CNDDDB California Native Species Field Survey Forms that record observations of these plants are included in Appendix 8.2C. Other plant species known to occur in the vicinity and shown on Figure 8.2-1 are primarily associated with sand dunes, coastal salt marsh, and coastal sage scrub habitats that are not found on the Project site. Those plant species are not expected to occur on site and were not observed during on-site botanical surveys.

#### ***Estuary Seablite (Suaeda esteroa) (CNPS List 1B.2)***

Estuary seablite is a short-lived perennial, often with bright green leaves that turn red in the fall. It is found in middle coastal salt marsh in scattered locations from Santa Barbara County south to San Diego County. In San Diego County it is known from only a few populations in the vicinity of Mission Bay, San Diego Bay, and Tijuana Slough. It is apparently absent from northern San Diego County. Estuary seablite also is found in coastal areas of northwestern Baja California, Mexico.

Two clusters of estuary seablite were found on site; one cluster (containing 4 stands) was found at the mouth of Telegraph Creek and one cluster (containing 4 stands) was found at the intake and effluent channels (Figure 8.2-1). A total of 120 individuals within these stands

were found within the Project boundary during botanical surveys from February 17 through May 26, 2006. The narrow band of coastal salt marsh between the water and riprap at the mouth of Telegraph Canyon Creek supports 4 stands of estuary seablite on either side of the flow channel. These stands are associated with coastal salt marsh species such as *Frankenia salina*, *Salicornia virginica*, *Batis maritima*, *Spartina foliosa*, *Atriplex triangularis*, *Frankenia salina*, *Apium graveolans*, and *Jaumea carnosa*. Four stands were also observed near high tide level on the riprap slope of the intake and effluent channels. Most were growing in isolated patches of coastal salt marsh with *Batis maritima*, *Salicornia virginica*, and *Suaeda taxifolia*, while other individuals were growing amongst rip rap.

#### **Woolly Seablite (*Suaeda taxifolia*) (CNPS List 4)**

Woolly seablite is a grayish shrub with small obscure flowers and knobby leaf scars along the stem. It is found in southern California from Santa Barbara County south to San Diego County and extends into Baja California, Mexico. It is found on the immediate coast, often along the upper edges of estuaries, on sea cliffs, and on coastal bluffs. Two individuals were located at two sites near the intake and effluent channels. Both were found growing on soil in poorly developed isolated patches of coastal salt marsh between boulders of riprap (Figure 8.2-1). The few associated plants growing with them included *Batis maritima*, *Salicornia virginica* and *Suaeda esteroa*.

#### **8.2.3.7.2 Special-Status Animals**

Information acquired from the CNDDDB, USFWS, and other sources resulted in the list of special-status wildlife species whose occurrence has been previously recorded in San Diego County (Appendix 8.2A). Wildlife species that have suitable habitat or have been recorded or observed in the Project area are included in Table 8.2-4. Their potential for occurrence is dependent on available suitable habitat on the Project site and in adjacent habitats. The potential for species occurrence is low on site due to the predominance of intensive development and ruderal habitats that characterize the area. Special-status animal species are primarily limited to the salt marshes, tidal flats, salt ponds, and marine environments of the South San Diego Bay. The following paragraphs briefly describe the special-status animals that occur on site or in adjacent habitats and the potential for project-related impacts to occur during construction, demolition, and operation.

#### **Fish Species**

Bays and estuaries are known to be important nursery and refuge areas for marine fishes. At least 89 species of bottom living and open water fishes are known to occur in San Diego Bay. An exhaustive list of fish species and analysis of the fisheries resource in San Diego Bay can be found in the San Diego Bay Integrated Natural Resources Management Plan (U.S. Department of the Navy and San Diego Unified Port District, 1999). The only fish observed on-site were non-native mosquitofish (*Gambusia affinis*) in a temporary pool within the excavation pits of the former northern oil storage tanks (Figure 8.2-3).

The Project area is adjacent to the San Diego Bay and stormwater from the Project area currently flows to the Bay. The SBPP warm water effluent also flows to the Bay and is currently monitored through an NPDES permit from the California Regional Water Quality Control Board (CRWQCB). During construction of SBPP and demolition of SBPP, appropriate Best Management Practices (BMPs) will be developed specifically for the site conditions and will be implemented pursuant to the SWPPP. These BMPs are designed to avoid and/or minimize sedimentation into the waterways that could otherwise affect fish

and other estuarine species through siltation of eggs, benthic invertebrates, aquatic insect larvae, or aquatic vegetation.

No fish that occur in the San Diego Bay or in the unlined portion of Telegraph Canyon Creek would be affected by SBRP construction or operation as no direct impacts to the Bay or creek would occur. Demolition of SBPP would result in incidental sedimentation from removal of the SBPP water intake and discharge headwall and restructuring of the rip rap shoreline. Construction BMPs would minimize sedimentation during this demolition activity.

**Tidewater goby (*Eucyclogobius newberryi*) (FE).** The tidewater goby, a fish species endemic to California, is found primarily in waters of coastal lagoons, estuaries, and marshes. Its habitat is characterized by brackish (somewhat salty, from 0 – 25 ppt) water in shallow lagoons and in lower stream reaches where the water is fairly still but not stagnant. They burrow in the mud, making small caves where the eggs are laid by the females and the males protect them until they hatch. Breeding occurs when water temperatures are approximately 60 to 65 F, typically from April/May through July, and some years into November/December. The gobies feed on benthic invertebrates, crustaceans, snails, and aquatic insect larvae. Predators of the gobies include large mouth bass (*Micropterus* sp.), black bass (*Micropterus* sp), sunfish (*Mola mola*), and channel catfish (*Ictalurus punctatus*). The African clawed frogs (*Xenopus laevis*) also prey on gobies where the water is low in salinity (Federal Register 2000). Tidewater gobies live only in California, and historically ranged from Tillas Slough (mouth of the Smith River, Del Norte County) to Agua Hedionda Lagoon (northern San Diego County) (USFWS website, 2006, available at <http://www.fws.gov/cno/arcata/es/fish/goby.html>). They are currently found across their known, historic range, but in fewer locations than historically occurred. The SBRP site is outside the current and historic range of this species. The closest Critical Habitat unit (Unit 10 Agua Hedionda Lagoon) is approximately 40 miles north of the site.

Other gobies are reported from the south San Diego Bay include: arrow goby (*Clevelandia ios*); cheekspot goby (*Ilypnus gilberti*); shadow goby (*Quietula ycauda*); bay goby (*Lepidogobius lepidus*), yellowfin goby (exotic species) (*Acanthogobius flavimanus*): and chameleon goby (*Tridentiger trigonocephalus*) (exotic species) (U.S. Department of the Navy and San Diego Unified Port District, 1999).

### **Amphibians and Reptiles**

Other species that depend on aquatic resources for portions of their life history have a similar limited potential to occur in the Project vicinity, including reptile and amphibian species. Special-status reptiles known to occur in the Project area include the green sea turtle in San Diego Bay.

No special-status amphibians were observed on site, however, it should be noted that the exotic and invasive African clawed frog (Family Pipidae) was caught in excavated pit north of Telegraph Canyon Creek during the biological surveys. This species should be eradicated from the SBPP site during construction activities (if not prior) to minimize escapees and any adverse effects they may cause to the natural environment. Eradication of the African clawed frog from the SBPP site may provide a benefit to the natural environment of the South San Diego Bay.

**Green Sea Turtle (*Chelonia mydas agassizii*) (FE).** The eastern Pacific populations of the green turtle are designated endangered by the USFWS. South San Diego Bay is the only area on the west coast of the U.S. where green turtles are known to aggregate (Stinson, 1984; McDonald and Dutton, 1992). Researchers have not determined whether originally the green turtles occurred naturally in the Bay, or were introduced by commercial fishing bycatch or aquaculture activities in the late 19<sup>th</sup> century (Merkel and Associates, Inc., 1995). The green turtle is restricted to warm waters, and it is thought that warm ocean currents allowed the green turtles to expand northward up to San Diego Bay, as explained:

*“Juveniles could be recruited into (or, conversely, emigrate out of) the bay with incursions of warm equatorial currents (known as ‘El Nino’ events).”* (p. 4, McDonald and Dutton, 1992).

Dutton and Seminoff (2002) explain the presence of the green turtles so far north as follows:

*“In the eastern Pacific Ocean, green turtles (also known as black turtles) nest at two primary rookeries, located in the southern state of Michoacan, Mexico (Figueroa et al. 1993) and at the Revillagigedos Islands, Mexico (Brattstrom). Green turtles migrate from these areas to distant foraging grounds along the Pacific coast of the Americas. Perhaps the northern-most foraging area for green turtles is San Diego Bay. This shallow inlet provides valuable food resources such as marine algae and seagrass.”* (p. 2, Dutton and Seminoff, 2002).

An important food of the green turtles – eelgrass – is a key component to the utility of San Diego Bay as a foraging habitat, explained as follows:

*“With respect to the present discussion, eelgrass is known to be an important food item of sea turtles, and its presence in high concentrations and in otherwise favorable environmental conditions could be expected to attract turtle use and influence activity patterns within San Diego Bay.”* (p. 4, Merkel and Associates, Inc., 1995).

A small population of green turtles has utilized the effluent channel of the SBPP since the power plant’s construction in 1960 because of the artificially-warmed habitat (thermal plume) created by discharge of heated cooling water (Merkel and Associates, Inc., 1995). Up to 25 green turtles have been captured, tagged, and released and the maximum population estimate is 72 turtles in the San Diego Bay (Stinson, 1984; McDonald and Dutton, 1992; Merkel and Associates, Inc., 1995; Dutton and McDonald, 2004). The importance of this small population is considered to be primarily of a scientific nature, as summarized in the following statement:

*“In terms of importance to the long-term survival of the Pacific green turtle, the San Diego Bay turtles probably represent an insignificant number of animals, especially as so few are mature adults. In terms of scientific research, this is considered an extremely valuable group of turtles.”* (p. 21, Merkel and Associates, Inc., 1995).

The home range of this green turtle population is considered to be the entire southern portion of San Diego Bay, since the maximum influence of the thermal plume when the powerplant is in full production is approximately 9,000 feet from the point of discharge (Merkel and Associates, Inc., 1995). The thermal plume apparently allows the green turtles

to maximize their growth and foraging capabilities (by behavioral thermo-regulation), and is explained as follows:

*“There is little or no eelgrass in the effluent channel. We hypothesize that they feed in the eelgrass beds, then return to the channel where the water is up to 8°C warmer than the rest of the bay. This warmer environment would increase digestive efficiency.”* (p. 5, McDonald and Dutton, 1992).

*“The continuous tracking of multiple individuals indicates that at least some turtles remain resident to this area for extended durations”* (p. 5, Dutton and Seminoff, 2002).

During the winter months, ambient temperatures in areas of San Diego Bay beyond the influence of the SBPP thermal discharge drop below the comfort range for the turtles. Ambient winter water temperatures in the south Bay (outside the effluent channel) range from 58 °F to 78-79 °F (p4, Merkel and Associates, Inc., 1995). Intake water temperatures during winter month in 2004 and 2005 averaged 61.6 °F (SBPP NPDES data). Water temperatures above 80 °F to 88 °F are restricted to the effluent channel (p4, Merkel and Associates, Inc., 1995). The temperature tolerance zone for turtles is from 65-90°F, with a comfort zone of 75-85°F (p20, Merkel and Associates, Inc., 1995). Merkel’s (1995) analysis indicates cold water temperatures of 52°F can cold-stun turtles, causing them to go into torpor, and higher temperatures of 77-82°F cause turtles to become inactive (p18,19, Merkel and Associates, Inc., 1995).

The seasonal reliance by the turtles on the warm water discharge has raised questions about the effect on the turtles that could result once the power plant is shut down. Specifically, the NMFS has expressed a concern that the warm water discharge is not abruptly ceased during a time when the ambient water temperature in the Bay is below the comfort range for the turtles.

The green sea turtle population in San Diego Bay is subject to mortality from human activities. In 1990 alone, there were 3 strandings/mortalities reported due to boat collisions (McDonald and Dutton, 1992). A later biological assessment determined the following hazards associated with the turtles inhabiting the effluent channel:

*“Although the SDG&E channel is a restricted area, we have often observed speed boats, usually towing water skiers, there. As previously mentioned, two of the four dead turtles found stranded in San Diego and Mission bays during 1990-1991 had deep propeller cuts through the skin and carapace. Stinson (1984) noted that turtles did not increase their speed when followed by a boat, and we observed turtles surfacing within six feet of our boat, even when the motor was running.”* (p. 5, McDonald and Dutton, 1992).

*“Although there exists a 5 mph speed limit for boats using the southern portions of the bay, enforcement of this restriction is greatly lacking outside of the navigational channels, due in part to the shallow water which limits access by Harbor Patrol boats.”* (p. 9, Merkel and Associates, Inc., 1995).

### **Nesting Birds**

The salt ponds and salt marshes in the South Unit of the San Diego NWR provide suitable habitat for many nesting birds, including several special-status species such as California least tern, Western snowy plover, and Belding's savannah sparrow. The Project area is adjacent to the salt ponds and J Street Marsh where bird species (e.g., osprey, killdeer, ducks, herons, egrets, shorebirds) are often found foraging and nesting. The landscape areas and areas with some vegetation on the site provide suitable nesting for a variety of songbirds. Red-winged blackbirds, Anna's hummingbird, black phoebe, mourning dove, and house finches are routinely observed at the site, indicating they most likely nest in the landscape areas and riparian habitat at the mouth of Telegraph Canyon Creek.

The salt ponds in the San Diego NWR are one of three primary locations in California where black skimmers nest (U.S. Department of the Navy and San Diego Unified Port District, 1999). In 1993, double-crested cormorants (*Phalacrocorax auritus*) made 43 nests on an abandoned barge at the salt ponds; this increased to 47 in 1997 (U.S. Department of the Navy and San Diego Unified Port District, 1999). Other breeding pairs of tern species, besides California least terns, reported at the salt works include elegant terns, royal terns (*Sterna maximus*), Caspian terns (*Sterna caspia*), and gull-billed terns (*Sterna nilotica*).

Nesting birds and their nest sites are protected under Fish and Game Code Section 3503. Federal-listed and state-listed birds, as well as special-status birds known to nest in the vicinity of the Project site are addressed in the following paragraphs. (Note: the abbreviations after the scientific name refer to the regulatory status of the species. These are further identified in Table 8.2-4 and in Appendix 8.2A).

**California Least Terns (*Sterna antillarum browni*)(FE, CE, FP).** California least terns occurs in coastal California and Baja California during the breeding season and migrates south during the winter. They forage along the shoreline, feeding on small fish at the water surface. The breeding season is from April through September. Preferred breeding habitat includes sandy beaches, however, in the San Diego Bay, they typically nest on man-made disturbed areas. They have been reported to nest in barren flats (salt ponds) near the SBPP (SDG&E, 1993). In 1993, 62 California least tern nests were initiated along the salt works dikes (U.S. Department of the Navy and San Diego Unified Port District, 1999). In 1995, eighteen California least tern nests were initiated on the salt ponds. The least terns do not forage or nest on the SBPP or proposed SBRP upland areas, but forage along the shoreline near the salt ponds, tidal marshes, and intake/effluent channels, feeding on small fish in the Bay. The least tern was known to historically (1990s) to nest on the spit that extends west from the SBPP water intake/effluent channels. The spit is man-made, approximately 32 acres in size, and comprises the Chula Vista Wildlife Reserve (Figure 8.2-1). The terns nested on an open, coarse sandy area surrounded by tidal flats in the Reserve. The least tern also nests in the South Unit of the San Diego Bay NWR on the berms surrounding and intersecting the salt ponds.

**Light-footed Clapper Rail (*Rallus longirostris levipes*)(FE, CE, FP).** Light-footed clapper rails are found along the California coastline from Santa Barbara to northern Baja California, Mexico. Light-footed clapper rails nest and forage entirely within salt marsh, especially large estuaries dominated by cordgrass and pickleweed and typically do not migrate. They feed on crabs, snails, worms, and other invertebrates in the mudflats. Breeding season is primarily from March through August. Light-footed clapper rails have been reported from the Sweetwater Marsh Unit and the South Bay Unit of the San Diego NWR (SDG&E, 1993;

U.S. Department of the Navy and San Diego Unified Port District, 1999). The J Street Marsh area contains pickleweed habitat with sparse cordgrass. This habitat may not have the dense cordgrass cover preferred for nesting, and none have been recorded in CNDDDB. No rails were observed during field surveys in February or May 2006, however, additional focused surveys for rails may be conducted during the first two years of SBRP construction activities (before the time when demolition activities would occur near the marsh habitat) to determine whether rails use the marsh for nesting. Protection measures for nesting rails would be implemented to reduce demolition noise to acceptable levels in the marsh.

**California Brown Pelican (*Pelecanus occidentalis*)(FE, CE, FP).** The California brown pelican nesting sites are restricted to islands in the Gulf of California to the Santa Barbara Islands in Southern California. Non-breeding pelicans range from the Pacific Coast from the Gulf of California to Washington and southern British Columbia. Nesting is colonial on islands without mammal predators. They feed on surface fish in open waters (primarily northern anchovy, with some Pacific mackerel and Pacific sardine). The California brown pelican is a common resident of San Diego Bay, and uses the South Bay Unit of the San Diego Bay NWR as a foraging area and a staging area for fall migration (USFWS, 1998). Brown pelicans roost primarily on tire dikes and other artificial structures at the salt ponds. Up to 7,000 pairs nest on the Coronado Islands and brown pelicans have also been reported to nest at Point Loma National Monument (U.S. Department of the Navy and San Diego Unified Port District, 1999). The brown pelican uses dikes that extend out from the South Bay Power Plant to the Chula Vista Reserve as a roosting area (SDG&E, 1993). They are also known to roost along the berms of the salt ponds. The brown pelican is periodically found perched on hardshore and light poles near the SBPP intake and effluent channels. They feed exclusively on fish in the Bay and do not forage or nest on site.

**Western Snowy Plover (*Charadrius alexandrinus nivosus*)(FT, CSC).** The western snowy plover nests in colonies on sandy beaches along the west coast of the United States and southern Baja California. Nest sites are typically scrapes in flat, open sandy areas devoid of vegetation or driftwood. Snowy plovers often return to the same location year after year to nest and raise young. Plovers feed on invertebrates in mud flats, marshes, and kelp wracks. Western snowy plover breeding season is from March to mid-September. Critical habitat units for the Western snowy plover are located 3.5 miles west of the site along Silver Strand and Coronado Island (Subunits CA-27C and CA27D) and 2.5 miles north of the site at the Sweetwater Marsh Unit San Diego Bay NWR (Subunit CA-27E) (Federal Register 2004). They occur on the beaches and salt work levees in the San Diego Bay area. In 1993, ten western snowy plover nests were initiated along the salt pond dikes (U.S. Department of the Navy and San Diego Unified Port District, 1999). Western snowy plovers are assumed to be using the salt ponds during the breeding season annually.

