

SUBSECTION 8.2

Biological Resources

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 operation. It also presents protection and mitigation measures that would avoid, minimize, or compensate for adverse impacts.

8.2.2 Applicable Laws, Ordinances, Regulations, and Standards

The following subsections describe the primary LORS that apply to potential impacts on biological resources in the project area, and list the agencies responsible for enforcing the regulations. A summary of the LORS is provided in Table 8.2-1, at the end of this section.

8.2.2.1 Federal

Federal Endangered Species Act (FESA, 16 United States Code [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). Adverse impacts are defined as “take,” which is prohibited except through authorization of a 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 Code of Federal Regulations [CFR] §17.3). Species that are not listed are not protected by the Federal Endangered Species Act (FESA) even if they are candidates for listing; 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.

Migratory Bird Treaty Act (16 USC 703 to 711) protects all migratory birds, including nests and eggs.

Bald and Golden Eagle Protection Act (16 USC 668) specifically protects bald and golden eagles from harm or trade in parts of these species.

8.2.2.2 State

California Endangered Species Act (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.

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.

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.

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 California Department of Fish and Game (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 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. CDFG jurisdiction is limited to areas within the 100-year floodplain. Within this zone, CDFG jurisdiction is subject to the judgment of the department. This applies to any channel modifications that would be required to meet drainage, transportation, or flood control objectives of a project.

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 (Public Resources Code Section 25000, et seq.) 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.

San Francisco Bay Conservation and Development Commission (BCDC) Permit is required for projects within 100 feet of open water, marshes and mudflats of the San Francisco Bay shoreline in Alameda; Contra Costa; Marin; Napa; San Francisco; San Mateo; Santa Clara; Solano; and Sonoma counties. BCDC jurisdiction also applies to portions of the Suisun Marsh system; ponds, refuges, preserves, and managed wetlands that have been diked off from the Bay, and portions of most creeks, rivers, sloughs, and other tributaries that flow into the San Francisco Bay.

8.2.2.3 Local and Other Jurisdictions

8.2.2.3.1 Applicable Habitat Conservation Plans and Critical Habitat Designations. The project is not located in or under the jurisdiction of an existing Habitat Conservation Plan.

Although the proposed project disturbance areas do not fall within any designated or proposed critical habitat areas, it is located in the general vicinity of Critical Habitat designated under the FESA for:

- Central Valley fall/late fall-run chinook salmon Evolutionarily Significant Unit (ESU) (*Oncorhynchus tshawytscha*)
- Central California coast coho salmon ESU (*Oncorhynchus kisutch*)
- Winter run chinook salmon ESU (*Oncorhynchus tshawytscha*)
- Steller (northern) sea lion (*Eumetopias jubatus*)

An ESU is a distinctive group of Pacific salmon or steelhead. The designated Critical Habitats for the above three salmon species are associated with aquatic resources, while local sea lion Critical Habitat is limited to offshore island rookeries. No project features or construction access would affect any aquatic or shore habitats.

8.2.2.3.2 San Francisco General Plan. The Environmental Protection Element of the San Francisco General Plan (San Francisco County, 1995) contains objectives to protect air (see Subsection 8.1, Air Quality) and water quality (see Subsection 8.14, Water Resources) and ensure sensible management of natural resources as well as conservation and restoration of open space (see Subsection 8.9, Agriculture and Soils) that have benefits to biological resources. It also contains specific policies and goals for protecting areas of sensitive plant and wildlife habitat and for assuring compatibility between natural areas and development. Environmental protection policies applicable to the project are summarized in Table 8.2-1.

8.2.2.3.3 Sustainability Plan for San Francisco. The San Francisco Sustainability Plan includes objectives to limit loss of biodiversity as well as goals to create a sustainable economy while contributing minimal impact on the natural world (City and County of San Francisco, 1997). Objectives applicable to the project are summarized in Table 8.2-1.

8.2.2.3.4 San Mateo County General Plan. The Vegetative, Water, Fish, and Wildlife Resources Policies chapter of the San Mateo County General Plan (San Mateo County, 1986) contains specific policies and goals for protecting areas of sensitive plant and wildlife habitat and for assuring compatibility between natural areas and development. The policies of this plan are included based on the potential for air emission impacts on serpentine habitat within San Mateo County's San Bruno Mountain State and County Park. Environmental protection policies applicable to the project are summarized in Table 8.2-1.

8.2.3 Environmental Setting

The following subsections describe the biological conditions of the proposed San Francisco Electric Reliability Project (SFERP) 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. Figures are located at the end of this subsection.)