**Belding's Savannah Sparrow (*Ammodramus sandwichensis beldingi*)(CE, former federal candidate).** Belding's savannah sparrow is a year-round resident of salt marshes bordering coastal estuaries and nests in patches of pickleweed or other marsh vegetation, of which its nests are built. The nesting season is from January through August, with peak breeding from April to July. It feeds on invertebrates in salt marshes, mudflats, and dunes. Belding's savannah sparrow is reported to have nested in salt marsh vegetation of Chula Vista Wildlife Reserve and the salt ponds (SDG&E, 1993; U.S. Department of the Navy and San Diego Unified Port District, 1999). Belding's savannah sparrow was observed in the

J Street Marsh outside the northwest fenceline of SBPP during surveys in May 2006. The bird was observed calling from the tops of pickleweed in the higher marsh area during the surveys in May 2006 and is assumed to have been nesting. Belding's savannah sparrows were also observed along the pickleweed stands in Channel Creek north of the site.

**California Black Rail (*Laterallus jamaicensis coturniculus*) (CT, FP).** The black rail is a seldom seen yearlong resident of saline, brackish, and fresh emergent wetlands associated with bays and coastal habitats. It nests from March through June. It has been reported to abandon a nest if disturbed before completing a clutch (Huey 1916, Heaton 1937). Potential habitat for the black rail exists in the coastal salt marsh (J Street Marsh) northwest of the site.

**Elegant Tern (*Sterna elegans*) (MBTA).** The elegant tern is only observed along the coast, using estuaries and beaches in the summer and fall along the California coast. Unlike other tern species, the elegant tern nests only in a scrape of sand along salt marsh dikes, sand beaches, and flats. They typically nest from March through June. It feeds on small schooling fish preferring northern anchovy. The elegant tern is a gregarious bird that breeds colonially. When the birds are in a flock, their noisy calling can be heard from a quarter mile distance. One of only two nesting colonies of elegant terns in the United States can be found at the salt ponds (SDG&E, 1993; U.S. Department of the Navy and San Diego Unified Port District, 1999).

**Horned Lark (*Eremophila alpestris*) (MBTA).** Horned larks inhabit a variety of open habitats; grasslands along the coast, and deserts near sea level, and can be found in high altitudes such as alpine dwarf-shrub above the treeline. These solitary ground nesters breed from March through July, with peak nesting activity occurring in May. Numerous individuals were observed during the February and May 2006 biological surveys in the sparsely vegetated sandy area north of Telegraph Canyon Creek on the SBPP Project site. Although specific horned lark nests were difficult to detect, they are assumed to nest on the site.

**Black Skimmer (*Rynchops niger*) (MBTA).** Black skimmers are traditionally known as colony nesters on bare sandflats just above the high water mark beginning during the month of June. Black skimmers are known to breed at the south end of San Diego Bay since 1976; and 75 were present by 1979. This San Diego population is a year round resident (Garrett and Dunn 1981). Nesting colonies are vulnerable to human disturbance on mainland beaches (Terres 1980). Suitable nesting habitat exists along the J Street Marsh and salt ponds west of the site.

**Osprey (*Pandion haliaetus*) (MBTA).** The osprey is a medium to large raptor with world wide distribution. It is primarily a fish eating specialists, but will also take small mammals, birds, reptiles, amphibians and invertebrates. Ospreys breed from March to September and routinely nests on platforms of sticks at the top of large snags, on cliffs, or on human made structures. Ospreys use rivers, bays, lakes, reservoirs, estuaries, and surf zones to catch fish near the surface of the water. Osprey were observed flying over the site and foraging in the J Street Marsh during February 2006 surveys. No raptor nests were observed on the site.

### ***Migratory Birds***

More than 300 bird species have been documented to use the San Diego Bay (U.S. Department of the Navy and San Diego Unified Port District, 1999). The majority of San Diego Bay birds, representing 30 families, are migratory and may only stop to rest and

feed, while others spend the winter or breed. Several migratory bird species were observed during field surveys (see Table 8.2-3), including Western grebe (*Aechmophorus occidentalis*), ring-necked duck (*Aythya collaris*), gadwall (*Anas strepera*) Northern pintail (*Anas acuta*), cinnamon teal (*Anas cyanoptera*), green-winged teal (*Anas carolinensis*), Northern shoveler (*Anas clypeata*), American widgeon (*Anas Americana*), and surf scoters (*Melanitta perspicillata*). Shorebirds are abundant in the salt marsh fringes and along tidal mud flats adjacent to the marshes during the winter months. Shorebirds observed during surveys include black-neck stilt (*Himantopus mexicanus*), common egret, great blue heron, willet (*Catoptrophorus semipalmatus*), greater yellow-legs (*Tringa melanoleuca*), long-billed dowitcher (*Limnodromus scolopaceus*), and Western sandpiper (*Calidris mauri*). Foraging raptors observed include Northern harrier (*Circus cyaneus*), peregrine falcon, American kestrel (*Falco sparverius*), red-tailed hawk, and Cooper's hawk. Table 8.2-3 presents a list of wildlife observed on the site during field surveys.

Special-status migratory birds that could occur in the area include peregrine falcon and, potentially, bald eagle.

**Peregrine falcon (*Falco peregrinus anatum*) (Federal Delisted, CE, FP).** The peregrine falcon breeds near wetlands, bays, lakes, or rivers with protected high cliffs or ledges for nest sites. They are known to occur in coastal scrub, woodlands, and forested habitats. They hunt from a perch, primarily taking ducks and fish along the shoreline and sometimes mammals and insects. Peregrine falcons are known to forage in the South San Diego Bay NWR (USFWS, 1998). A pair of peregrine falcons was observed perching on and flying around the SBPP stacks during surveys in February 2006. The pair was using the stacks and railings on Unit 4 to perch and hunt pigeons and European starlings that nest on the infrastructure. Several regurgitated pellets and partially eaten carcasses of the birds, as well as ducks and grebes, were observed on the walkways and cross bars of Unit 4. Peregrines were also observed flying around SBPP by URS biologists in 2005. CH2M HILL biologists returned to the SBPP site in May 2006 to evaluate the nesting potential of the peregrines. No nesting material was observed during a search of the SBPP infrastructure. No peregrines were observed perching on the infrastructure throughout the day, however, late in the afternoon one peregrine was observed flying over the SBPP hunting pigeons for approximately 5 to 10 minutes and then left the site. This could be one bird from the pair observed during earlier surveys in February. A second bird was not observed, and may have been at a nest location off site. No fresh pellets or carcasses were observed on Unit 4 in May 2006. The peregrines appear to use the tall stacks at SBPP as a hunting perch overlooking the salt ponds, salt marsh, and Chula Vista Reserve during the winter and nest off site.

**Bald Eagle (*Haliaeetus leucocephalus*). (FD, CE).** Bald eagles typically breed in Northern California and north, but migrate during the winter. Nesting habitat includes large trees near a permanent water source. Breeding occurs February through July. They hunt for fish, waterfowl, and mammals, often competing with osprey for prey. Bald eagles are not considered an important element of the avian fauna in the South San Diego Bay NWR. USFWS (1998) states, "From a species survival perspective, the eagle uses the Bay incidentally and infrequently, and the Bay is one of tens of thousands of potential foraging areas nationwide. No eagles were counted by the Service". (p. 37, USFWS, 1998). No bald eagles were observed during field surveys and none are expected to be affected by construction or demolition activities.

### **Marine Mammals**

Harbor seals (*Phoca vitulina geronimensis* or *richardsi*) and California sea lions (*Zalophus californicus*) are common at the mouth and in deeper portions of northern San Diego Bay. Pacific bottle-nosed dolphin (*Tursiops truncatus*) are occasionally sighted in the south San Diego Bay (USFWS, 1998). Gray whales *Eschrichtius robustus*) are observed occasionally at the mouth of the Bay and in one year at the SBPP intake channel (Liebst 2006). All marine mammals are federally protected by the Marine Mammal Protection Act. No marine mammals use the Project site for resting or feeding. Construction and demolition activities would not occur in the San Diego Bay proper (only along the intake/effluent channel hard shore) and no marine mammals are expected to be adversely affected from the Project. Protection measures and BMPs, such as restrictive fencing and sediment controls developed for the Project would avoid impacts to marine mammals that may travel through the Bay.

## **8.2.4 Environmental Analysis**

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of project construction, operation, and maintenance of the SBRP Project, the construction of the relocated SDG&E substation, as well as the demolition of the existing SBPP. Construction of SBRP would begin 2008 and extend through 2010. Demolition of the existing SBPP would be completed once the SBRP is operational. This section describes the potential effects of construction activities on the habitats and special-status species at the proposed 12.9-acre SBRP site, 6.5-acre SDG&E relocated substation site, as well as the 115-acre SBPP demolition site.

### **8.2.4.1 Standards of Significance**

Impacts on biological resources are considered significant if one or more of the following conditions could result from implementation of the proposed Project:

- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of a state or federally listed threatened or endangered species
- Substantial effect, reduction in numbers, restricted range, or loss of habitat for a population of special-status species, including fully protected, candidate proposed for listing, CSC, and certain CNPS list designation
- Substantial interference with the movement of any resident or migratory fish or wildlife species
- Substantial reduction of habitat for native fish, wildlife, or plants
- Substantial disturbance of natural wetlands, marshes, riparian woodlands, and other wildlife habitat
- Removal of trees designated as heritage or significant under County or local ordinances.

### **8.2.4.2 Potential Impacts of Construction and Operation of SBRP Project Site and Temporary Construction Laydown Areas**

The 33-acre land parcel held tanks of liquefied natural gas (LNG) for operation of SBPP. This tank farm was closed and mostly dismantled in 1989. Two large tank foundations and

several cement building foundations are still present. The existing berm that surrounded the large tanks is still present and contains degraded asphalt along the rim that supports vegetation that has grown through the cracks. This berm holds water during high precipitation years that would otherwise sheet-flow to the San Diego Bay. As part of site preparation, the cement and asphalt will be removed in preparation for construction of SBRP and possibly recycled and used to fill low/excavated areas on the 115-acre parcel, and the foundations of the former LNG tanks will be removed.

Once the area is cleared, the SBRP facility footprint would require only 12.9 acres, while the SDG&E substation would require 6.5 acres of the 33-acre parcel. The remaining 13.5 acres of land includes a pending Port 100-foot buffer zone on the Bay side and a 300-foot SDG&E utility easement on the east side of the Project site (Figure 8.2-3). The 6.5 acres for the SDG&E substation will initially be used as construction laydown for the SBRP. Additional laydown areas will be located on the southern portion of the SBPP parcel where some facilities will be removed or relocated during initial site preparation activities. Access to the SBRP site would be from Bay Blvd. Temporary construction access roads would be graveled and restored after construction is complete.

Limited, temporary construction impacts would occur within the pending 100-foot buffer along the Bay. This area contains an old building and cement building foundations in the northwest corner that would be removed. The SBRP would construct a cement box culvert from the proposed detention basin to the existing cement stormwater drainage feature that runs along the western boundary of the 33-acre site. Except for construction of the box culvert and removal of existing infrastructure, the pending 100-foot buffer will not be used during construction for storage, access, or laydown.

The existing 8-foot tall cyclone fence along the Bay shoreline will remain in place throughout construction and demolition activities. This will keep construction equipment and personnel out of the sensitive shoreline habitats where wildlife is relatively abundant. Additional security fencing will be installed around the SBRP site. This fencing will be chainlink material, 7 feet tall with 3 barbed strands angled out along the top of the fence.

The area within the SDG&E 300-foot utility corridor easement includes a landscape berm with mature trees and shrubs that will remain during construction and effectively used as a visual screening from adjacent properties during operations. The area dedicated to the new SDG&E substation would temporarily be used as SBRP construction laydown but would permanently be developed as a new substation after SBRP is complete.

The 16-inch diameter, 3,700-foot long natural gas pipeline would be constructed along the eastern boundary of the SBRP site. The alignment would cross the cement-lined portion of Telegraph Canyon Creek (Figures 2-18 and 8.2-2a) to a point where it would tie into existing SBPP gas lines. Potable water would be supplied to the SBRP site by a 6-inch diameter pipeline that extends to the Chula Vista sewer system (Figure 2-34). Sanitary waste water would be discharged to the sewer system via a 18-inch diameter, 400-foot long pipeline to Bay Blvd. Waste water from the oil/water separator, cycle makeup treatment water would also flow to the sewer system.

Electric transmission lines would initially include two underground lines (2,700-foot long 69kV line and 2,400-foot long 138kV line) that will connect the SBRP to the existing SDG&E

substation on the SBPP site on an interim basis. Once SBRP is complete and the new SDG&E substation is constructed in the southern end of the SBRP site, new underground lines (600-foot 69kV and a 900-foot 138kV) would be constructed in a 52-inch wide duct bank trench. These transmission lines are well within the Project site. An additional 400-foot 230kV transmission line would be constructed above ground to connect to existing 230kV lines 400 feet east of the site.

The quality of the project site as wildlife habitat is low to moderate. A coyote den was observed in the tank farm berm and the elevated tank foundations provide cover for wildlife such as raccoon, California ground squirrel, black-tailed hare, and fence lizards. The tamarisk, coyote bush, bulrush, and taller vegetation could provide nesting substrate for passerines such as red-winged blackbird, mourning dove, hummingbird, and others.

#### **8.2.4.2.1 Demolition of SBPP**

Demolition of SBPP would affect 70 of the 115-acre parcel. The rest of the areas will be graded for use by the Port. Equipment anticipated to be used for demolition of the SBPP includes (the actual equipment use may vary depending on the selected demolition contractor): 300-ton crawler cranes, excavators, backhoes, front-end loaders, 10-wheeled dump trucks for transporting materials, fork lifts, compactors, bulldozers, and various support vehicles such water trucks (dust control), fueling/service vehicles, and pickup trucks. Demolition activities will follow several plans that will be developed prior to the start of work: Work Plan, Traffic Control Plan, Noise Monitoring Plan, SWPPP, Environmental Protection Plan, Waste Management Plan, and Air Monitoring Plan.

During the final planning stages for the demolition, a comprehensive Drainage and Grading Plan will be developed that includes stormwater design calculations. The drainage from the 115-acre area will occur by sheet flow across the site into several drainage areas including Telegraph Canyon Creek to the north and to stormwater drainages in the remaining areas. Once final grading is completed, erosion control will be placed to prevent erosion and displacement of the final grading soils. It is not anticipated that the site will be seeded as part of the final grading.

Demolition will include removing the headwall from the intake and effluent channels. The shoreline will be constructed to match the existing hard shore infrastructure. Demolition of the SBPP intake and effluent channels could introduce incidental sediments into the Bay from removing the headwall. These sediments would be minimized with use of the BMPs described in the SWPPP. No loss or adverse effects to waters of the U.S. will occur, however, in-water work may be necessary. Water used during demolition activities will be discharged to the sewer system and not to open land or waterways.

Demolition of the two fuel oil tanks in the South Tank Farm near the circulating water intake and discharge channels will occur immediately adjacent to the eastern most salt pond along Palomar Ditch. This area will require implementation of sediment and erosion controls during tank removal and post-demolition grading to avoid direct impacts to the salt pond habitat that is part of the San Diego NWR. Once the tanks are removed, the area will be recontoured so that hydrology to the salt pond is not changed.

During demolition, old asphalt and cement structures will be crushed and may be used as backfill in the northern tank farm area. The soil from the berms would also be used as fill

and graded. Approximately 165,000 cubic yards of soil will be imported to the site to raise elevations. Potential soil imports will come from Caltrans and other local projects nearby.

#### **8.2.4.2.2 Noise Impacts from Construction and Operations**

The estimated noise levels from SBRP construction and SBPP demolition activities was determined through monitoring background noise levels at the existing operating SBPP, the nearest residential receptors, and the nearest wildlife habitats (salt ponds, J Street Marsh, Chula Vista Marina) to determine if adverse effects could occur on the use of those properties, or upon wildlife (see Section 8.5 for further details on modeling and analyses). Once background noise levels were obtained, the construction, demolition, and operational noise levels were modeled and noise contours developed to determine changes in background noise levels at sensitive areas. A literature search was performed to determine potential impacts noise could have on wildlife.

The effects of noise on wildlife vary if the noise is intermittent or continuous. In addition, wildlife generally respond to noise generated from human activity in one of three ways: avoidance, habituation, or attraction. Intermittent or impulse noise can be described as sporadic, high intensity acoustical events lasting less than a few seconds or as long as a few minutes. Intermittent noise is typically loud and sudden, including construction activities (e.g., pile driving<sup>2</sup>, dump trucks). There is considerable evidence to suggest that such impulse noises can result in adverse physical (e.g., ear trauma), physiological and behavioral effects on wildlife. Specific effects of noise on wildlife are highly dependent on the particular characteristics of the noise and whether a visual or physical stimulus is associated with it. Adding a fear-producing activity (e.g., vibrations near ground nest sites or a crane swinging overhead) to the source of noise will result in a more extreme response to the noise (Larkin 1996).

Continuous noise lasts for a prolonged period of time with essentially no interruptions. In fact, a series of impulse noises (e.g., helicopter rotors, freeway traffic) may resemble continuous noise in their effects. Operation noises from SBPP and the proposed SBRP would be considered continuous noise for this analysis. Natural continuous noises are part of every environment and some wildlife species have developed adaptations for noise long before the advent of modern technology, and in some instances natural ambient sounds, along with diverse vegetation structure, can reduce the direct effects of human noises on wildlife. For example, natural waterfalls can have continuous noise levels of 76 decibels A-weighted (dBA), and many species of wildlife occupy areas with waterfalls. In general, both mammals and birds can suffer temporary hearing impairment from 24-hour exposure to noise levels of 80 to 110 decibels (dB) (CDT et al., 1995). Continuous sound pressure levels at 70 dB are considered a safe limit to wildlife (Bowles, 1995). The USFWS indicated an acceptable continuous operation noise level of 60 dBA would not adversely affect nesting Yuma clapper rail in the Salton Sea area (USFWS, 2003).

The SBPP site currently supports an operating power plant and there is ongoing continuous traffic noise on Bay Street and I-5 immediately east of the site. These noise sources typically operate 24 hours per day, 7 days per week and together contribute significant noise to the

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<sup>2</sup> Pile driving (one of the noisiest equipment with overhead movement and ground vibrations) is not proposed for the SBRP. Rather, the Project will use auger cast pilings.

area. Current ambient background noise levels are shown in Table 8.5-10 in the Noise Subsection 8.5.

Operation of the SBRP will produce continuous noise, as described in Subsection 8.5, but would be less than the existing contributions of the SBPP at adjacent area that may have wildlife species present. When SBRP is operating and SBPP is closed, there will be a net reduction in noise levels at the site. Operations noise from SBRP is estimated to be 60 dBA at the boundary between the SBRP site and adjacent salt pond immediately to the west, and 65 dBA at the proposed SBRP fence boundary with the pending 100-foot buffer (Figure 8.5-6, operation contours). Noise levels decrease to 55 dBA in the nearest salt pond and are further reduced to 35 dBA at the Chula Vista Reserve and majority of salt ponds southwest of the site. Continuous low level noise from SBRP operations will not adversely impact wildlife, as wildlife usually becomes accustomed to routine background noise. This is also evidenced by the large numbers of birds (migratory and residents) currently occupying the salt marshes, salt ponds, and shoreline habitats adjacent to the operating SBPP.

Noise from construction and demolition activities could temporarily discourage wildlife from foraging and nesting immediately adjacent to the Project site. Many bird species rely on vocalization during the breeding season to attract a mate within their territory. Noise levels from certain construction and demolition activities could reduce the reproductive success of nesting birds. Construction and demolition equipment typically include cranes, excavators, backhoes, front-end loaders, dump trucks, fork lifts, compactors, bulldozers, and various support vehicles such water trucks (dust control), fueling/service vehicles, and pickup trucks (see Table 8.5-11 for typical noise levels from common construction equipment at various distances).

Demolition activities will have maximum noise levels ranging from 36 dBA to 70 dBA (Table 8.5-13). Maximum demolition noise levels in the J Street Marsh were estimated to be from 56 dBA to 64 dBA. Maximum demolition noise levels in the salt pond habitats were estimated to be from 59 dBA to 67 dBA. A maximum demolition noise level at the Chula Vista Wildlife Reserve is estimated to be 69 dBA along the access to the spit and 59 dBA at the nesting location. The maximum levels will not occur continuously throughout the demolition period; rather specific locations will be affected at different times. Most demolition noise is expected to be below the 70 dB level considered to be a safe limit to wildlife (Bowles, 1995). If necessary, protection measures, such as restricting demolition activities near the J Street Marsh and salt ponds during the nesting period, could be implemented so that maximum noise levels do not exceed 60 dBA at nest sites from March through August. The most sensitive time periods for nesting birds in adjacent habitats would be early in the morning and at dusk when the birds are calling for mates. Although the maximum noise levels at the three nesting locations may be above the USFWS approved level of 60 dBA for nesting Yuma clapper rails (USFWS 2003), high noise demolition activities could be limited during the early morning and at dusk between March and August in the areas immediately adjacent to the boundary fence (i.e. within approximately 1,200 feet of nesting habitat areas). With implementation of this protection measure, effects of demolition noise on nesting birds in the J Street Marsh, salt ponds, and Chula Vista Wildlife Reserve would be less than significant.

For construction activities, Table 8.5-14 presents the estimated maximum noise levels at sensitive noise receptor locations, including the Chula Vista Wildlife Reserve, salt ponds,

and J Street Marsh. Major construction activities would occur during normal daytime shifts, 5 days per week for a period of 28 months. Maximum construction noise levels would be at 71 dBA approximately 730 feet west of the SBRP site boundary in the nearest salt pond. Maximum noise levels of 59 dBA would occur at the intake channel. Further west into the salt ponds, maximum construction noise levels would be approximately 60 to 63 dBA. Maximum construction noise levels of 56 dBA would occur on the Chula Vista Reserve approximately 3,775 feet from SBRP. The existing LNG berm would remain in place during initial construction activities at SBRP and may act as a barrier to attenuate some noise from construction. These maximum construction noise levels will not occur throughout the construction period; most of the time noise levels will be lower.

Noise during construction and demolition activities will be monitored per the Noise Monitoring Plan that will be developed and included as an appendix to the BRMIMP. The noise monitoring plan will include any noise and/or timing restrictions to avoid impacts to nesting birds adjacent to the site. Primarily, nesting occurs from March through August (with peak nesting from March through May) in the habitats adjacent to the site. Although demolition activities may be limited along the site boundary near sensitive habitats, construction activities may not have as much schedule flexibility. The plan will also describe noise attenuation methods to reduce construction and demolition noise in the nesting habitats to 60 dBA. The noise monitoring plan would be submitted to the USFWS and CDFG for approval during informal and/or formal consultations.

#### **8.2.4.2.3 Light Impacts from Operations**

Bright night lighting could disturb wildlife that occur in the Bay (e.g., nesting birds, foraging mammals, and flying insects). Night lighting is also suspected to attract migratory birds to areas and, if the lights are on tall buildings or heat recovery steam generator (HRSG) stacks, collisions could occur. However, the existing SBPP has extensive lighting that has been in operation since the early 1960s. This lighting method has not discouraged the nesting of least terns on the Reserve or salt ponds over the years. The SBRP lighting will meet the requirements for security, operations and maintenance, and safety, and will be shielded and pointed downwards and away from the Bay to minimize impacts to nesting birds and other wildlife in the Bay. The new SBRP lighting will reduce the ongoing effects to the Bay wildlife that currently occurs and may be a benefit to birds in the area by increasing the suitability of nesting habitats.

#### **8.2.4.2.4 Avian Collision and Electrocution Hazards**

The Project would construct HRSG stacks, which are 125 feet tall, and a 400-foot long 230-kV electric transmission line that could potentially result in bird collisions. Most bird collisions involve nocturnal migrants flying at night in inclement weather and low-visibility conditions, colliding with tall guyed television or radio transmission towers (CEC 1995; Kerlinger 2000 in *Final Staff Assessment for Contra Costa Power Plant*). Migratory birds generally fly at an altitude that would avoid ground structures, except when crossing over topographic features (e.g., ridge tops) or when inclement weather forces them down closer to the ground.

The San Diego Bay attracts many migratory and resident birds that forage in habitats adjacent to the site. Migratory birds that are attracted to the South Bay area near the site use the Sweetwater Marsh, salt ponds, Chula Vista Reserve, J Street Marsh, and tidal marsh at the mouth of Telegraph Canyon Creek as forage and resting habitat. The birds flying

between habitats could collide with power plant structures such as stacks and transmission lines during low visibility periods of fog and rain. Because the City of Chula Vista and freeway is immediately east of the site and development extends over 3 miles, the flocks of waterfowl that concentrate in the San Diego Bay and shoreline are not expected to forage over the site or fly over transmission lines to get to sage scrub habitats east of Chula Vista. However, because the site is adjacent to high bird use habitats, bird flight diverters (BFDs) installed on the 230-kV transmission line would add more protection for the birds by allowing better avian visualization of the thinner top wires during fog and rain events and reduce avian collisions with the wires. BFDs are preformed high-impact PVC spirals that thread onto the top wires. Studies have shown BFDs may reduce avian collisions by 57 percent to 89 percent (APLIC 1994).

Bird collisions with the new 400-foot-long 230-kV electrical transmission connection are expected to be rare due to relatively low pole heights (approximately 70 to 110 feet). The SBRP HRSG stack height is below the height of the existing power plant stacks and the existing electric transmission lines. Because of the relatively low structure height and lack of guy wires, the potential for bird collisions with stacks, poles, electric conductor wires, structures, and towers of the Project is considered less than significant.

Large raptors, herons, and egrets can be electrocuted by transmission lines when a bird's wings simultaneously contact two conductors of different phases, or a conductor and a ground. The installation of above ground transmission line segment and tower will be constructed according to "raptor-friendly" guidelines (Avian Power Line Interaction Committee [APLIC 1996]). The 230-kV electrical transmission line for the Project will be constructed with at least a 5.5-foot span between conductor wires. The transmission line would not increase avian electrocutions in the area. Risk of electrocution is not expected to be significant since the site does not attract large numbers of birds. In addition, the "raptor-friendly" design would reduce potential impacts to less than significant.

#### **8.2.4.3 Special-Status Species**

The San Diego Bay and surrounding open land areas provide habitat for several special-status plants and animals. Figure 8.2-1 shows the locations of rare species known to occur within 2 miles of the site. Although these species are found in the vicinity of the site, they are primarily restricted to the aquatic and shoreline habitats along the San Diego Bay. The following paragraphs briefly describe potential Project impacts that could occur to special-status species that have suitable habitat, were observed during surveys, or are known to be present on site or in adjacent habitats. Protection measures that were developed to protect these species are included in Section 8.2.5. Additional mitigation and protection measures may be required by USFWS, CDFG, NMFS, or CEC during consultations. Mitigation and protection measures will be detailed in the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) that will be overseen by the CEC staff biologist. A draft outline of the BRMIMP is included in Appendix 8.2D.

##### **8.2.4.3.1 Plants**

###### ***Estuary Seablite and Woolly Seablite***

The SBPP and SBRP land areas contain fill material in varying degrees throughout the site and are dominated by disturbed, upland ruderal habitat and do not support habitat for any special-status plant species. The rip-rap wall at the SBPP intake and effluent channels

contain isolated pockets of coastal marsh habitat that support individuals of estuary seablite and wooly seablite. In addition, the unlined and tidally influenced portion of Telegraph Canyon Creek that flows to the San Diego Bay supports habitat for the estuary seablite. Demolition of the intake/effluent channel headwall and restoration of rip rap shoreline could result in the loss of individual plants. The plants will be flagged prior to demolition activities and construction personnel will be directed to avoid the plants. If demolition activities require removal of individual plants, they may be relocated to protected areas such as the mouth of Telegraph Canyon Creek. The BRMIMP would include a plan to restore, relocate, and/or enhance habitat for seablite along the shoreline.

#### **8.2.4.3.2 Aquatic Bay Species**

Construction and operation of SBRP is not expected to adversely affect populations of gobies or other fish in the Bay. Stormwater discharges from the site would flow to the Bay after meeting the NPDES stormwater discharge requirements that would not adversely affect the beneficial uses of the Bay. Demolition of SBPP would result in incidental sedimentation from removal of the SBPP water intake and discharge headwall and restructuring of the rip-rap shoreline. Construction BMPs will minimize sedimentation during this demolition activity. No direct impacts to special-status fish are expected during construction or demolition activities.

Benefits to fish and aquatic organisms will occur with stopping operation of the once-through cooling system currently operating at SBPP. This system brings water directly from the Bay, which cycles once through the power plant system before being discharged to the effluent channel in the Bay. Water for the new SBRP power plant operations will be potable water (80 gpm) from the Sweetwater Water Authority. Power plant effluent will be discharged to the City of Chula Vista industrial sewer system and would not flow to the Bay. Since the new SBRP Project will use water from the Sweetwater Authority, there will be no mechanism to entrain fish or other biota as a result of the withdrawal of water from the South Bay for operations. Entrainment of fish, aquatic invertebrates, and ichthyoplankton will be eliminated when SBPP is non-operational and SBRP is operating with its dry cooling system. In addition, eliminating the warm water effluent will benefit the South Bay ecosystem by returning the water conditions to a more natural state.

McDonald and Dutton, 1992 state that there is little or no eel grass in the SBPP thermal plume. Eliminating the warm water effluent from SBPP may increase the amount of eel grass in the South Bay when water temperatures cool and reach the ambient temperature of the Bay. Recent studies on the effects of the power plant discharge suggest that a limiting factor for eel grass growth is shading caused by turbid waters. The SBPP may alter the usual distribution of eel grass in the South Bay by circulating naturally occurring turbidity. Thus, eel grass may increase in some areas and decrease in others following retirement of the SBPP (Tenera et. al 2004). Eel grass beds are used by many Bay species for forage.

#### **Green Sea Turtle**

The green sea turtle is known to occur in the South San Diego Bay throughout the year and is attracted to the existing warm water effluent of SBPP. The San Diego Bay Integrated Natural Resources Management Plan states the following about the existing SBPP effluent:

*“Thermal pollution from the SDG&E south Bay power plant’s discharge was found to cause adverse effects on marine life within 1,801 to 3,901 ft (549 to 1,189 m) of the*

*discharge point (Ford et al. 1970). Only marine invertebrate and algae species tolerant of the temperature conditions were found in this zone, although adverse effects to the Bay outside the cooling channel were determined to be minimal, mainly affecting decapod crustaceans and gastropod molluscs. Impacts were apparently greatest from the late summer cooling water discharge, with additional species occupying the channel area during cooler periods. Beneficial effects of the thermal plume included significant biomass increases for several major groups and the creation of favorable year-round habitat for the endangered green sea turtle (Macdonald et al. 1990). Ecological effects of the thermal effluent on certain marine species at the site were also studied in several master's theses at San Diego State University (SDSU) (Kellogg 1975; McGowen 1977; Merino 1981)."* (U.S. Department of the Navy and San Diego Unified Port District, 1999).

Once the SBRP is online and operational, the existing SBPP will not be able to operate and the warm water discharge will cease. Elimination of the artificial warm water plume in the Bay may give the green sea turtle opportunities to leave the Bay for breeding areas in Baja California and Mexico. Staff from the NMFS have expressed a concern that the warm water discharge not be abruptly ceased in wintertime, when ambient Bay water temperatures are below the comfort range of the turtles. The proposed commissioning schedule for the SBRP has the plant coming on-line in the spring of 2010. As such, the existing SBPP would cease operations during the spring or early summer of 2010 when the turtles are not relying on the warm water discharge. The NMFS indicated there could be new opportunities to study the distribution of this population of turtles after the warm water discharge is eliminated.

It should be noted that the frequency and operation of the SBPP is determined by the California Independent System Operator (CAISO) and is beyond the control of the Applicant. While efforts will be made to ensure that the shutdown of the SBPP does not negatively effect the green sea turtles, the Applicant simply cannot dictate how or when the power plant is dispatched.

As mentioned previously, stormwater discharges from the site would flow to the Bay after meeting the NPDES stormwater discharge requirements and would not adversely affect the beneficial uses of the Bay. Incidental sedimentation from demolition of SBPP water intake and discharge headwall would be minimized by using construction BMPs. No direct impacts to green sea turtle are expected during construction or demolition activities.

#### **8.2.4.3.3 Nesting Birds on Site**

The compact sand and sparse vegetation within the open sandy areas provides nesting substrate for small songbirds. The sandy areas also provide nesting substrate for ground nesters such as horned lark and killdeer. Horned larks were observed calling and protecting potential nest sites in May 2006. If construction or demolition activities occur during nesting season (typically March through August), take of nests and or young could occur. To avoid and minimize impacts to nesting birds, nesting substrate for songbirds (taller plants) is proposed to be removed outside of the nesting season (non-nesting season typically September through February) before construction activities begin. The sandy areas requiring grading would be graded prior to March 1 and will be routinely inspected for nesting activities throughout construction and demolition. Any nests found in or adjacent to disturbance areas would be flagged and the area immediately around the nest protected from construction equipment. However, overall construction activities of SBRP or demolition

activities at the existing SBPP would not be affected by nests onsite, rather the protection and monitoring of the nests would allow construction and demolition activities to continue. These nests would be monitored and results included in the monthly compliance reports to the CEC.

#### **8.2.4.3.4 Nesting Birds in Habitats Adjacent to Site**

##### ***California Least Tern and Western Snowy Plover***

California least terns and Western snowy plovers are known to nest in the adjacent salt ponds and salt marsh habitats west of the site (Figure 8.2-1). No direct impacts to nesting terns or plovers will occur from construction of the SBRP or demolition of SBPP as they do not nest on the site. Access to the Chula Vista Wildlife Reserve and Salt Works will be prohibited to all construction personnel. A locked gate at the entrance to the spit (Reserve) access road will be left in place and remain closed during construction. In addition, the existing 8-foot tall cyclone fence that surrounds the Project site will remain in place during all construction and demolition activities. This fence is located on the boundary between upland fill areas of the site and the salt pond/salt marsh habitats downslope of the site. The slope outside the fenceline contains hard shore materials such as rip rap and asphalt.

No adverse impacts to nesting California least tern or Western snowy plover are expected from operation of SBRP as the noise levels are estimated to be 60 dBA within the boundaries of the 33-acre parcel. There will be no noise impacts to Critical Habitat for the Western snowy plover.

Temporary indirect impacts to nesting terns and plovers could occur from construction and demolition noise during breeding season from March through August if levels are significantly above ambient levels and associated with overhead activity. The noise impact analysis in Subsection 8.2.4.2.2 shows that most demolition noise is expected to be below the 70 dB level considered to be a safe limit to wildlife (Bowles, 1995). High noise demolition activities could be limited in the areas immediately adjacent to the boundary fence (i.e. within approximately 1,200 feet of nesting habitat areas) so that high noise-producing activity does not occur during the nesting season of March through August. With implementation of this protection measure, effects of demolition noise on California least terns and Western snowy plover nesting at the salt ponds and Chula Vista Wildlife Reserve would be less than significant.

Maximum construction noise levels would be at 71 dBA approximately 730 feet west of the SBRP site boundary in the nearest salt pond. Further west into the salt ponds, maximum construction noise levels would be approximately 60 to 63 dBA. Maximum construction noise levels of 56 dBA would occur on the Chula Vista Reserve approximately 3,775 feet from SBRP. These maximum construction noise levels will not occur throughout the construction period; most of the time noise levels will be lower. Construction schedules are not as flexible as the demolition schedule and noise levels above 60 dBA could reach nesting sites for the terns and plovers. The Noise Monitoring Plan will describe noise attenuation methods to reduce construction and demolition noise in the nesting habitats to 60 dBA. The noise monitoring plan would be submitted to the USFWS and CDFG for approval during informal and/or formal consultations.

Benefits for the terns and plovers will occur with demolition of the SBPP stacks where peregrine falcons are known to roost and forage. Eliminating perches that currently

overlook the salt ponds and marshes would reduce the predation on tern and plover chicks from peregrines and other raptors. The new stacks on SBRP would be 125 feet tall and any structures suitable for perching falcons would be outfitted with perch deterrents (e.g. Nixalite, a spiky deterrent placed on surfaces to discourage birds from landing). Although the perch deterrents most likely would not eliminate all birds from perching all of the time, it may discourage larger birds from using the structures on a daily basis, or as a comfortable winter roost.