TABLE 8.2-1
Applicable Laws, Ordinances, Regulations, and Standards

Element	Goal/Policy	Conformance
Federal		
Federal Endangered Species Act (FESA, 16 USC 153)	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).	The SFERP site does not include habitat for federally listed species. Construction and operation will avoid significant impacts to federally listed species and their habitat.
Migratory Bird Treaty Act (16 USC 703 to 711)	Protects all migratory birds, including nests and eggs.	The SFERP site does not include habitat or other features that would likely attract migratory birds. Stacks will be low in profile and are not likely to result in significant bird strikes. New transmission lines will be underground.
Bald and Golden Eagle Protection Act (16 USC 668)	Specifically protects bald and golden eagles from harm or trade in parts of these species.	The SFERP site does not include habitat or other features that would likely attract eagles. Stacks will be low in profile and are not likely to result in significant bird strikes. New transmission lines will be underground.
State		
California Endangered Species Act (Fish and Game Code Section 2050 et seq.).	Species listed under this act cannot be “taken” or harmed, except under specific permit.	The SFERP site was analyzed and it was determined that SFERP construction or operation will not affect listed species and, therefore, not result in “take.”
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.	SFERP construction or operation will not result in “take.” Stacks will be low in profile and are not likely to result in significant bird strikes. New transmission lines will be underground.
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.	The SFERP site was analyzed and does not include features that would encourage or accommodate nest building. Any encountered nests would be avoided during the species’ breeding season.

TABLE 8.2-1
Applicable Laws, Ordinances, Regulations, and Standards

Element	Goal/Policy	Conformance
Fish and Game Code Section 3503.5	Protects all birds of prey and their eggs and nests.	The SFERP site was analyzed and does not include habitat or other features that would likely attract birds of prey. Stacks will be low in profile and are not likely to result in significant bird strikes. New transmission lines will be underground. The SFERP site was analyzed and does not include features that would encourage or accommodate nest building.
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.	SFERP construction or operation will not result in "take" of birds of prey, their nests, or eggs. Site features have been designed to avoid avian strikes. The SFERP site does not include features that would encourage or accommodate nest building.
Fish and Game Code Sections 4700, 5050, and 5515	Lists mammal, amphibian, and reptile species that are fully protected in California.	The SFERP site was analyzed and does not include likely habitat for fully protected mammal, amphibian, or reptile species.
Fish and Game Code Sections 1900 et seq.,	The Native Plant Protection Act lists threatened, endangered, and rare plants listed by the state.	The SFERP site was analyzed and does not include likely habitat for protected plant species.
Title 14, California Code of Regulations, Sections 670.2 and 670.5	Lists animals designated as threatened or endangered in California.	The SFERP site was analyzed and does not include likely habitat for state-listed species.
California 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 SFERP site construction was analyzed and will not include alteration of any stream or channel.
California Environmental Quality Act (CEQA) (Public Resources Code Section 15380)	CEQA requires that the effects of a project on environmental resources must be analyzed and assessed using criteria determined by the lead agency.	The Application for Certification (AFC) analysis and process is CEQA equivalent. All requirements under CEQA are met with the analysis in the SFERP AFC.

TABLE 8.2-1
Applicable Laws, Ordinances, Regulations, and Standards

Element	Goal/Policy	Conformance
Warren Alquist Act (Public Resources Code Section 25000, et seq.)	Warren-Alquist Act is a CEQA-equivalent process implemented by the California Energy Commission (CEC).	The AFC analysis and process is CEQA-equivalent. All requirements under the Warren-Alquist Act are met with the analysis in the SFERP AFC.
San Francisco Bay Conservation and Development Commission (BCDC) Permit	BCDC regulates activities and development with the potential to adversely impact the San Francisco Bay.	A BCDC permit will not be required. The SFERP site and temporary laydown yard are located beyond the 100-foot-from-shoreline BCDC jurisdiction.
Local and Other Jurisdictions		
City and County of San Francisco General Plan		
Environmental Protection	Objective 1. Achieve proper balance among the conservation, utilization, and development of San Francisco's natural resources.	SFERP is located and designed to avoid impacts to biological resources.
Environmental Protection	Policy 1.1. Conserve and protect the natural resources of San Francisco. The City and County must assure that its remaining natural resources are protected from misuse. The use of existing resources should provide maximum benefit for public use while preserving and protecting the natural character of the environment.	SFERP is located and designed to avoid biological resources.
Environmental Protection	Policy 1.2. Improve the quality of natural resources. To prevent contamination of natural resources, the City and County should support and comply with all anti-pollution standards of the region.	An erosion and sediment control plan will be prepared.
Environmental Protection	Policy 1.3. Restore and replenish the supply of natural resources. The City and County should undertake projects to acquire or create open space, cultivate more vegetation, replenish wildlife, and landscape man-made surroundings.	SFERP will not result in the removal of open space or native vegetation.
Environmental Protection	Policy 1.4. Assure that all new development meets strict environmental quality standards and recognizes human needs. Development projects should not disrupt natural or ecological balance, degrade the visual character of natural areas, or otherwise conflict with the objectives and policies of the Master Plan.	SFERP is located and designed to avoid impacts to biological resources.
Environmental Protection	Objective 3. Maintain and improve the quality of the Bay, ocean, and shoreline areas.	SFERP is located and designed to avoid biological resources. It will not use the Bay as a water source as do other local power plants.
Environmental Protection	Policy 3.3. Implement plans to improve sewage treatment and halt pollution of the Bay and ocean.	SFERP will use recycled water and combined sewer drains.

TABLE 8.2-1
Applicable Laws, Ordinances, Regulations, and Standards

Element	Goal/Policy	Conformance
Environmental Protection	Objective 8. Ensure the protection of plant and animal life in the City.	SFERP is located and designed to avoid biological resources.
Environmental Protection	Policy 8.1. Cooperate with and otherwise support the CDFG and its animal protection programs.	SFERP is located and designed to avoid biological resources.
Environmental Protection	Policy 8.2. Protect the habitats of known plant and animal species that require a relatively natural environment. Primarily encourages the continued management of established open areas like Golden Gate Park, beaches, the Presidio, and other areas with open space that provide potential natural habitat for plant and wildlife species.	SFERP is located and designed to avoid impacts to biological resources.
Environmental Protection	Policy 8.3. Protect rare and endangered species.	SFERP is located and designed to avoid impacts to biological resources.
Recreation and Open Space	Objective 1. Preserve large areas of open space sufficient to meet long-range needs of the bay region. This primary objective of this element is to preserve and promote the use of open space for recreation. This includes conservation of natural habitat.	SFERP is located and designed to avoid impacts to biological resources. The project will not involve the removal of open space.
Recreation and Open Space	Policy 2.13. Preserve and protect significant natural resource areas. The City and County should make efforts to preserve remaining open spaces that provide habitat for plant and wildlife species.	The project site is not characterized by unique natural features or open space that provides significant habitat for plant or wildlife species.
The Sustainability Plan for the City of San Francisco		
Biodiversity	Goal 2. To protect and restore remnant natural ecosystems	SFERP is located and designed to avoid impacts to biological resources.
Biodiversity	Goal 3. To protect sensitive species and their habitats and support their recovery in San Francisco.	SFERP is located and designed to avoid impacts to biological resources.
Biodiversity	Goal 4. To maximize habitat value in developed and naturalistic areas, both public and private.	Not applicable. Project is in an industrial area.
San Mateo County General Plan		
Vegetative, Water, Fish and Wildlife Resources Policies	Policy 1.2. The County will protect sensitive habitats from reduction in size or degradation of the conditions necessary for their maintenance.	SFERP is located and designed to avoid impacts to biological resources from nitrogen deposition.
Vegetative, Water, Fish and Wildlife Resources Policies	Policy 1.23. The County will regulate the location, density and design of development to minimize significant adverse impacts and encourage enhancement of vegetative, water, fish and wildlife resources.	SFERP is located and designed to avoid impacts to biological resources from nitrogen deposition.

TABLE 8.2-1
Applicable Laws, Ordinances, Regulations, and Standards

Element	Goal/Policy	Conformance
Vegetative, Water, Fish and Wildlife Resources Policies	Policy 1.26. The County will ensure that development will minimize disruption of fish and wildlife and their habitats.	SFERP is located and designed to avoid impacts to biological resources from nitrogen deposition.
Vegetative, Water, Fish and Wildlife Resources Policies	Policy 1.27. The County will regulate land uses and development activities within and adjacent to sensitive habitats in order to protect critical vegetative, water, fish, and wildlife resources; protect rare, endangered, and unique plants and animals from reduction in their range or degradation of their environment; and protect and maintain the biological productivity of important plant and animal habitats.	SFERP is located and designed to avoid impacts to biological resources from nitrogen deposition.

Sources: City and County of San Francisco (1995), City of San Francisco (1997), and San Mateo County (1986).