### ***Belding's Savannah Sparrow***

The Belding's savannah sparrow is known to nest in the pickleweed of the J Street Marsh west of the SBPP and Channel Creek north of the site. Belding's savannah sparrows were observed in the marshes during each of the field surveys. The cyclone fence that surrounds the property will remain in place during construction of SBRP and demolition of SBPP. This fence will eliminate direct impacts to savannah sparrow nesting habitat from construction equipment and personnel. The low (35 dBA with maximum of 40 dBA) continuous noise levels from SBRP operations on the J Street Marsh would not affect nesting sparrows.

Construction noise from SBRP would be less than 60 dBA at the J Street Marsh and would not adversely affect nesting birds. Noise from demolition activities may temporarily disturb nesting sparrows in the J Street Marsh and Channel Creek. Demolition noise levels of up to 79 dBA could reach the marsh habitat. This noise level could disrupt calling abilities of the males and responses from females. If noise levels remain high for long periods of time during the nesting season, reproduction could be adversely affected. Demolition activities could be limited in the early morning and at dusk from March to August in the areas immediately adjacent to the boundary fence (i.e. within approximately 1,200 feet of nesting habitat areas). With implementation of this protection measure, effects of demolition noise on Belding's savannah sparrow nesting at the J Street Marsh or Channel Creek would be less than significant. These restrictions would also benefit other birds nesting in the marsh.

### ***Light-Footed Clapper Rail***

Although light-footed clapper rails have not been observed in the J Street Marsh, they are known historically from the marshes in the South San Diego Bay (CNDDDB 2006). Additional focused surveys for rails would occur during the first two years of construction activities (before the time when demolition activities would occur near the marsh habitat) to determine whether rails use the marsh for nesting and how close they may be to the site activities. Noise mitigation measures would be applied to demolition activities near the J Street Marsh as described above for Belding's savannah sparrow. These restrictions would also benefit the light-footed clapper rail and other birds nesting in the marsh.

### ***Brown Pelican***

The brown pelican roosts in several areas of the Bay and is often found perched on hardshore and light poles near the SBPP intake and effluent channels. Adults with juveniles were observed roosting on the light poles during surveys in February 2006. These pelicans are also known to roost along the berms of the salt ponds. They feed exclusively on fish in the Bay and do not forage on site. No direct impacts to brown pelicans are expected from construction and operation of SBRP. The continuous low noise levels from operations is not expected to adversely affect the roosting pelicans on site as they are most likely accustomed to the noise from SBPP. Demolition of SBPP could temporarily displace a few pelicans that roost near the channels during demolition of the intake channel headwall. Noise and

activities from SBRP construction would not affect nesting pelicans but may temporarily displace them from roosting sites immediately adjacent to the channels during construction and demolition activities. Construction and demolition would not result in significant impacts to California brown pelicans.

#### **8.2.4.3.5 Migratory Birds and Raptors**

Migratory birds including waterfowl, shorebirds, and raptors are attracted to the Sweetwater Marsh, salt ponds, Chula Vista Reserve, J Street Marsh, and other tidal marshes in the San Diego Bay. Raptors observed foraging on the site include red-tailed hawk, American kestrel, osprey, and peregrine falcon that prey on birds (including water birds) and small mammals. The SBPP provides suitable perching features such as the stacks, tanks, and light poles that overlook the salt ponds and Chula Vista Reserve. Replacing SBPP with SBRP would not result in significant impacts to migratory birds or raptors.

##### ***Peregrine Falcon***

Although the SBPP infrastructure provided forage and shelter to at least one pair of peregrine falcons during the winter months in 2005/2006, it is most likely they do not nest on site. Peregrines were observed using the SBPP site as part of their forage area during the breeding season, feeding on pigeons and starlings that nest on the plant structures. Construction activities for SBRP would occur approximately 1,000 feet from the SBPP stacks and would not affect perching peregrines or peregrines nesting off site. Preconstruction surveys would be conducted prior to demolition of SBPP to determine if the peregrines have decided to use the structures as a nest site. If a nest is found, demolition activities involving the stacks would be postponed until any young have fledged. If possible, demolition of the SBPP stacks could be conducted during the spring/summer when the peregrines are nesting off site; however, if noise impacts to nesting terns and plovers preclude demolition during spring/summer breeding season, the stacks would be removed after peregrines have been excluded from the site. If necessary, measures to prevent peregrines from perching on SBPP will be installed or implemented prior to demolition. Measures could include perch deterrents placed on typical roost locations one year prior to demolition. In addition, flagging could be hung around the stacks to scare peregrines and prevent perching. Curtains or other material could be used to close off particular areas currently open to the birds. Routine inspections of the SBPP for roosting birds will be conducted during the two years of SBRP construction to determine the best locations for deterrents or other measures.

These protection measures would avoid direct harm to nesting peregrines and minimize indirect impacts to roosting peregrines. No adverse impacts to peregrine falcons are expected from construction of SBRP and demolition of SBPP.

#### **8.2.4.3.6 Water Resources and Potential Wetlands**

Telegraph Canyon Creek, stormwater drainages, and man-made ponding areas that exhibit some wetland characteristics are present on the Project site. These areas potentially fall under the jurisdiction of the USACE and CDFG. Drainages that support wetland or riparian vegetation could be considered habitat for wildlife by CDFG and could require a streambed alteration agreement if affected. The natural gas pipeline that will be constructed by SDG&E may be constructed under Telegraph Canyon Creek, using the horizontal directional drilling or jack and bore construction methods. These methods would eliminate direct impacts to the creek banks and minimize sedimentation into the creek that would occur with a

conventional open cut trench method. Placing the gas pipeline under the creek may require a Section 404 permit from USACE and a streambed alteration agreement from CDFG. No special-status species would be affected from constructing the gas pipeline under the cement-lined portion of the creek. The gas pipeline may be attached above ground to the existing cement abutment at the eastern end of Telegraph Canyon Creek. This method would not impact the creek and would not require a USACE or CDFG permit.

Demolition of the SBPP intake and effluent channels may introduce incidental sediments into the Bay from removing the headwall and restructuring the rip-rap shoreline. These sediments would be minimized with use of the BMPs described in the SWPPP. Demolition work along the shoreline would may require a Section 10 permit under the Rivers and Harbors Act for the temporary work. No net loss of waters of the U.S. would occur from construction or demolition.

There would be no operational cooling water intake from the Bay or discharge from SBRP, as SBRP will use air-cooled condensers, and therefore no adverse impact to marine biological resources or water quality is expected to occur from this source.

Water will be applied to the site for dust control during construction. Erosion and sediment washed into surface waters would be potentially harmful to water quality of the adjacent Bay. The Applicant would be required to have a SWPPP as part of compliance with a construction National Pollutant Discharge Elimination System (NPDES) permit. The permit specifies BMPs to avoid sediment runoff and erosion that would cause water quality degradation. Water used during demolition activities and hydrotest water used to test pipeline integrity will be discharged to the sewer system and not to open land or waterways.

Storm water from the SBRP site during operations will be diverted to an approximately 1.36-acre detention basin on site. The basin will include a raised berm to raise the elevation from 17 feet to 23 feet to avoid the ground water table. The storm water will be released through a new box culvert connecting the basin to the existing cement-lined storm water drainage along the western boundary of the site. A regulating structure on the detention basin will keep the storm water discharge at the current rate. The detention basin has been designed in accordance with San Diego County criteria. One criterion states the detention basin must hold water for at least 24 hours for water quality purposes, but not longer than 72 hours to prevent mosquito breeding. This storm water basin will be inside the SBRP facility and is not expected to attract significant numbers of birds. The water quality of the storm water would be monitored and would not adversely affect birds or other wildlife if they entered the pond. Storm water releases would be monitored under an NPDES permit from the CRWQCB.

#### **8.2.4.3.7 Biological Resources of Commercial or Recreational Value**

No impacts to the San Diego Bay will occur with construction of SBRP and demolition of SBPP. In fact, elimination of the once-through cooling system at SBPP will eliminate any incidental entrainment of aquatic biota. The San Diego Bay ecosystem and recreational fish species would most likely benefit from demolition of SBPP. No impacts to recreational fishing would occur from the Project.

#### **8.2.4.3.8 Impacts to Trees**

All of the trees on the Project site were planted as landscape trees after construction of the SBPP (Figure 8.2-2a). These landscape trees represent a mixture of native and nonnative species. The landscape berms along the eastern boundary of the SBPP site and east of SBRP will not be removed during construction and demolition, and will functionally act as a visual screen from adjacent properties during operations. None of the trees are heritage tree species.

#### **8.2.4.4 Conflict with Regional Habitat Conservation Plans**

The Project is located within two existing FESA Section 10 Habitat Conservation Plan Areas: the San Diego Multiple Species Conservation Plan (MSCP) Subregional Plan; and the more focused City of Chula Vista MSCP Subarea Plan. However, the Site is located in a special management zone (e.g. under Port authority) and is therefore not eligible for inclusion under either MSCP (Lunstedt, 2006). Therefore, construction of the Project would not conflict with goals of any Habitat Conservation Plan or other regional conservation plan.

#### **8.2.4.5 Cumulative Impacts**

The SBRP and relocated SDG&E substation will permanently convert up to 19.4 acres of ruderal, developed, and weedy annual grassland which exist on the former 33-acre industrial site to an industrial use. Because the site is zoned and previously used for industrial uses, this is considered insignificant change in regards to wildlife habitat impacts. Developed lands in San Diego County are not universally considered significant beneficial habitat for wildlife, although they provide seasonal forage for some species, as evidenced by peregrine falcons roosting and foraging on the SBPP stacks during winter months.

The associated gas pipeline, water pipelines, and electric transmission lines for the Project are located within the main Project site and within existing developed rights-of-way and easements and will not result in permanent loss of habitat or cause significant adverse impacts to biological resources individually or cumulatively.

Benefits to some special-status species will occur with demolition of SBPP. The elimination of the warm water discharge will likely result in the green sea turtles migrating from the Bay and occupying wintering and breeding grounds in Mexico and Baja California. This natural occurrence has been altered by the warm water effluent since the early 1960s. In addition, conditions in the Bay may improve with decreased entrainment of ickthyoplankton and possible increases in eel grass habitats.

Benefits to the nesting California least terns, Western snowy plovers, Belding's savannah sparrow, and possibly light-footed clapper rails could occur with demolition of SBPP and implementation of deterrent measures on the new SBRP proposed to reduce perching peregrine falcons that could prey on the nesting birds and their chicks.

Once SBRP is operational and SBPP is demolished, the 115-acre existing SBPP site may be developed as part of the Bay Front Master Plan by the Port.

### **8.2.5 Proposed Mitigation and Monitoring**

The following subsections describe proposed mitigation and protection measures intended to avoid and minimize project effects or compensate for potential adverse effects of the Project on

biological resources. A BRMIMP will be developed for the Project prior to ground breaking that addresses how specific mitigation and protection measures for special-status species will be implemented during demolition and construction. The BRMIMP will also define any monitoring plans for impacts that could affect species, such as noise monitoring near nesting birds, and will document the effectiveness of mitigation and protection measures.

### **8.2.5.1 General Project Construction**

The following measures would be implemented for SBRP construction and SBPP demolition areas:

- Provide Worker Environmental Awareness Training (WEAT) for construction personnel that identify the sensitive biological resources and protection measures required to minimize project impacts during construction and operation. This will include measures to protect species in habitats adjacent to the site.
- Provide construction monitoring by a qualified Designated Biologist and onsite Biological Monitors during construction activities near sensitive habitats.
- Prepare a BRMIMP that outlines how the Applicant will implement the mitigation/protection measures developed in order to maintain any action authorized, by state or federal lead agencies and is not likely to jeopardize the continued existence of endangered or threatened species. The BRMIMP outline is presented in Appendix 8.2D.
- Avoid sensitive habitats and species during construction by retaining existing boundary fence line and developing construction exclusion zones and fencing around sensitive areas as needed.
- Conduct additional preconstruction surveys for sensitive species in potential impact areas during the winter and spring before construction grading begins, particularly within areas that have nesting substrate (shrubs, trees, and tall vegetation). Surveys would also focus on ground nesters such as killdeer and horned larks. Nesting substrate should be removed during the winter months prior to February 1. Surveys for peregrine falcon would be conducted throughout construction to assess use of the site during all seasons. If possible, demolition of the SBPP stacks should be completed during the summer months while the falcons are nesting off site.
- Prepare a Noise Monitoring Plan that describes noise attenuation methods that would reduce construction and demolition noise at nesting locations in the adjacent salt ponds, J Street Marsh, and Chula Vista Wildlife Reserve from March through August.
- Prepare monthly construction monitoring and compliance reports that analyze the effectiveness of the mitigation/protection measures. These reports will be submitted to the CEC on a monthly basis.
- All areas not required for permanent easements and development would be restored to preconstruction conditions, including topography, hydrology, topsoil, and, if appropriate, revegetation that focuses on erosion control. The restoration would be determined by the Port as the property owner.

### 8.2.5.2 Worker Environmental Awareness Training

A site-specific Worker Environmental Awareness Training (WEAT) program will be designed to inform all onsite personnel of the sensitive biological resources, restrictions, protection measures, and individual responsibilities associated with the Project. The WEAT would focus on construction and demolition activities that could adversely affect California least terns, Western snowy plover, and Belding's savannah sparrow that nest in the salt ponds and salt marshes adjacent to the site and California brown pelicans that roost near the intake channel. In addition, BMPs to control sedimentation into the San Diego Bay would be emphasized. The WEAT will be administered in an onsite and/or classroom setting and will include an oral, video, and written materials presentation. The presentation will include the types of construction activities that could impact biological resources and the measures developed to avoid such impacts. It will also include appropriate contact procedures and personnel information. The program includes information regarding encounters with wildlife and dealing with situations involving biological resources. Special emphasis will be placed on explaining the protection measures developed for the Project and the consequences of noncompliance.

### 8.2.5.3 Special-Status Species

Special-status species are not likely to occur on the Project site, however, California least terns, Western snowy plover, and Belding's savannah sparrow nest in the salt ponds and salt marshes adjacent to the site. Specific mitigation/protective measures were developed that focus on providing environmental awareness training, avoiding sensitive habitats, and avoiding seasonal disruption of particular special-status species critical life history events. The following are protective measures that would be implemented to protect sensitive species found during preconstruction surveys and construction monitoring activities.

#### 8.2.5.3.1 Foraging and Migratory Birds

The Project site and transmission line route are adjacent to the San Diego Bay that supports many migratory and resident birds that forage in the Bay, along the shoreline, or in the salt marsh and tidal mudflats. These birds typically do not forage over the site but may fly over the site while moving from forage areas. The Project will underground two transmission lines during construction activities, thereby not increasing the number of avian collisions with transmission lines in the area. With implementation of the following mitigation measures impacts to migratory and resident foraging birds are expected to be less than significant.

1. Design "raptor-friendly" 230-kV electric transmission lines, as described in *Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996* (APLIC 1996) with conductor wire spacing greater than the wingspans of large birds (43 inches on the vertical and 60 inches on the diagonal) to prevent electrocutions.
2. Provide shielded safety lighting that points downward and away from the San Diego Bay on the HRSG stacks and structures to reduce avian collisions and disturbance to wildlife in the Bay from lights.
3. Install bird flight diverters (BFDs) on the new 400-foot long 230kV transmission line to reduce avian collisions with conductor wires.

#### 8.2.5.3.2 Resident Nesting Birds

Potential impacts from construction and demolition activities on resident nesting birds would primarily occur from temporary construction noise and grading the site. Ground nesting birds such as horned lark and killdeer nest on the open ground with sparse vegetation. All ground areas will be surveyed prior to any construction activities and initial grading should be conducted in the winter (before March) prior to the start of nesting season. In addition, surveys and nest material removal (only prior to any eggs being laid) will be conducted routinely during monitoring of the SBRP construction period to reduce the likelihood of new nests being constructed in proposed disturbance areas. If new active nests are found, they would be flagged and protected, and construction disturbance would be postponed in the immediate area until young have fledged.

Construction noise levels attenuation may be determined necessary by USFWS if construction or demolition noise levels are expected to be above 60 dBA at nest sites, which could adversely affect nesting least terns, snowy plovers, or Belding's savannah sparrows. Consultation with USFWS and CDFG may be necessary to address these potential impacts to listed species.

SBPP would apply bird deterrent measures on plant structures overlooking the salt ponds and San Diego Bay to reduce peregrine falcons and other raptors from perching and preying on nesting California least terns, Western snowy plover, Belding's savannah sparrow, and light-footed clapper rail.

#### **8.2.5.3.3 Aquatic Species Protection Measures**

The following protective measures are proposed to avoid impacts to the habitats of aquatic species in the South San Diego Bay (e.g., fish, phytoplankton, zooplankton, green sea turtle).

1. Avoid direct impacts to tidal creeks and downstream reaches of salt marsh habitats with modifications to gas pipeline design that include use of a trenchless construction method (HDD or jack-and-bore) or attach pipeline to cement structure.
2. If deemed necessary by CDFG or Regional Water Quality Control Board, obtain a Streambed Alteration Agreement and water quality certification for the gas pipeline and shoreline activities that includes protection measures for biological resources downstream. Develop a contingency plan for the potential inadvertent return of drilling mud (often referred as frac-outs) into waterways during drilling activities.
3. USACE Rivers and Harbors Act Section 10 and/or CWA Section 404 permit may be required for demolition near the intake and effluent channels on the shoreline of the San Diego Bay. Cofferdams may be necessary to hold tide water back during demolition.
4. Implement BMPs and erosion control in the temporary impact areas, especially near the shoreline, drainages, and waterways.

#### **8.2.6 Involved Agencies and Agency Contacts**

For informational purposes, the list of applicable permits, including permits that would be required, but for CEC's exclusive siting jurisdiction, are shown in Table 8.2-5.