8.2.3.1 Regional Overview

The proposed SFERP site is located near the western shore of central San Francisco Bay (Bay) in the Potrero District of San Francisco (see Figures 8.2-1 and 8.2-2).

The San Francisco Bay is a breach in the Coast Range that extends for much of the length of the state. The Bay is an important geologic break in the range, providing an influential climatic and hydrological connection between the Pacific Ocean and the Central Valley. The San Francisco area abounds with environmental diversity as land meets water and salt water meets fresh water. The result is a collection of communities such as deep open water, sandy shorelines, dunes, oak woodlands, grasslands, scrub, salt flats, salt marshes, estuaries, brackish marshes, freshwater marshes, and riparian corridors. The range of habitats and transition zones between these communities results in a diverse assemblage of plant and wildlife species.

San Francisco itself is approximately a 7-mile square peninsula defining the northern end of the south Coast Range. It is urban with dense industrial, commercial, and residential development. However, it is not without undeveloped or abandoned lots, parkland, and other patches of designated open space providing important habitat for common and special-status plant and wildlife species. Even in the urban landscape, many species have adapted and continue to persist in the presence of human disturbance and significant habitat modification.

The SFERP site is located in a heavily industrialized area of San Francisco. The plant site has been cleared of permanent structures and is currently occupied by a temporary cement batch plant. The existing Potrero Power Plant (Potrero PP) is approximately 0.3 miles to the north. The approximately 8.5-acre proposed laydown area is immediately east of the site, on Port of San Francisco land (see Figure 8.2-2). This area is currently being used for equipment storage and separates the SFERP site from the Bay. Industrial and commercial land uses are immediately adjacent to all site boundaries. Aquatic habitats of the Bay are approximately 180 feet northeast of the site and 120 feet from the temporary laydown yard. The associated SFERP underground electrical transmission, gas, and water lines will be located along or in roadways; are entirely within commercial and industrial areas; will involve local (less than 0.76 mile) connections with existing infrastructure, and will not affect biological resources. Significant biological resources in the project vicinity include the San Francisco Bay, Heron's Head Park, and San Bruno Mountain (see Figures 8.2-1 and 8.2-2). The San Francisco Bay is an inlet where the inland waters from the Sacramento and San Joaquin rivers meet the Pacific Ocean. The Bay provides important habitat for fish, migratory birds, and wetland plant and wildlife species. Heron's Head Park is located approximately 1 mile south of the project and adjacent to the Hunter's Point power plant. The 24-acre park is a restored wetland situated on top of a landfill. San Bruno Mountain State and County Park is located approximately 4 miles southwest of the project in San Mateo County, east of Daly City. The biological resources of this park are the subject of the San Bruno Mountain Habitat Conservation Plan. Islais Creek is located approximately 990 feet directly south of the proposed SFERP site. It is one of the few creeks located in the city of San Francisco and is tidally influenced. It once emptied into a large marsh that emptied into the Bay but has been channelized and severely modified with riprap. The marsh no longer exists and Islais Creek is now used for activities associated with the port. Figure 8.2-2 includes project feature locations and biological resources identified on aerial photos at 1:13,200 scale.

The ocean influence and varied topography surrounding San Francisco result in a variety of microclimates. The geographical break in the Coastal Range channels wind through the Bay and influences climate east through the Central Valley and up the Sierra Nevada Range. San Francisco experiences a typical Californian Mediterranean climate, modified by its ocean proximity. True to the Mediterranean climate, winters are characteristically mild (45 to 60 degrees Fahrenheit [°F]) and moist. However, wind patterns and cold ocean water combine to produce fog and moderate summer temperatures (50°F to 70°F).

The following subsections describe the types of habitat found in the project impact areas. Special-status species that are known or have the potential to occur in the project impact areas are listed in Table 8.2-2 (located at the end of this subsection) and described in Subsection 8.2.3.3. A comprehensive list of special-status species obtained from USFWS, CDFG, and the CEC's Final Staff Assessment (FSA) for the proposed Potrero PP Unit 7 (PPPU7) (CEC, 2002) that was used to evaluate project impacts to sensitive biological resources is included in Appendix 8.2A.

8.2.3.2 Habitat and Vegetation Communities

The SFERP site is located entirely within a previous industrial development and includes areas of hard-packed, unvegetated gravel and dirt, non-native grasses and forbs, and an active concrete batch plant. There are no remaining features that provide significant natural habitat for plant or wildlife species. Vegetation is primarily limited to nonnative invasive species that have become established in small patches of less disturbed bare ground. These areas provide limited forage and cover resources for a limited diversity of wildlife such as common passerines and rodents. The associated linear features are contained within a combination of pavement and hard-pack gravel roads and concrete sidewalks. The laydown yard is a well used storage area characterized by hard-packed gravel and dirt, with a paved perimeter. The north and northeastern boundaries of the laydown are approximately 120 feet from the Bay (see Figure 8.2-2). The adjacent shoreline is armored with riprap and the upper bank includes sparse vegetation such as fennel, pampas grass, and non-native grasses and forbs. This area is outside of the laydown area and provides limited forage and cover for common bird and other wildlife species. San Francisco Bay is the closest area of significant habitat to the SFERP site. The Bay shore has been significantly modified with piers, bulkheads, rip rap, and stabilizing structures. The waterfront is developed for shipping and commercial uses.

8.2.3.3 Special-Status Species

A list of federal and state special-status plant and wildlife species was compiled for the project area based upon the following references: the CDFG California Natural Diversity Database (CNDDDB); California Native Plant Society's (CNPS) Electronic Inventory; a USFWS species list requested for San Francisco County; the PPPU7 FSA; and a field reconnaissance survey. 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 Point Bonita, San Francisco North, Oakland West, Hunters Point U.S. Geological Survey (USGS) quadrangles are shown on Figure 8.2-1. The field reconnaissance survey was performed by a CH2M HILL biologist on February 11, 2005, and included a 1-mile radius around the site. Based on the project setting, it was determined that focused or additional

surveys would not be necessary as no significant biological resources would be affected by construction or operation. The qualifications of the field biologist are provided in Appendix 8.2B.

The reference search and survey resulted in the comprehensive special-status species list provided in Appendix 8.2A. The list includes species listed as threatened or endangered that have special requirements under the FESA and California Endangered Species Acts (CESA) and other unlisted 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.

Results from the reconnaissance survey, habitat evaluations, aerial photographs, and the FSA for the nearby PPPU7 project conclude an absence of significant biological resources in the SFERP project area. There are no property or project features that would support special-status plants or attract special-status wildlife. Potential impacts are limited to avian collision with exhaust stacks. This impact would be a function of plant operation rather than construction.

The San Francisco Bay area includes sensitive serpentine habitats that are adversely impacted by significant levels of NO_x deposition. Due to prevailing winds, SFERP operation is not expected to contribute significant NO_x deposition on surrounding serpentine habitats such as those found on San Bruno Mountain.

Therefore, the initial species list was shortened to include only those species that may be affected by these two potential impact sources. The abbreviated list is presented in Table 8.2-2.

8.2.3.3.1 Special-Status Plants. Information acquired from the CNDDDB, CNPS, and other sources resulted in a list of 33 special-status plants species that could occur in San Francisco County (Appendix 8.2A). Most of these species are associated with natural habitats that were once prevalent in San Francisco but have since been lost to extensive urban development. Vegetation in the project area is limited to invasive species established in less frequented patches of disturbed ground. Therefore, project construction will not result in direct removal of special-status plant species. No trees are located on the site.

The greatest potential for impact to plants would be from nitrogen deposition due to NO_x emissions during facility operation. Nitrogen functions as a vegetation fertilizer when added to grassland and woodland communities such as are found on San Bruno Mountain. Those San Bruno Mountain habitats on serpentine rock are characteristically nutrient deficient and support relatively low plant species diversity. Those plants that are adapted to withstand serpentine soils are often rare and endemic. The addition of nitrogen could promote plant species that otherwise find serpentine habitat inhospitable. This potentially results in increased competition and loss of habitat for more serpentine habitat-dependent plant species. However, due to prevailing winds, SFERP operation is not expected to contribute significant NO_x deposition on surrounding serpentine habitats such as those found on San Bruno Mountain.

The initial special-status plant species list was shortened to eight species based on their association with serpentine habitat (Table 8.2-2). This includes shrubs such as the Presidio

manzanita (*Arctostaphylos hookeri* ssp. *franciscana*) and annual herbs such as San Francisco owl's clover (*Orthocarpus floribundus*).

8.2.3.3.2 Special-Status Wildlife. Information acquired from the CNDDB, USFWS, and other sources resulted in a list of 79 special-status wildlife species whose occurrence has been previously recorded in San Francisco County (County) (Appendix 8.2A). Because of the lack of suitable habitats, it is unlikely that any of these species would be found in the project area. Impacts to aquatic resources and the species associated with those habitats were the primary concern for the proposed PPPU7. Unlike that project, the SFERP water supply does not include direct intake or discharge of San Francisco Bay water. SFERP water will be supplied and discharged by conventional City of San Francisco (City) infrastructure. The project site presents no significant resources to attract terrestrial wildlife. Therefore, the initial species list was abbreviated to include only those species that may be affected by nitrogen deposition and avian collision.