**TABLE 8.2-5**  
Agency Contacts for the SBRP Project

<b>Biological Resource Agency</b>	<b>Person Contacted</b>	<b>Issue</b>	<b>Phone</b>
U.S. Fish and Wildlife Service	Carolyn Lieberman	Species List request, informal consultation	(760) 431-9440
San Diego Bay National Wildlife Refuge, South Bay Unit	Victoria Touchstone	Nesting birds in salt ponds and marshes of NWR	(760) 930-0168
National Marine Fisheries Service	Christina Fahy, Fisheries Biologist	Federal listed green sea turtle	(562) 980-4023
California Department of Fish and Game; 1600 Agreement	Kelly Fisher	Streambed Alteration Agreement, creek on site	(858) 467-4207
California Department of Fish and Game; Listed Species	Marilyn Fluharty	California listed state species and species of concern	(858) 467-4231
California Department of Fish and Game	Bill Paznokas	Marine species and eel grass	(858) 467-4281
USACE	Robert Smith	Section 404 permit for crossing waters of the U.S., shoreline work, and fill of potential wetlands	(213) 452-3416
Regional Water Quality Control Board	Staff	Potential need of a RWQCB 401 permit	(858) 467-2592

## 8.2.7 Required Permits and Permit Schedule

For informational purposes, the list of applicable permits, including permits that would be required, but for CEC's exclusive siting jurisdiction, are shown in Table 8.2-6.

**TABLE 8.2-6**  
Required Permits and Schedule

<b>Permit/Authorization</b>	<b>What Is Required to Complete Consultations and Permit Applications</b>	<b>Date Application to be Submitted</b>
Biological Opinion pursuant to Section 7 of the ESA	May be needed for federally listed nesting bird species and green sea turtle. Informal consultation with USFWS/NMFS in process concerning California least tern, Western snowy plover, California brown pelican, light-footed clapper rail, green sea turtle, and peregrine falcon.	If required, a Biological Assessment would be submitted late 2006.
CDFG Streambed Alteration Agreement potentially required for pipeline construction across Telegraph Canyon Creek and work along shoreline.	Construction drawings of water crossing and demolition work at intake/effluent channels, completion of CEQA compliance documentation.	A notification would be submitted after the PMPD from CEC is issued.

**TABLE 8.2-6**  
Required Permits and Schedule

Permit/Authorization	What Is Required to Complete Consultations and Permit Applications	Date Application to be Submitted
CDFG Consistency Determination potentially required for state-listed species addressed in the federal consultation.	Completion of USFWS consultation and preparation of letter requesting consistency with the USFWS Biological Opinion (BO).	The request would be submitted as soon as a USFWS BO is obtained.
Clean Water Act Section 404 Permit and/or Rivers and Harbors Act Section 10 permit potentially required for gas pipeline crossing of Telegraph Canyon Creek, work on shoreline near intake and effluent channel	Prepare notification package with final construction design and protection measures described for gas pipeline placement under Telegraph Canyon Creek and removal of intake/effluent channel headwall.	Notification package and request for permit would be submitted late 2006.
Clean Water Act Section 401 Water Quality Certification	If a Section 404 permit is needed, prepare 401 application that describes monitoring plan for water quality during construction, completed endangered species consultations, and CDFG Streambed Alteration Agreement.	Application for 401 certification would be submitted to coincide with the 404 and SAA applications.

## 8.2.8 References

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**TABLE 8.2-1**

Laws, Ordinances, Regulations, and Standards Applicable to SBPR Biological Resources.

<b>LORS</b>	<b>Purpose</b>	<b>Regulating Agency</b>	<b>Permit or Approval</b>	<b>Applicability (AFC Section Explaining Conformance)</b>
<b>Federal</b>				
Endangered Species Act of 1973 and implementing regulations, Title 16 United States Code (USC) §1531 et seq. (16 USC 1531 et seq.), Title 50 Code of Federal Regulations (CFR) §17.1 et seq. (50 CFR 17.1 et seq.)	Designates and protects federally threatened and endangered plants and animals and their critical habitat.	USFWS and NMFS	USFWS and NMFS issues a Biological Opinion, or Authorization with Conditions after review of project impacts	Applicant has sited facility to avoid direct impacts to habitat for endangered species. May need to formally consult on indirect noise impacts to nesting birds using adjacent habitats. No critical habitats will be affected in the Project area. (Section 8.2.3.7)
Section 404 of Clean Water Act of 1977	Requires permit to affect jurisdictional waters of the U.S., including wetlands.	USACE	Section 404 Permit	Applicant will minimize impacts to waters by using HDD for gas pipeline under creek in compliance with Nationwide Permit (NWP) 12. (Section 8.2.2.1; 8.2.2.5.7)
Section 10 of the Rivers and Harbors Act	Requires approval prior to the commencement of any work in or over navigable waters of the United States, or which affects the course, location, condition or capacity of such waters.	USACE	Section 10 Authorization	Applicant will work within navigable waters along shoreline of San Diego Bay at intake/effluent channels. Section 10 authorization will be obtained. (Section 8.2.2.1)
Section 401 of Clean Water Act of 1977	Requires the Applicant to conduct water quality impact analysis for the Project when using 404 permits and for discharges to waterways.	RWQCB	Water Quality Certification	Applicant will obtain 401 Certification if required as a condition of the 404 permit. Stormwater discharge would be through an approved industrial NPDES permit (Section 8.2.2.5.7)
Suggested Guidelines for Raptor Protection (APLIC, 1996)	Describes design measures to avoid and reduce impacts to raptors and other birds from electrical transmission and other facilities.	CEC	CEC Conditions of Approval	Applicant will implement design measures for new 230-kV transmission line to protect raptors from collision and electrocution. (Section 8.2.4.2.4)
Migratory Bird Treaty Act 16 USC §§703-711	Prohibits the non-permitted take of migratory birds.	USFWS and CDFG	CEC Conditions	Applicant proposed to use bird flight diverters on new transmission line to minimize take of migratory birds. (Section 8.2.2.1; 8.2.4.3.5)

**TABLE 8.2-1**  
Laws, Ordinances, Regulations, and Standards Applicable to SBRP Biological Resources.

LORS	Purpose	Regulating Agency	Permit or Approval	Applicability (AFC Section Explaining Conformance)
<b>State</b>				
California Endangered Species Act of 1984, Fish and Game Code, §2050 through §2098	Protects California's endangered and threatened species. Requires take permit if direct impacts to listed species occurs.	CDFG	Comments as cooperating agency on Section 7 or Issues 2081 incidental take permit for state-listed species.	Potential impacts from construction noise may affect state-listed species. (Section 8.2.2.2)
Fish and Game Code Fully Protected Species §3511: Fully Protected birds §4700: Fully Protected mammals §5050: Fully Protected reptiles and amphibians §5515: Fully Protected fishes	Prohibits the taking of listed plants and animals that are Fully Protected in California.	CDFG	CEQA review by CDFG.	Applicant will avoid take of any Fully-protected species. (Section 8.2.2.2)
Fish and Game Code §1930, Significant Natural Areas (SNA)	Designates certain areas such as refuges, natural sloughs, riparian areas, and vernal pools as significant wildlife habitats. Listed in the CNDDDB.	CDFG	CEQA review by CDFG.	Applicant will avoid SNA, none within the Project area.
Fish and Game Code §1580, Designated Ecological Reserves	The CDFG commission designates land and water areas as significant wildlife habitats to be preserved in natural condition for the general public to observe and study.	CDFG	CEQA review by CDFG.	Applicant will avoid DER.
Fish and Game Code 2080.1	Consistency Determination to verify the Federal Biological Opinion is "consistent" with CESA.	CDFG	Federal ESA Biological Assessment review and approval by CDFG.	If formal consultation is required under the FESA, a Consistency Determination would be needed for the Belding's savannah sparrow. (Section 8.2.2.2)
Fish and Game Code §1600, Streambed Alteration Agreement (SAA)	Reviews projects for impacts to waterways, including impacts to downstream vegetation and wildlife from sediment, diversions, and other disturbances.	CDFG	Issues conditions of the Streambed Alteration Agreement that reduces and minimizes effects on vegetation and wildlife	Applicant will apply for SAA to alter irrigation canals if required to do so by CDFG. (Section 8.2.4.3.6)

**TABLE 8.2-1**

Laws, Ordinances, Regulations, and Standards Applicable to SBPR Biological Resources.

<b>LORS</b>	<b>Purpose</b>	<b>Regulating Agency</b>	<b>Permit or Approval</b>	<b>Applicability (AFC Section Explaining Conformance)</b>
Native Plant Protection Act of 1977, Fish and Game Code, §1900 et seq.	Designates state rare and endangered plants and provides specific protection measures for identified populations.	CDFG	Reviews mitigation options if there will be significant project effects on threatened or endangered plant species	Construction at the intake/effluent channels may affect individual CNPS List 1B and List 4 plants. No threatened or endangered plants on Project site. (Section 8.2.3.7.1)
Public Resource Code §§25500 & 25527	Siting of facilities in certain areas of critical concern for biological resources, such as ecological preserves, wildlife refuges, estuaries, and unique or irreplaceable wildlife habitats of scientific or educational value, is prohibited, or when no alternative, strict criteria is applied.	USFWS and CDFG	Issues Biological Opinion or Authorization with Conditions after review of project impacts	The SBPP site is adjacent to the South Unit of the San Diego NWR, Chula Vista Wildlife Reserve, and J Street Marsh. No direct impacts to these habitats will occur. Potential for temporary construction noise disturbance to nesting birds in the adjacent habitats. (Section 8.2.2.1)
Title 20 CCR §§1702 (q) and (v)	Protects “areas of critical concern” and “species of special concern” identified by local, state, or federal resource agencies within the Project area, including the California Native Plant Society (CNPS).	USFWS and CDFG	Issues Biological Opinion or Authorization with Conditions after review of project impacts.	Areas of critical concern may include South Unit of the San Diego NWR, Chula Vista Wildlife Reserve, and J Street Marsh. Species of special concern are addressed. (Section 8.2.3.1)
Title 14 CCR Section 15000 et seq.	Describes the types and extent of information required to evaluate the effects of a proposed project on biological resources of a project site.	USFWS and CDFG	Review and comment on AFC.	AFC will provide this information. (Section 8.2.2.2)

**TABLE 8.2-2**  
Plants Observed On-site (organized alphabetically by Taxonomic Family)

Scientific Name	Common Name	Scientific Name	Common Name
Aizoaceae		Frankeniaceae	
<i>Carpobrotus edulis</i> *	Hottontot-fig	<i>Frankenia salina</i>	Alkali heath
<i>Mesembrianthemum nodiflorum</i> *	Small-flowered iceplant	Geraniaceae	
<i>Sesuvium verrucosum</i>	Western sea-purslane	<i>Erodium cicutarium</i> *	Red-stemmed fileree
Amaranthaceae		<i>Erodium moschatum</i> *	White-stemmed fileree
<i>Amaranthus albus</i> *	Tumbleweed	<i>Pelargonium</i> sp.*	Geranium
Anacardiaceae		Lythraceae	
<i>Schinus molle</i> *	Peruvian pepper	<i>Lythrum hyssopifolia</i> *	Grass poly
<i>Schinus terebenthifolius</i> *	Brazilian pepper	Malvaceae	
Apiaceae		<i>Malacothamnus fascicularis</i>	Bush mallow
<i>Apium graveolens</i> *	Common celery	<i>Malva parviflora</i> *	Cheeseweed
<i>Foeniculum vulgare</i> *	Fennel	<i>Lavetara cretica</i> *	Cretan lavatera
Apocynaceae		Moraceae	
<i>Carissa macrocarpa</i> *	Natal plum	<i>Ficus</i> sp.*	Fig
Araceae		Myoporaceae	
<i>Washingtonia filifera</i> *	California fan palm	<i>Myoporum laetum</i> *	Myoporum
Asteraceae		Myrtaceae	
<i>Aster subulatus</i> ssp. <i>Ligulatus</i>	Slender aster	<i>Callistemon</i> sp.*	Bottlebrush
<i>Baccharis pilularis</i>	Coyote bush	<i>Eucalyptus camaldulensis</i> *	River red-gum
<i>Baccharis salisifolia</i>	Mulefat	<i>Melaleuca</i> sp.*	Melaleuca
<i>Baccharis sarothroides</i>	Broom baccharis	Nyctaginaceae	
<i>Centauria melitensis</i> *	Tocalote	<i>Bougainvillea</i> sp.*	
<i>Chrysanthemum coronarium</i> *	Garland chrysanthemum	Oleaceae	
<i>Cirsium vulgare</i> *	Bull thistle	<i>Olea europea</i> *	European olive
<i>Conyza bonariensis</i> *	South american horseweed	Plumbaginaceae	
<i>Conyza canadensis</i>	Canada horseweed	<i>Limonium californicum</i>	California sea-lavender
<i>Conyza coulteri</i>	Coulter's horseweed	<i>Limonium perezii</i> *	Perez's sea-lavender
<i>Gnaphalium luteo-album</i> *	Weedy cudweed	<i>Limonium</i> sp.*	

**TABLE 8.2-2**  
Plants Observed On-site (organized alphabetically by Taxonomic Family)

Scientific Name	Common Name	Scientific Name	Common Name
<i>Gnaphalium stramineum</i>	Cotton-batting plant	Poaceae	
<i>Heterotheca grandiflora</i>	Telegraph weed	<i>Avena barbata</i> *	Slender wild oat
<i>Isocoma menziesii</i> var. <i>vernoides</i>	Coast goldenbush	<i>Bromus diandrus</i> *	Ripgut grass
<i>Lactuca seriola</i> *	Wild lettuce	<i>Bromus hordaceus</i> *	Soft chess
<i>Sonchus oleraceus</i> *	Sow thistle	<i>Bromus madritensis</i> *	Foxtail brome
<i>Stephanomeria virgata</i>	Tall stephanomeria	<i>Cortaderia selloana</i> *	Selloa pampas grass
<i>Xanthium spinosum</i>	Spiny clot-bur	<i>Cynodon dactylon</i> *	Bermuda grass
<i>Xanthium strumarium</i>	Cocklebur	<i>Distichlis spicata</i>	Saltgrass
Batidaceae		<i>Hordeum murinum</i> ssp. <i>Leporinum</i> *	Hare barley
<i>Batis maritima</i>	Saltwort	<i>Monanthochloe littoralis</i>	Salt cedar
BORAGINACEAE		<i>Polypogon monspeliensis</i> *	Rabbit's foot grass
<i>Heliotropium curassavicum</i>	Salt heliotrope	<i>Stenotaphrum secundatum</i> *	St. Augustine grass
Brassicaceae		<i>Leptochloa uninervia</i>	Dense-flowered sprangletop
<i>Brassica geniculata</i> *	Summer mustard	<i>Melinis repens</i> *	Natal grass
<i>Brassica nigra</i> *	Black mustard	<i>Piptatherum miliaceum</i> *	Smilo grass
<i>Lepidium lasiocarpum</i> *	Sand peppergrass	Polygonaceae	
<i>Sisymbrium irio</i> *	London rocket	<i>Rumex conglomerates</i> *	Whorled dock
Caryophyllaceae		<i>Rumex crispus</i> *	Curly dock
<i>Spergularia</i> sp.	Sand spurry	Primulaceae	
<i>Spergularia villosa</i> *	Villous sand spurry	<i>Anagalis arvensis</i> *	Scarlet pimpernil
Chenopodiaceae		Rosaceae	
<i>Arthrocnemum subterminale</i>	Parish's pickleweed	<i>Rhaphiolepis indica</i> *	India hawthorn
<i>Atriplex canescens</i>	Four-wing saltbush	Salicaceae	
<i>Atriplex lindleyi</i> *	Lindley's saltbush	<i>Salix gooddingii</i>	Godding's willow
<i>Atriplex semibaccata</i> *	Australian saltbush	<i>Salix laevigata</i>	Red willow
<i>Atriplex suberecta</i> *	Serate-leaved saltbush	Saxifragaceae	
<i>Bassia hysopifolia</i> *	Five-hook bassia	<i>Escallonia</i> sp.*	Escallonia
<i>Salicornia virginica</i>	Common woody pickleweed	Solanaceae	

**TABLE 8.2-2**  
Plants Observed On-site (organized alphabetically by Taxonomic Family)

Scientific Name	Common Name	Scientific Name	Common Name
<i>Salsola tragus</i> *	Russian thistle	<i>Nicotiana glauca</i> *	Tree tobacco
<i>Suaeda esteroa</i>	Estuary seablite	<i>Solanum americanum</i> *	White nightshade
Cyperaceae		Tamaricaceae	
<i>Scirpus californicus</i>	California bullrush	<i>Tamarix ramosissima</i> *	Mediterranean tamarix
<i>Scirpus maritimus</i>	Alkali bulrush	Typhaceae	
<i>Scirpus pungens</i>	Three-square	<i>Typha</i> sp.	Cattail
Euphorbiaceae		Urticaceae	
<i>Chamaesyce serpens</i> *	Annual rattlesnake spurge	<i>Urtica urens</i> *	Dwarf nettle
<i>Ricinus communis</i> *	Castor bean	Verbenaceae	
Fabaceae		<i>Lantana</i> sp.*	Lantana
<i>Acacia</i> sp.*	Acacia	<i>Verbena lasiostachya</i>	Western verbena
<i>Certonia siliqua</i> *	Carob		
<i>Melilotus indicus</i> *	Yellow sweetclover		

\* Indicates non-native plant

**TABLE 8.2-3**  
Wildlife Species Observed on or Near the Project Area by CH2M HILL/CH2M HILL Biologists during Field Surveys in 2005 and 2006

Common Name	Scientific Name	Comments
<b>Birds</b>		
Pied-billed grebe	<i>Podilymbus podiceps</i>	Observed along bay shoreline and in streams flowing through existing plant site
Horned grebe	<i>Podiceps auritus</i>	Observed in power plant intake/exhaust area
Western grebe	<i>Aechmophorus occidentalis</i>	Observed along bay shoreline and observed in power plant water intake/exhaust area
Brown pelican	<i>Pelecanus occidentalis</i>	Observed along bay shoreline and observed on hardshore (light pole) of power plant water intake/effluent area
Double-crested cormorant	<i>Phalacrocorax auritus</i>	Fly over and forage along bay shoreline
Great blue heron	<i>Ardea herodias</i>	Fly over and along bay shoreline also observed dead carcass under t-line north of existing power plant
Great egret	<i>Ardea alba</i>	Fly over and along bay shoreline

**TABLE 8.2-3**

Wildlife Species Observed on or Near the Project Area by CH2M HILL/CH2M HILL Biologists during Field Surveys in 2005 and 2006