Five special-status insects depend on nectar sources associated with serpentine habitats such as those on San Bruno Mountain. Those species include San Bruno elfin butterfly (*Incisalia mossii bayensis*), mission blue butterfly (*Icaricia icarioides missionensis*), callippe silverspot butterfly (*Speyeria callippe callippe*), Bay checkerspot butterfly (*Euphydryas editha bayensis*), and Opler's longhorn moth (*Adela oplerella*). However, because of prevailing winds, SFERP operation is not expected to contribute significant NO_x deposition on surrounding serpentine habitats such as those found on San Bruno Mountain (see subsection 8.2.4.2.5).

Exhaust stacks represent collision potential for various bird species. Thirty bird species were included in the abbreviated special-status species list. These species may risk collision when migrating through the general area or when traveling between resource areas. These include raptors such as Cooper's hawk (*Accipiter cooperii*) and American peregrine falcon (*Falco peregrinus anatum*); coastal birds such as California brown pelican (*Pelecanus occidentalis californicus*) and double-crested cormorant (*Phalacrocorax auritus*); and passerines such as rufus hummingbird (*Selasphorus rufus*) and saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*).

8.2.3.4 Biological Surveys

A biological reconnaissance survey of the project area and general vicinity was performed by a biologist from CH2M HILL on February 11, 2005. The surveyor's qualifications are provided in Appendix 8.2B. The field surveys were aided by aerial photographs, 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. The survey included the site and an area within a 1-mile radius from the site (see Figure 8.2-2). Results from 1999 and 2000 surveys performed for the proposed PPPU7 were also used for reference (Mirant, 2000). No further biological surveys are considered necessary. A list of species observed in the project vicinity is included in Table 8.2-3.

TABLE 8.2-3
Wildlife Species Observed During the Biological Reconnaissance Visit of the SERP Project Area (February 11, 2005)

Common Name	Scientific Name	Location	Sign
BIRDS			
Western grebe	<i>Aechmophorus occidentalis</i>	San Francisco Bay	Observation
Double-crested cormorant	<i>Phalacrocorax auritus</i>	San Francisco Bay	Observation
Great egret	<i>Ardea alba</i>	San Francisco Bay	Observation
Canada goose	<i>Branta Canadensis</i>	Adjacent open field to the west of the proposed site	Observation
American wigeon	<i>Anas Americana</i>	San Francisco Bay	Observation
Greater scaup	<i>Aythya marila</i>	San Francisco Bay	Observation
Bufflehead	<i>Bucephala albeola</i>	San Francisco Bay	Observation
Western sandpiper	<i>Calidris mauri</i>	San Francisco Bay	Observation
Western gull	<i>Larus occidentalis</i>	San Francisco Bay	Observation
Rock dove	<i>Columba livia</i>	Proposed site, laydown area, and adjacent upland areas	Observation
European starling	<i>Sturnus vulgaris</i>	Proposed site, laydown area, and adjacent upland areas	Observation
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Perimeter of proposed laydown yard	Observation
MAMMALS			
Domestic dog	<i>Canis familiaris</i>	Proposed site, laydown area, and adjacent upland areas	Tracks

8.2.4 Environmental Consequences

Potential direct and indirect impacts to biological resources were evaluated to determine the permanent and temporary effects of the construction, operation, maintenance, and decommissioning of the SFERP project and supporting facilities. A summary of potential project impacts is presented in Table 8.2-4.

TABLE 8.2-4
Summary of Permanent and Temporary SFERP Project Impacts on Biological Resources During Construction.