Common Name	Scientific Name	Comments
Green-backed heron	<i>Butorides striatus</i>	Observed throughout project areas foraging and flyover
Green-winged teal	<i>Anas crecca</i>	Fly over and along bay shoreline also observed dead carcass under t-line north of existing power plant
Mallard	<i>Anas platyrhynchos</i>	Observed in power plant water intake/exhaust area
Snowy egret	<i>Egretta thula</i>	Fly over and along bay shoreline and Telegraph Canyon Creek
Northern pintail	<i>Anas acuta</i>	Fly over and along bay shoreline foraging in large numbers (Migration)
Cinnamon teal	<i>Anas cyanoptera</i>	Fly over and along bay shoreline
Northern shoveler	<i>Anas clypeata</i>	Fly over and along bay shoreline
American wigeon	<i>Anas americana</i>	Fly over and along bay shoreline foraging in large numbers (Migration)
Ring-necked duck	<i>Aythya collaris</i>	Transition area from cement lined drainage to natural stream corridor
Surf scoter	<i>Melanitta perspicillata</i>	Observed along bay shoreline and observed in power plant water intake/exhaust area
Bufflehead	<i>Bucephala albeola</i>	Observed along bay shoreline and observed in power plant water intake/exhaust area
Red-breasted merganser	<i>Mergus serrator</i>	Observed along bay shoreline and in Telegraph Canyon Creek flowing through existing plant site
Osprey	<i>Pandion haliaetus</i>	Observed circling power plant, foraging shoreline and catching fish in bay
Northern harrier	<i>Circus cyaneus</i>	Observed foraging along bay shoreline
Cooper's hawk	<i>Accipiter cooperii</i>	Foraging and fly over landscaped areas
Red-tail hawk	<i>Buteo jamaicensis</i>	Observed foraging throughout project area and perched on t-line north of existing power plant
American kestrel	<i>Falco sparverius</i>	Foraging and fly over landscaped areas
Peregrine falcon	<i>Falco peregrinus</i>	Observed pair foraging and perching throughout project areas in February 2006, power plant operators say pair has nested in past on existing plant stacks. No nest was observed in 2006, however, one adult was observed hunting pigeons May 2006.
Wilson's warbler	<i>Wilsonia pusilla</i>	Observed in landscape areas near bay
American coot	<i>Fulica americana</i>	Observed along bay shoreline and in Telegraph Canyon Creek

**TABLE 8.2-3**

Wildlife Species Observed on or Near the Project Area by CH2M HILL/CH2M HILL Biologists during Field Surveys in 2005 and 2006

Common Name	Scientific Name	Comments
Greater yellowlegs	<i>Tringa melanoleuca</i>	Observed along bay shoreline and observed in power plant water intake/exhaust area
Willet	<i>Catoptrophorus semipalmatus</i>	Observed along bay shoreline and in Telegraph Canyon Creek
Western sandpiper	<i>Calidris mauri</i>	Observed along bay shoreline and in Telegraph Canyon Creek
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>	Observed along bay shoreline and in Telegraph Canyon Creek
California gull	<i>Larus californicus</i>	Fly over and along bay shoreline
Rock dove	<i>Columba livia</i>	Observed throughout project areas foraging and flyover
Mourning dove	<i>Zenaida macroura</i>	Observed throughout project areas foraging and flyover
Anna's hummingbird	<i>Calypte anna</i>	Foraging and fly over landscaped areas
Calliope hummingbird	<i>Stellula calliope</i>	Observed on fence line between landscape and tidal marsh habitats
Belted kingfisher	<i>Ceryle alcyon</i>	Transition area from cement lined drainage to natural stream corridor
Black phoebe	<i>Sayornis nigricans</i>	Observed foraging within cement lined drainage north of existing power plant
Say's phoebe	<i>Sayornis saya</i>	Observed in landscape areas
Cassin's kingbird	<i>Tyrannus vociferans</i>	Transition area from cement lined portion of Telegraph Canyon Creek
Horned lark	<i>Eremophila alpestris</i>	Observed foraging and potentially nesting under t-lines north of existing power plant
American crow	<i>Corvus brachyrhynchos</i>	Observed throughout project areas foraging and flyover
Bushtit	<i>Psaltriparus minimus</i>	Observed in landscape areas throughout project
Blue-grey gnatcatcher	<i>Poliopitila caerulea</i>	Observed in landscape areas
Northern mockingbird	<i>Mimus polyglottos</i>	Observed in landscape areas throughout project
European starling	<i>Sturnus vulgaris</i>	Observed in landscape areas throughout project
Yellow-rumped warbler	<i>Dendroica coronata</i>	Observed in landscape areas throughout project
Savannah sparrow	<i>Passerculus sandwichensis</i>	Observed foraging under t-lines north of existing power plant

**TABLE 8.2-3**

Wildlife Species Observed on or Near the Project Area by CH2M HILL/CH2M HILL Biologists during Field Surveys in 2005 and 2006

Common Name	Scientific Name	Comments
Belding's savannah sparrow	<i>Passerculus andwichensis beldingi</i>	Perched on fence near power plant water intake/exhaust area and in salt marsh northwest of site
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Observed in landscape areas throughout project
Western meadowlark	<i>Sturnella neglecta</i>	Observed throughout project areas foraging and flyover
House finch	<i>Carpodacus mexicanus</i>	Observed in landscape areas
Killdeer	<i>Charadrius vociferus</i>	Observed in open areas
Gadwall	<i>Anas strepera</i>	Observed foraging and possibly nesting at the mouth of Telegraph Canyon Creek
Black-necked stilt	<i>Himantopus mexicanus</i>	Observed on mudflats on west end of salt marsh
Forester's tern	<i>Sterna forsteri</i>	Observed foraging in effluent channel
Caspian tern	<i>Sterna caspia</i>	Observed foraging on mudflats on west end of salt marsh
Barn swallow	<i>Hirundo rustica</i>	Observed flying near mouth of creek
Cliff swallow	<i>Hirundo pyrrhonota</i>	Observed flying near mouth of creek
Pigeon	<i>Columba livia</i>	Observed on numerous structures on-site
<b>Mammals</b>		
Virginia opossum	<i>Didelphis virginiana</i>	Observed partial remains of two individuals within existing and proposed power plant sites
Desert cottontail	<i>Sylvilagus audubonii</i>	Near existing switch yard and in proposed new power plant site
California ground squirrel	<i>Spermophilus beecheyi</i>	Near existing switch yard and in proposed new power plant site
Coyote	<i>Canis latrans</i>	Scat, and tracks observed throughout project areas, den observed within new power plant site in old LNG berm
Striped skunk	<i>Mephitis mephitis</i>	Observed at Chula Vista Marina
<b>Amphibians and Reptiles</b>		
Green sea turtle	<i>Chelonia mydas</i>	NMFS was trapping and collecting data on the green sea turtles at the SBPP effluent channel February 15, 2006, during the biological surveys. Known from the South Bay since the early 1960's.
Western fence lizard	<i>Sceloporus occidentalis</i>	Burrows and forages on site
African clawed frog	Family Pipidae <i>Xenopus laevis</i>	Exotic, aquarium species found in ponded, excavated pit on-site with mosquitofish

**TABLE 8.2-3**

Wildlife Species Observed on or Near the Project Area by CH2M HILL/CH2M HILL Biologists during Field Surveys in 2005 and 2006

<b>Common Name</b>	<b>Scientific Name</b>	<b>Comments</b>
Gopher snake (shed)	Possibly <i>Pituophis</i>	Skin found at southern boundary of site
<b>Fish</b>		
mosquitofish	<i>Gambusia affinis</i>	found in ponded, excavated pit on-site

**TABLE 8.2-4**  
Special-Status Species Known to Occur or Have Potential to Occur on or Adjacent to the SBPP and SBRP Sites.

<b>Common Name</b> <b>Scientific Name</b>	<b>Status</b>	<b>Occurrence in Project Area</b>	<b>Potential Project Impacts</b>
<b>Plants</b>			
estuary seablite <i>Suaeda esteroa</i>	List 1B.2	Observed on site in coastal salt marsh along mouth of Telegraph Canyon Creek and in rip rap of intake/effluent channels.	Potential loss of plants during shoreline work.
woolly seablite <i>Suaeda taxifolia</i>	List 4	Observed on project site along coastal salt marsh borders in rip rap of intake/effluent channels.	Potential loss of plants during shoreline work.
<b>Animals</b>			
Green Sea turtle <i>Chelonia mydas</i>	Federal Threatened	Resident population occurs in SBPP effluent channel and eel grass beds of South San Diego Bay. NMFS studies include trapping on the spit to the Chula Vista Reserve. Warm water effluent may artificially trap turtles in the South Bay during winter when they should migrate to Mexico and Baja California.	Potential benefits from stopping SBPP warm water effluent that attracts turtles in South San Diego Bay during winter when surrounding water is too cold to allow migration. Potential for disturbance during demolition near intake/effluent channels.
California least tern <i>Sterna antillarum browni</i>	Federal Endangered, California Endangered	Known breeding populations at salt works since at least 1969 and Chula Vista Wildlife Reserve since 1980. Closest nesting location is approximately 2,000 to 3,000 feet from site boundary on the Reserve. Protected by gate and fence, restricts public access to spit breeding area.	No direct impacts to nesting and forage habitats adjacent to site. Potential for construction and demolition noise to temporarily disturb nesting birds in Salt Ponds. Potential for temporary disturbance to shoreline forage area near intake/effluent channels during demolition.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	Federal Threatened, California Species of Special Concern	Known to nest at Salt Ponds, Silver Strand, and Sweetwater Marsh. Critical Habitat designated on Silver Strand and Sweetwater Marsh NWR. Suitable nesting habitat occurs at least 0.5 miles from Project site.	No direct impacts to nesting and forage habitats adjacent to site. Potential for construction and demolition noise to temporarily disturb nesting birds in Salt Ponds.
California brown pelican <i>Pelecanus occidentalis californicus</i>	Federal Endangered, California Endangered	Observed roosting adults with juveniles on SBPP light poles in February 2006. Suitable nesting habitat occurs outside of Project area. Known to roost on Salt Works dikes.	No direct impacts to nesting and forage habitats. Potential for temporary displacement from hard shore roost (light poles) during demolition near intake/effluent channel.
Belding's savannah sparrow <i>Ammodramus sandwichensis beldingi</i>	California Endangered, Federal Species of Concern	Observed in J Street Marsh northwest of site and Channel Creek during February and May 2006. Suitable high salt marsh habitat occurs outside of Project site boundaries. Has nested at salt works and Chula Vista Wildlife Reserve. CNDDB (2006) shows 8 pairs of sparrows inhabited J Street Marsh in 1986 and 4 in 2001.	No direct impacts to nesting and forage habitats adjacent to site. Potential for construction and demolition noise to temporarily disturb nesting birds in J Street Marsh and Channel Creek.

TABLE 8.2-4

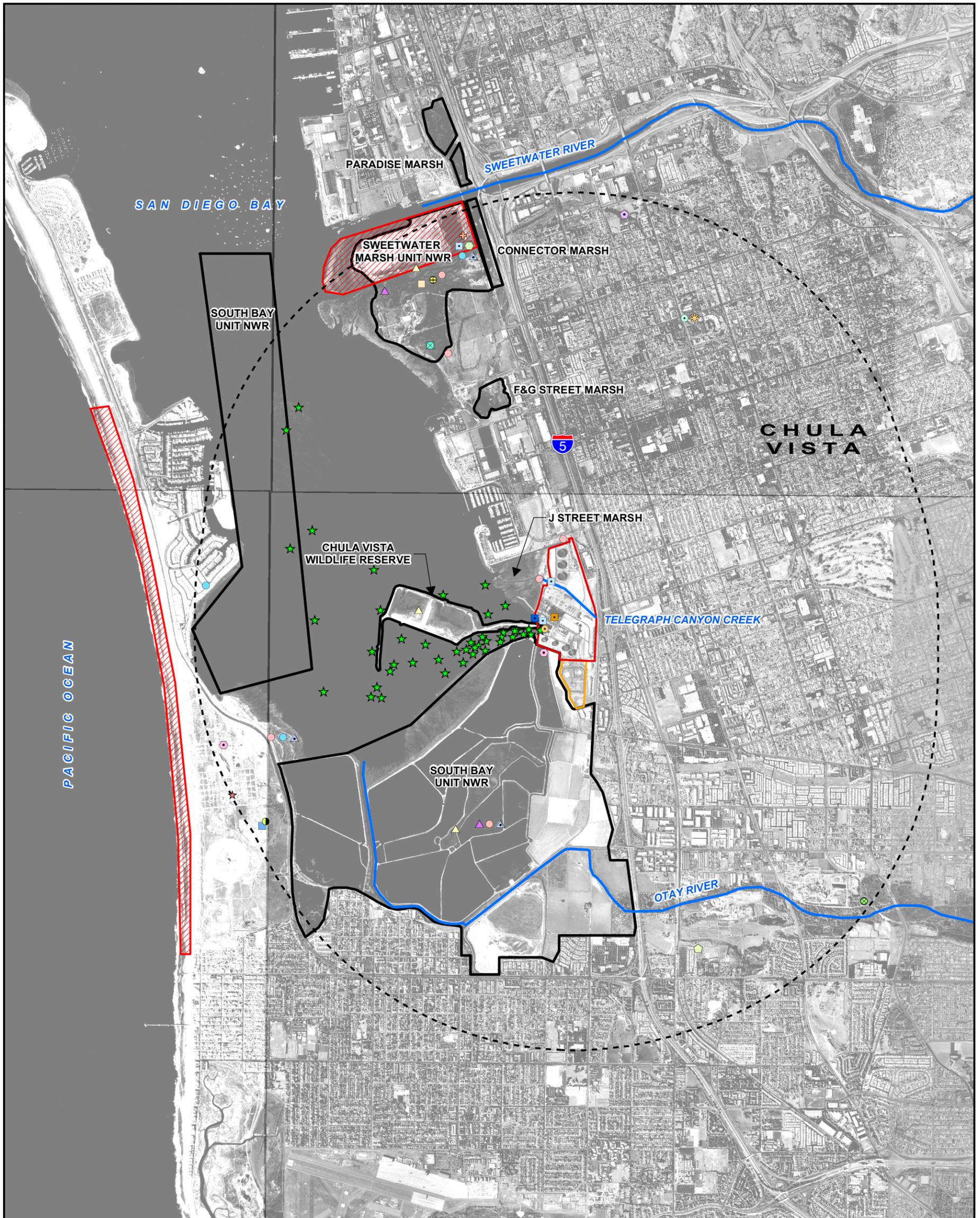
Special-Status Species Known to Occur or Have Potential to Occur on or Adjacent to the SBPP and SBRP Sites.

<b>Common Name</b> <b>Scientific Name</b>	<b>Status</b>	<b>Occurrence in Project Area</b>	<b>Potential Project Impacts</b>
Light footed clapper rail <i>Rallus longirostris levipes</i>	Federal Endangered, California Endangered	Suitable coastal marsh habitat occurs outside of Project site. Potential habitat in J Street Marsh. CNDDDB records 5 rails observed in 1984 and 1 in 1985 in marshes at southern end of San Diego Bay. Known to occur in Tijuana River estuary.	No direct impacts to nesting and forage habitats adjacent to site. Potential for construction and demolition noise to temporarily disturb nesting birds in Salt Ponds (if present).
Peregrine falcon <i>Falco peregrinus</i>	Federal Delisted, California Endangered	Observed one pair roosting and foraging on SBPP structures (stacks and tanks overlooking San Diego Bay). Most likely nests off site but within foraging distance. Observed foraging on pigeons and starlings that nest in SBPP structures during breeding season in May 2006.	No direct impacts to nest sites. Demolition of SBPP will eliminate a known winter roost site for a pair of peregrines. Eliminating peregrine perch site overlooking Salt Ponds and Chula Vista Reserve could benefit nesting populations of California least tern and Western snowy plover.
California horned lark <i>Eremophila alpestris</i>	California Species of Special Concern	Observed in ruderal habitat on the site in February and May 2006. Potentially nests on site north of Telegraph Canyon Creek.	Potential loss of nesting area on site north of Telegraph Canyon Creek. Requires preconstruction surveys prior to demolition activities. Requires site grading north of creek to occur outside breeding season.
Black skimmer <i>Rynchops niger niger</i>	California Species of Special Concern	Nests in colonies on unvegetated gravel bars, sandy beaches, low islets or man-made dredge spoils and dikes. Feeds near mouths of rivers on small fish. Known from the south San Diego Bay and Salton Sea.	Suitable habitat occurs outside of Project area on Salt Works dikes, and intertidal salt flats. Could forage along the site shoreline and mouth of Telegraph Canyon Creek.
Double-crested cormorant <i>Phalacrocorax auritus</i>	California Species of Special Concern	Observed flying over site during surveys. Suitable nesting habitat occurs outside of Project area, may roost on hard shore structures along shoreline.	No direct impacts to nesting and forage habitats. Potential for temporary displacement from hard shore roost (shoreline rip rap) during demolition near intake/effluent channel.
Elegant tern <i>Sterna elegans</i>	Federal Species of Concern, California Species of Special Concern	Mudflats, salt flats, open beaches	Suitable habitat occurs outside of Project area in salt ponds. No impacts to breeding elegant terns are expected.
Gull-billed tern (nesting colony) <i>Sterna nilotica vanrossemi</i>	Federal Species of Concern, California Species of Special Concern	Forages along mudflats, lakes, emergent wetlands, feeding on mole crabs, fish, lizards, and sometimes least tern and snowy plover chicks. Known from the Salton Sea and San Diego Bay areas.	Suitable forage habitat occurs outside of Project area in Salt Work ponds. No nesting or forage habitat occurs on site and none were observed during surveys.
Large-billed Savannah sparrow (wintering) <i>Ammodramus sandwichensis rostratus</i>	Federal Species of Concern, California Species of Special Concern	Salt marshes in Salton Sea, southern California, and Baja California.	Suitable habitat occurs outside of Project impact area. Bird is uncommon in area, mostly occurs south in Baja California.

**TABLE 8.2-4**

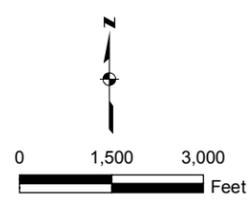
Special-Status Species Known to Occur or Have Potential to Occur on or Adjacent to the SBPP and SBRP Sites.