Location	Project Work	Construction Zone Size	Time Requirements	Habitat Type	Sensitive Biological Resources	Impacts	
						Temporary	Permanent
Power plant site	Removal of existing temporary structures and grading for footprint construction	4 acres	Start 2nd Quarter 2006	Gravel and ruderal hard packed dirt	None	None	Development of 4 acres of previously developed land
Construction laydown area	Construct compacted gravel pad or use existing surface	8.5 acres	Start 2nd Quarter 2006	Gravel and hard packed dirt	None	8.5 acres	None
Natural gas pipeline	Open pipeline trench to local tie-in location	Approximately 900-foot-long line will tie in with the existing PG&E San Francisco Line 101 located at the corner of Illinois and 25th streets.	Start 4th Quarter 2006	Paved	None	None	None
Potable water supply line	Open pipeline trench to local tie-in location	A 300-foot-long tie-in with an existing city main located on Cesar Chavez Street.	Start 4th Quarter 2006	Paved	None	None	None
Process water supply line	Open pipeline trench and box culvert to local tie-in location	An approximately 0.76 mile tie-in with a City combined sewer system to a new treatment plant located within the site.	Start 4th Quarter 2006	Paved	None	None	None
115-kV transmission lines	Open duct trench to local tie-in location	Approx. 3,000-foot-long underground line to connect the plant switchyard with the existing Potrero substation.	Start 2nd Quarter 2006	Paved	None	None	None

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 designations.
- 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 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 SFERP Project Site and Temporary Construction Laydown Area

The SFERP plant site would permanently occupy approximately 4 acres of existing industrial development. This area is currently characterized by gravel and dirt surfaces with patches of ruderal areas supporting sparse non-native vegetation. The project site has a history of industrial use and is surrounded by a variety of industrial uses primarily associated with the Port of San Francisco. The site provides little or no habitat value for native plant and wildlife species. The construction laydown area will be approximately 8.5 acres. The laydown area would be located directly east and adjacent to the project site, between 25th and Cesar Chavez streets and between the project site and the Bay (see Figure 8.2-2). This proposed laydown area has been recently graded and partially graveled.

8.2.4.2.1 Special-Status Species. No special-status plant or wildlife species were observed on the proposed project site and vicinity during the 2005 reconnaissance survey for this project, the 2003 reconnaissance survey for the Mirant site location (described in Section 9, Alternatives), or the 1999 and 2000 surveys performed for the nearby proposed PPPU7 (Mirant Potrero LLC, 2000). No records of historical special-status species sightings were included in the CNDDDB for this area. CNDDDB records for three special-status plant species (adobe sanicle, alkali milk-vetch, and San Francisco owl's-clover) are located approximately a mile west of the site (Figure 8.2-1). All three records are over 100 years old and the species are now considered locally extirpated. The site and laydown areas are dominated by industrial development and do not support likely habitat for any special-status plant or wildlife species. Seasonal botanical and wildlife surveys are not necessary.

Due to the lack of biological resources, SFERP's construction would not result in significant impacts to special-status plant and wildlife species. The following paragraphs describe the potential for impacts associated with different components of SFERP site construction and operation.

8.2.4.2.2 Wetlands and Waters of the U.S. No jurisdictional wetlands or waters are present on the project site. Project construction would not cause loss or fill of any wetlands.

Cooling water discharged from the plant cooling system and other plant wastewater will be sent to the Southeast Water Pollution Control Plant (SEWPCP) via the City's combined sewer system. Likewise, stormwater runoff from the site will be sent to the SEWPCP via the combined sewer system.

Water will be applied to the site and laydown area for dust control during construction. Erosion and sediment washed into surface waters would be potentially harmful to San Francisco Bay water quality. As discussed further in Subsections 8.9 (Agriculture and Soils) and 8.14 (Water Resources), the Applicant will prepare an erosion and sediment control plan that specifies best management practices (BMPs) to be implemented during all project activities to avoid sediment runoff and erosion that would cause water quality degradation.

8.2.4.2.3 Cooling Tower Drift. Cooling tower drift is the fine mist of water droplets that escape the cooling tower's mist eliminators and are emitted into the atmosphere. Cooling towers concentrate the particulates (total dissolved solids) during the cooling process and produce a salt mist. At high concentrations, salts can physically damage leaf cells, which affects the photosynthetic ability of the plant. Other effects include blocking the stomata (leaf pores) so that normal gas exchange is impaired, as well as affecting leaf adsorption and solar radiation reflectance. These effects can reduce productivity in crops, trees, and sensitive special-status plant species in a deposition area.

Studies performed by Lerman and Darley (1975) concluded that particulate deposition rates of 365 grams per square meter per year ($\text{g}/\text{m}^2/\text{year}$) caused damage to fir trees, but rates of 274 $\text{g}/\text{m}^2/\text{year}$ and 400 to 600 $\text{g}/\text{m}^2/\text{year}$ did not cause damage to vegetation at other sites. Pahwa and Shipley (1979) exposed vegetation (corn, tobacco, and soybeans) to varying salt deposition rates to simulate drift from cooling towers that use saltwater (20,000 to 25,000 parts per million [ppm]) in the circulation water. Salt stress symptoms on the most sensitive crop plants (soybeans) were barely perceptible effects at a deposition rate of 2.98 $\text{g}/\text{m}^2/\text{year}$ (Pawha and Shipley, 1979).