<b>Common Name Scientific Name</b>	<b>Status</b>	<b>Occurrence in Project Area</b>	<b>Potential Project Impacts</b>
Osprey <i>Pandion haliaetus</i>	Migratory Bird	Observed foraging in salt marsh northwest of site. Suitable forage and nesting habitat occurs outside of Project area.	No direct impacts to nesting and forage habitats adjacent to site. Construction is not expected to discourage foraging in adjacent habitats.
Great (Common) egret <i>Ardea alba</i>	Migratory Bird	Observed foraging in salt marshes at mouth of Telegraph Canyon Creek and along shoreline hunting from hard shore.	No direct impacts to nesting and forage habitats. Potential for temporary displacement from hard shore roost (shoreline rip rap) during demolition near intake/effluent channel.
Great blue heron <i>Ardea herodias</i>	Migratory Bird	Observed foraging in salt marshes at mouth of Telegraph Canyon Creek and along shoreline hunting from hard shore.	No direct impacts to nesting and forage habitats. Potential for temporary displacement from hard shore roost (shoreline rip rap) during demolition near intake/effluent channel.

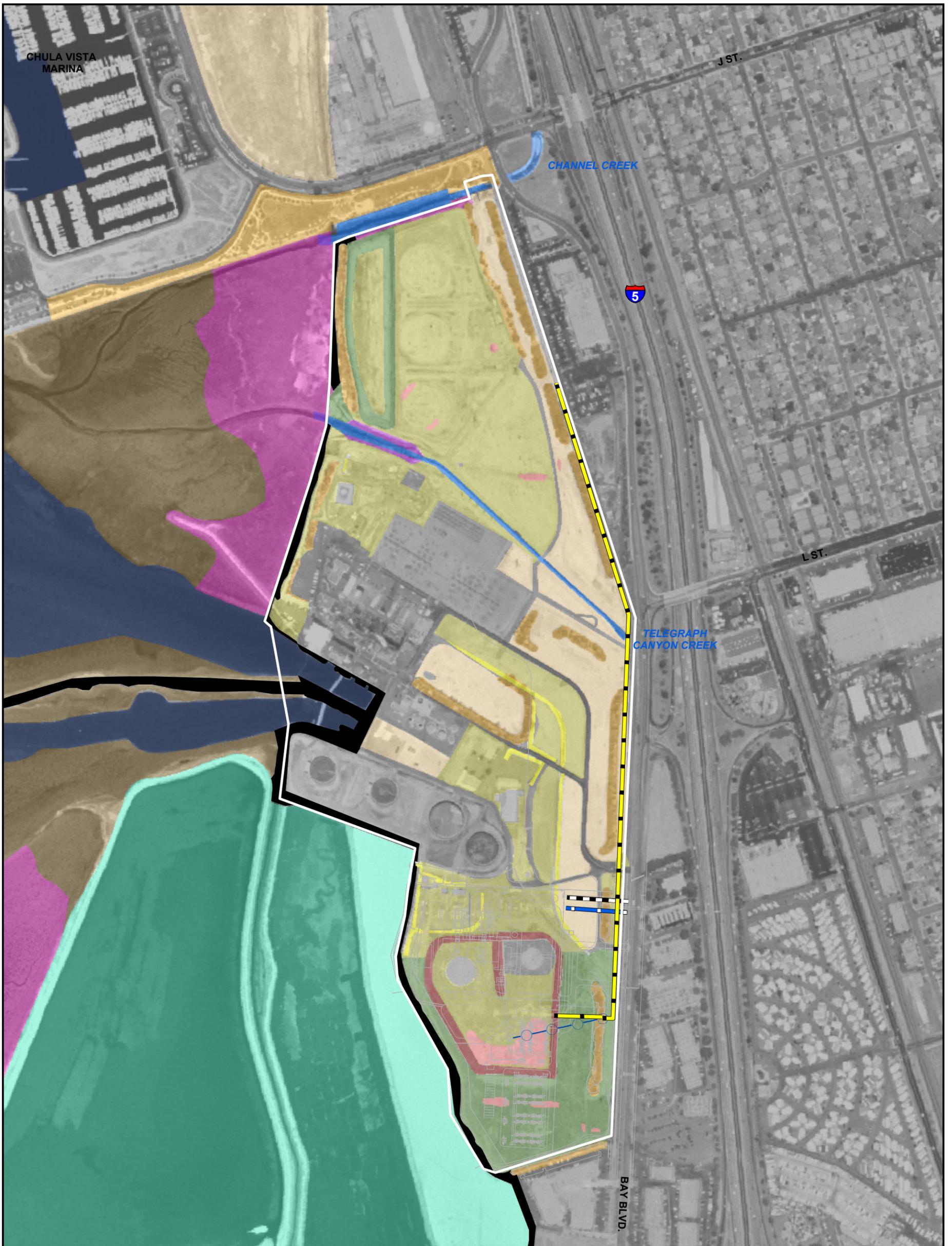


LEGEND	
<b>SPECIAL STATUS ELEMENTS</b>	
<b>ANIMALS</b>	
●	BELDING'S SAVANNAH SPARROW
■	CALIFORNIA BLACK RAIL
▲	CALIFORNIA LEAST TERN
◆	COAST (SAN DIEGO) HORNED LIZARD
★	GREEN SEA TURTLE
▲	LIGHT-FOOTED CLAPPER RAIL
◆	MONARCH BUTTERFLY
●	ROOSTING BROWN PELICAN
■	ROOSTING PEREGRINE FALCON
▲	WESTERN SNOWY PLOVER
<b>PLANTS</b>	
●	COULTER'S GOLDFIELDS
●	DECUMBENT GOLDENBUSH
■	ESTUARY SEABLITE
■	WOOLY SEABLITE
●	NUTTALL'S LOTUS
★	ORCUTT'S PINCUSHION
+	PALMER'S FRANKENIA
⊗	PURPLE STEMODIA
⊕	SALT MARSH BIRD'S-BEAK
●	SAN DIEGO BARREL CACTUS
●	SAN DIEGO MARSH-ELDER
■	SNAKE CHOLLA
●	SOUTHERN COASTAL SALT MARSH
■	VARIEGATED DUDLEYA
<b>STREAMS</b>	
—	WESTERN SNOWY PLOVER
▨	PROPOSED CRITICAL HABITAT UNIT
—	WILDLIFE REFUGES
▨	EXISTING SBPP PARCEL
—	SBPP PROJECT BOUNDARY

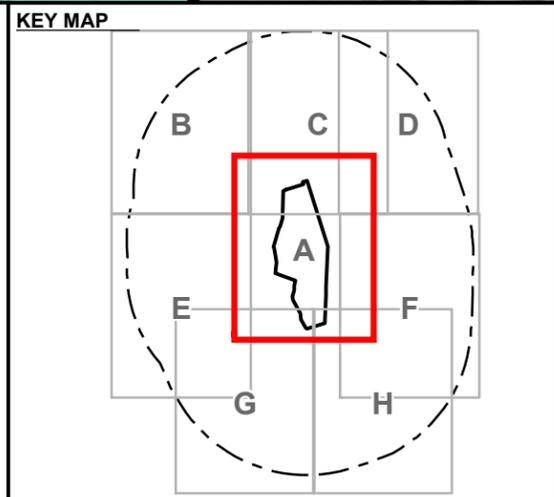
SOURCE: McDonald and Dutton, 1992; USFWS, 2005; CNDDB, 2006; 2006 CH2M Hill Field Surveys



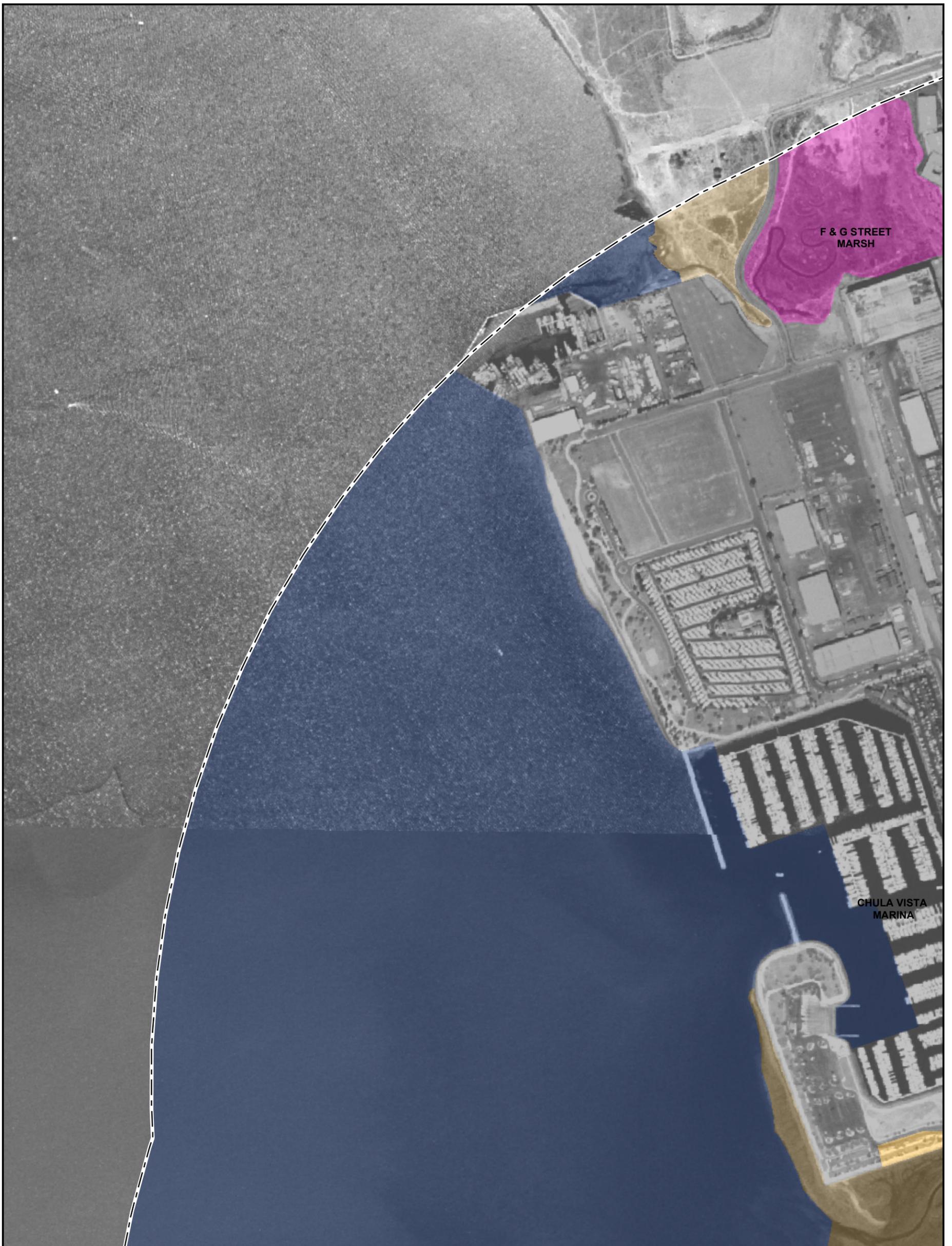
**FIGURE 8.2-1**  
**SPECIAL-STATUS SPECIES**  
**AND CRITICAL HABITAT**  
**LOCATIONS**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA



LEGEND	
<b>HABITAT TYPES</b>	
	ANNUAL GRASSLAND
	BACCHARIS SCRUB
	COMPACTED SANDY OPEN AREA
	DEVELOPED/INDUSTRIAL/URBAN
	HARD SHORE
	LANDSCAPE
	MARINE (SAN DIEGO BAY)
	RIPARIAN
	RUDERAL
	SALT PONDS AND ASSOCIATED DIKES
	TIDAL SALT MARSH
	TIDAL MUD FLAT
 SCALE 1:6,000	
<b>WATER RESOURCES</b>	
	CEMENT-LINED DRAINAGE
	POORLY DRAINED DEPRESSION
	WATERS OF THE U. S.
<b>PROJECT FEATURES</b>	
	230KV TRANSMISSION LINE
	GAS LINE ROUTE
	WATER SUPPLY ROUTE
	SEWER LINE ROUTE
	PROJECT BOUNDARY
	1-MILE RADIUS AROUND THE PROJECT SITE



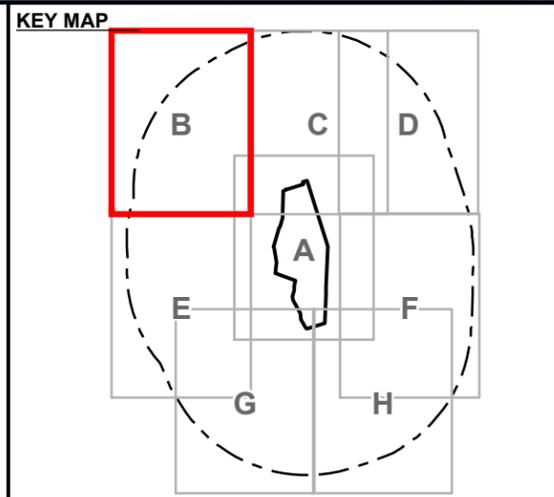
**FIGURE 8.2-2a**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA



**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
	ANNUAL GRASSLAND		CEMENT-LINED DRAINAGE
	BACCHARIS SCRUB		POORLY DRAINED DEPRESSION
	COMPACTED SANDY OPEN AREA		WATERS OF THE U. S.
	DEVELOPED/INDUSTRIAL/URBAN	<b>PROJECT FEATURES</b>	
	HARD SHORE		230KV TRANSMISSION LINE
	LANDSCAPE		GAS LINE ROUTE
	MARINE (SAN DIEGO BAY)		WATER SUPPLY ROUTE
	RIPARIAN		SEWER LINE ROUTE
	RUDERAL		PROJECT BOUNDARY
	SALT PONDS AND ASSOCIATED DIKES		1-MILE RADIUS AROUND THE PROJECT SITE
	TIDAL SALT MARSH		
	TIDAL MUD FLAT		

0 250 500 Feet  
SCALE 1:6,000



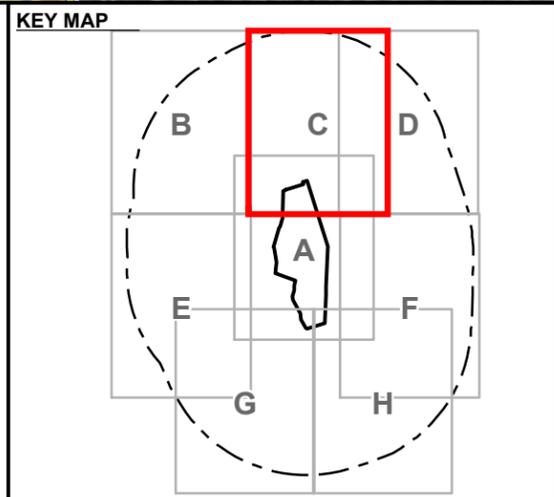
**FIGURE 8.2-2b**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA



**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
	ANNUAL GRASSLAND		CEMENT-LINED DRAINAGE
	BACCHARIS SCRUB		POORLY DRAINED DEPRESSION
	COMPACTED SANDY OPEN AREA		WATERS OF THE U. S.
	DEVELOPED/INDUSTRIAL/URBAN	<b>PROJECT FEATURES</b>	
	HARD SHORE		230kV TRANSMISSION LINE
	LANDSCAPE		GAS LINE ROUTE
	MARINE (SAN DIEGO BAY)		WATER SUPPLY ROUTE
	RIPARIAN		SEWER LINE ROUTE
	RUDERAL		PROJECT BOUNDARY
	SALT PONDS AND ASSOCIATED DIKES		1-MILE RADIUS AROUND THE PROJECT SITE
	TIDAL SALT MARSH		
	TIDAL MUD FLAT		

0 250 500 Feet  
SCALE 1:6,000



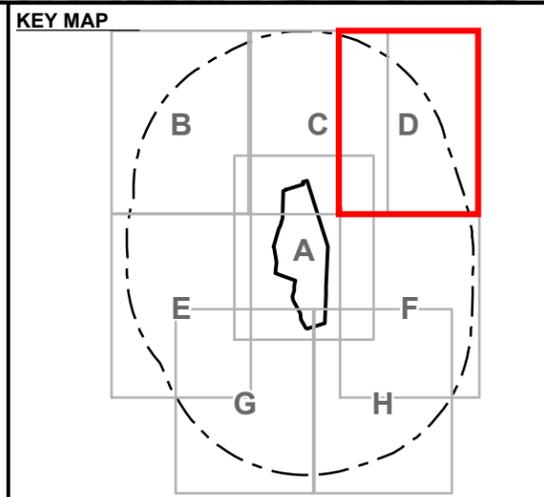
**FIGURE 8.2-2c**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**



**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
	ANNUAL GRASSLAND		CEMENT-LINED DRAINAGE
	BACCHARIS SCRUB		POORLY DRAINED DEPRESSION
	COMPACTED SANDY OPEN AREA		WATERS OF THE U. S.
	DEVELOPED/INDUSTRIAL/URBAN	<b>PROJECT FEATURES</b>	
	HARD SHORE		230kV TRANSMISSION LINE
	LANDSCAPE		GAS LINE ROUTE
	MARINE (SAN DIEGO BAY)		WATER SUPPLY ROUTE
	RIPARIAN		SEWER LINE ROUTE
	RUDERAL		PROJECT BOUNDARY
	SALT PONDS AND ASSOCIATED DIKES		1-MILE RADIUS AROUND THE PROJECT SITE
	TIDAL SALT MARSH		
	TIDAL MUD FLAT		

0 250 500 Feet  
SCALE 1:6,000



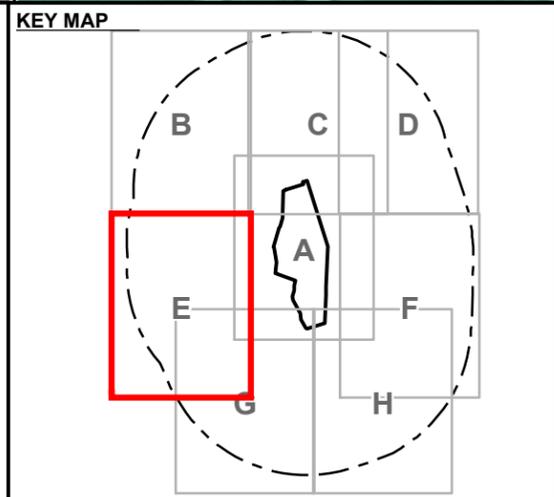
**FIGURE 8.2-2d**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**



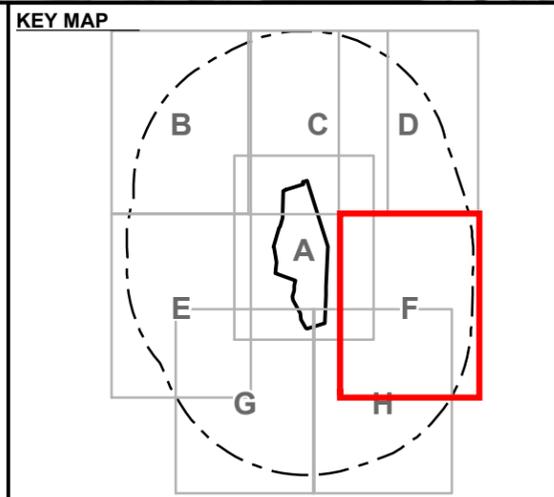
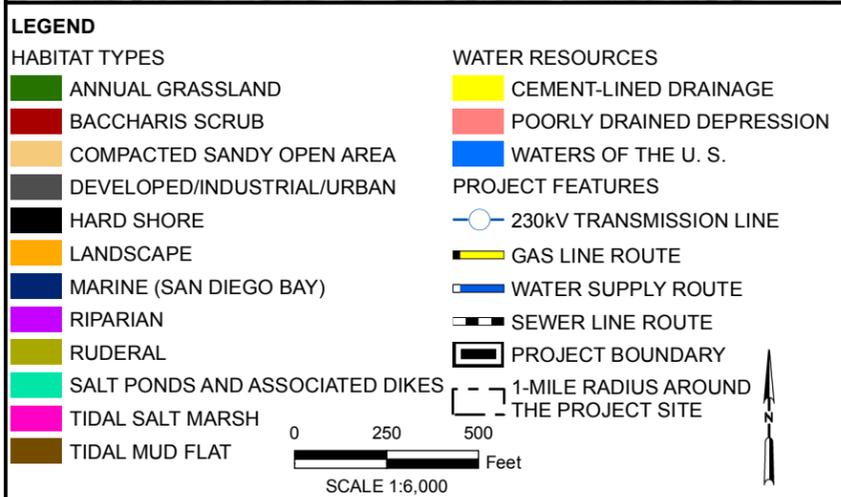
**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
ANNUAL GRASSLAND	CEMENT-LINED DRAINAGE	POORLY DRAINED DEPRESSION	
BACCHARIS SCRUB	WATERS OF THE U. S.		
COMPACTED SANDY OPEN AREA	<b>PROJECT FEATURES</b>		
DEVELOPED/INDUSTRIAL/URBAN	230kV TRANSMISSION LINE	GAS LINE ROUTE	
HARD SHORE	WATER SUPPLY ROUTE	SEWER LINE ROUTE	
LANDSCAPE	PROJECT BOUNDARY	1-MILE RADIUS AROUND THE PROJECT SITE	
MARINE (SAN DIEGO BAY)			
RIPARIAN			
RUDERAL			
SALT PONDS AND ASSOCIATED DIKES			
TIDAL SALT MARSH			
TIDAL MUD FLAT			

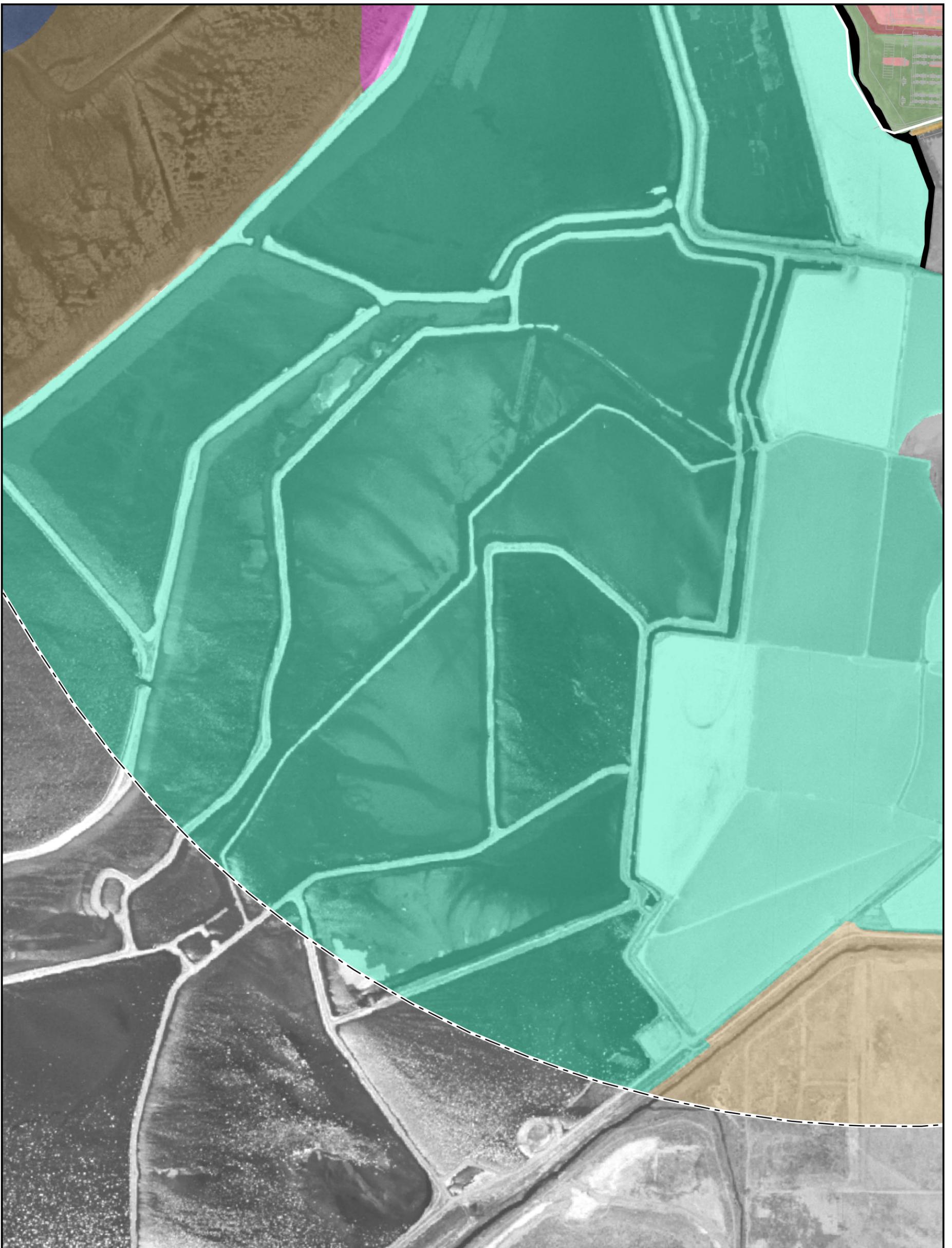
0 250 500 Feet  
SCALE 1:6,000



**FIGURE 8.2-2e**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**



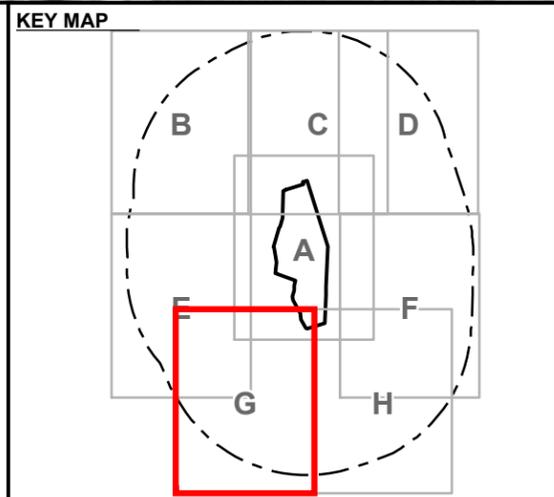
**FIGURE 8.2-2f**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**



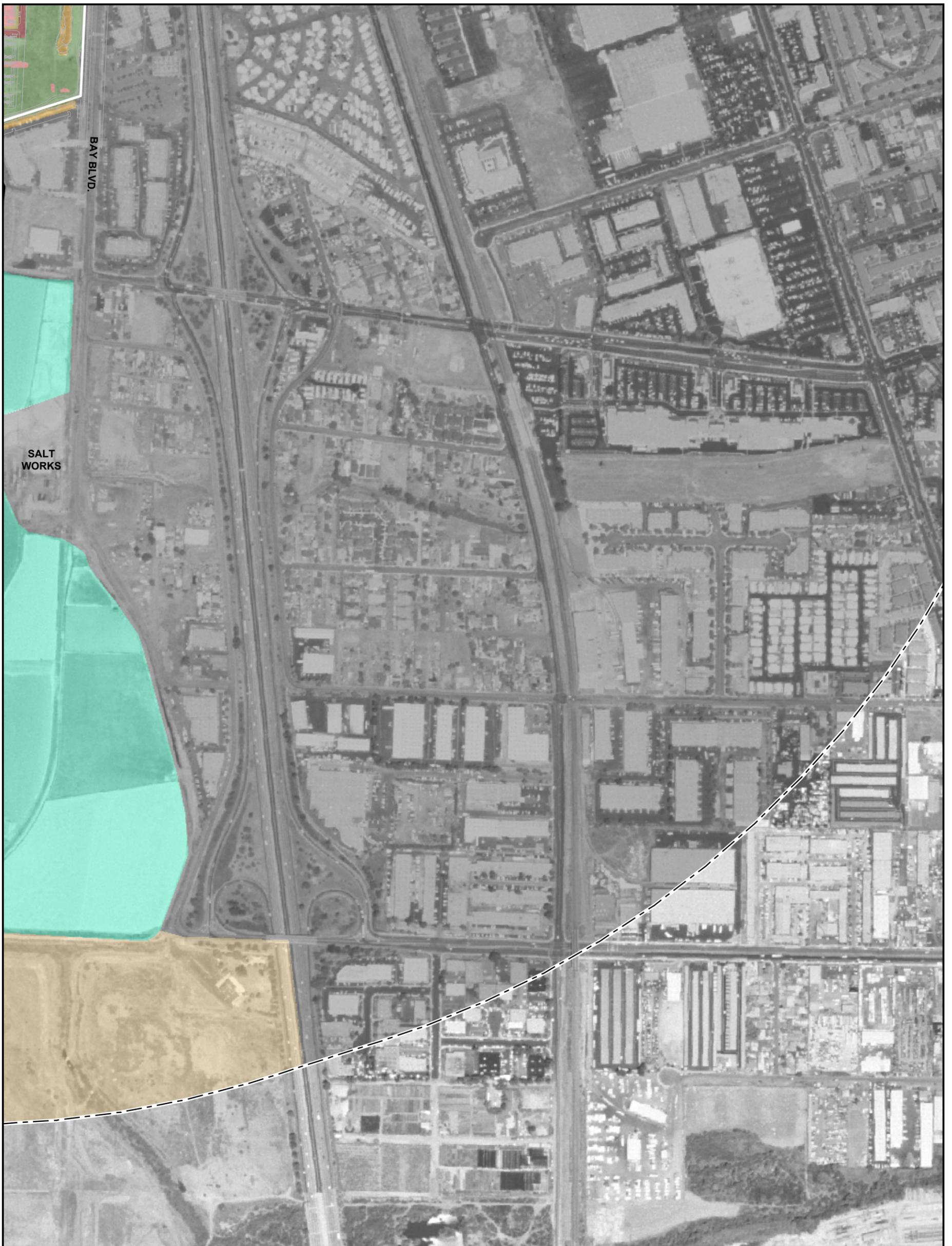
**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
	ANNUAL GRASSLAND		CEMENT-LINED DRAINAGE
	BACCHARIS SCRUB		POORLY DRAINED DEPRESSION
	COMPACTED SANDY OPEN AREA		WATERS OF THE U. S.
	DEVELOPED/INDUSTRIAL/URBAN	<b>PROJECT FEATURES</b>	
	HARD SHORE		230kV TRANSMISSION LINE
	LANDSCAPE		GAS LINE ROUTE
	MARINE (SAN DIEGO BAY)		WATER SUPPLY ROUTE
	RIPARIAN		SEWER LINE ROUTE
	RUDERAL		PROJECT BOUNDARY
	SALT PONDS AND ASSOCIATED DIKES		1-MILE RADIUS AROUND THE PROJECT SITE
	TIDAL SALT MARSH		
	TIDAL MUD FLAT		

0 250 500 Feet  
SCALE 1:6,000



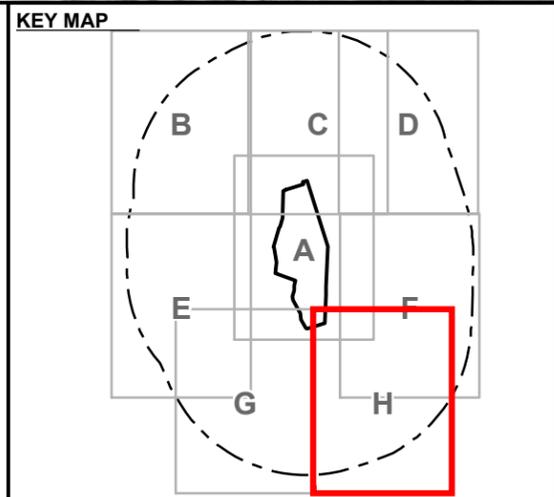
**FIGURE 8.2-2g**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA



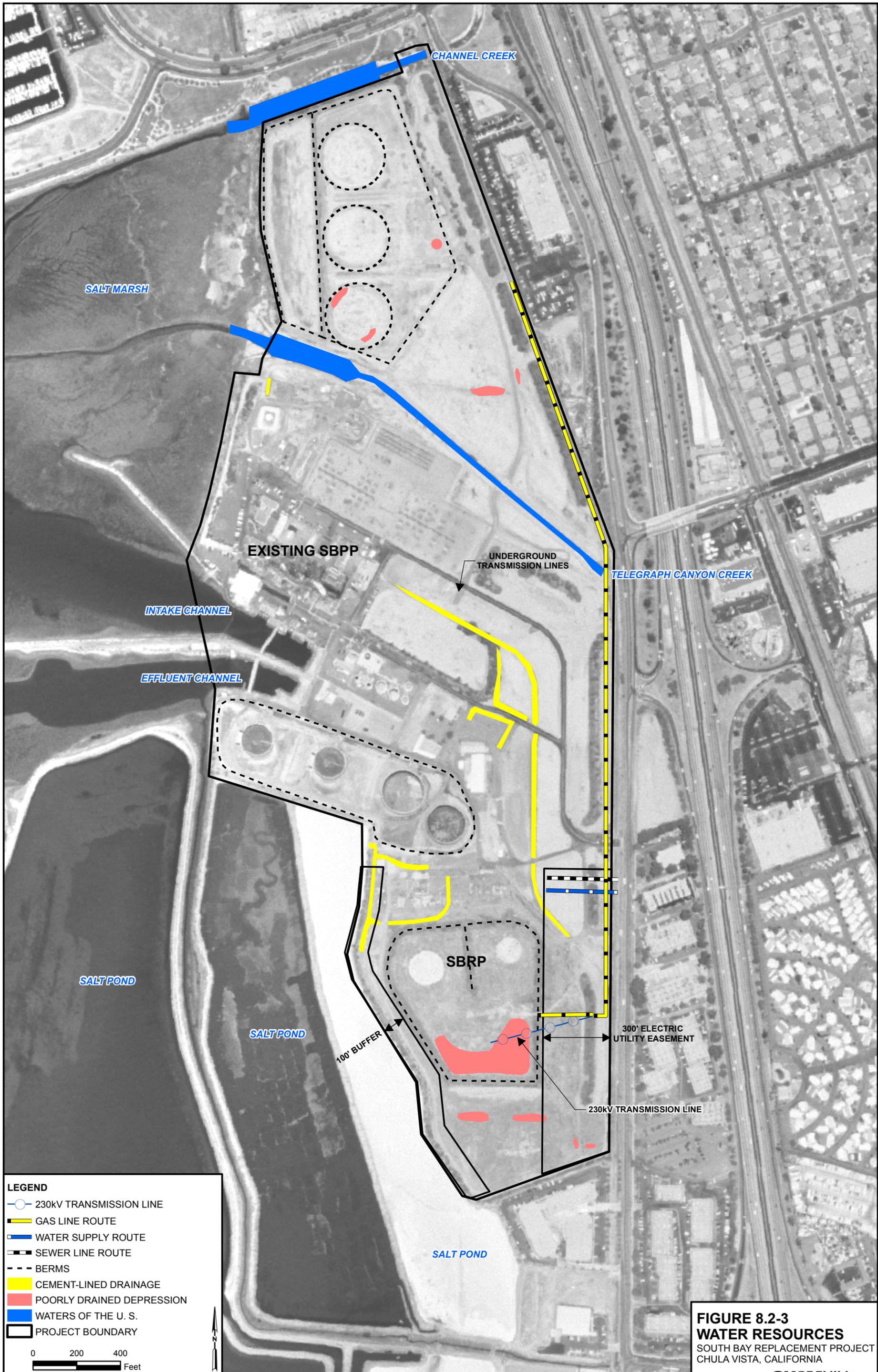
**LEGEND**

<b>HABITAT TYPES</b>		<b>WATER RESOURCES</b>	
	ANNUAL GRASSLAND		CEMENT-LINED DRAINAGE
	BACCHARIS SCRUB		POORLY DRAINED DEPRESSION
	COMPACTED SANDY OPEN AREA		WATERS OF THE U. S.
	DEVELOPED/INDUSTRIAL/URBAN	<b>PROJECT FEATURES</b>	
	HARD SHORE		230kV TRANSMISSION LINE
	LANDSCAPE		GAS LINE ROUTE
	MARINE (SAN DIEGO BAY)		WATER SUPPLY ROUTE
	RIPARIAN		SEWER LINE ROUTE
	RUDERAL		PROJECT BOUNDARY
	SALT PONDS AND ASSOCIATED DIKES		1-MILE RADIUS AROUND THE PROJECT SITE
	TIDAL SALT MARSH		
	TIDAL MUD FLAT		

0 250 500 Feet  
SCALE 1:6,000



**FIGURE 8.2-2h**  
**BIOLOGICAL RESOURCES**  
**WITHIN 1 MILE OF THE SITE**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**



**LEGEND**

- 230kV TRANSMISSION LINE
- GAS LINE ROUTE
- WATER SUPPLY ROUTE
- SEWER LINE ROUTE
- - - BERMS
- CEMENT-LINED DRAINAGE
- POORLY DRAINED DEPRESSION
- WATERS OF THE U. S.
- PROJECT BOUNDARY

0      200      400  
 Feet

**FIGURE 8.2-3  
 WATER RESOURCES**  
 SOUTH BAY REPLACEMENT PROJECT  
 CHULA VISTA, CALIFORNIA  
**CH2MHILL**