Assuming a particulate deposition rate of 2 centimeters per second and a maximum salt concentration of 0.10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (the maximum modeled annual average particulate matter concentrate from the cooling tower), the maximum expected deposition rate is 3.091 kg/hectare/year or 0.309 $\text{g}/\text{m}^2/\text{year}$, which is significantly less than levels expected to cause barely perceptible effects to the most sensitive crop plants.

8.2.4.2.4 Cooling Effluent and Discharge. Process water for the SFERP power plant operations will be supplied from the City's combined sewage system and go through a new onsite water treatment plant. This system is further discussed in Section 7 (Water Supply) and Subsection 8.2.4.3. Water will be discharged to the plant wastewater sump, and then to the City's combined sewer system. Since the SFERP project will draw process water from, and discharge wastewater into, the combined sewer system, there will be no mechanism to affect fish or other aquatic biota from securing or discharging water during operations.

8.2.4.2.5 Combustion Turbine Emissions

Potential Impacts to San Bruno Mountain. Air emissions from the three combustion turbine exhaust stacks include nitrogen oxides (NO_x), sulfur oxides (SO_x), and particulates (PM₁₀). Nitrogen oxide gases (NO, NO₂) convert to nitrate particulates in a form that is suitable for uptake by most plants. As stated previously, increased nitrate availability could potentially impact the natural serpentine vegetation community on San Bruno Mountain. The nonnative annuals could out-compete the native serpentine plants. However, prevailing wind patterns in the area would generally drive the plume inland across the Bay and away from San Bruno Mountain.

Nitrogen dioxide is potentially phytotoxic, but generally at exposures considerably higher than those resulting from most industrial emissions. Exposures for several weeks at concentrations of 280 to 490 µg/m³ can cause decreases in dry weight and leaf area. One-hour exposures of at least 18,000 µg/m³ are required to cause leaf damage. The predicted maximum annual average NO₂ of 0.1 µg/m³ are far below these threshold limits. In addition, the total predicted maximum 1-hour NO₂ concentrations of 8.3 µg/m³ (with infrequent concentrations of 115 µg/m³ during simultaneous startups of all three combustion turbine generators [CTGs]) would be significantly smaller than the 1-hour threshold (7,500 µg/m³ or 3,989 ppm) for 5 percent foliar injury to sensitive vegetation (USEPA, 1979). This indicates that NO_x emissions from the SFERP, when considered in the absence of other air pollutants, would not adversely affect the physical functions of plants in the area.

The existing background nitrogen deposition rate at San Bruno Mountain is estimated to be 6.169 kg/ha/year (see Appendix 8.2C for derivation of existing background rate). The average modeled nitrogen deposition from the project over the area is estimated to be 0.0059 kg/ha/year, or less than 0.1 percent of background. The modeling methodology is described in detail in Appendix 8.2C. The total nitrogen deposition is thus 6.169 plus 0.0059, or 6.175 kg/ha/year.

This modeling analysis does not take into account the NO_x emission reduction credits (ERC) being provided for the project, which will offset much of the nitrogen emissions increase from SFERP.

In addition, this modeling analysis does not consider NO_x emission reductions from the closure of existing in-City generation facilities. The City is pursuing the SFERP project to support closure of existing generation facilities in San Francisco while maintaining electrical reliability. The Hunters Point Power Plant should be closed prior to the in-service date of the SFERP, with the construction of the 230-kV Jefferson-Martin transmission line and a series of additional projects that are currently underway. The California Independent System Operator (CAISO) has confirmed that once the Jefferson-Martin line and eight additional transmission projects that are currently in service or under development are in service, the SFERP, along with another City sponsored generation project at the San Francisco Airport, will also provide for closure of Potrero Unit 3. The CAISO also indicated that with the addition of four transmission projects, the City generation projects will provide for closure of Potrero Units 4, 5 and 6 in 2007.

Current nitrogen deposition impacts on San Bruno Mountain reflect the impacts of operation of the Hunters Point and Potrero power plants. Therefore, historical operation of those power plants provides a baseline for the assessment of potential future cumulative impacts.

Three potential future operating scenarios were evaluated. In the first scenario, it was assumed that both Potrero and Hunters Point power plants would continue to operate at historical levels (that is, future annual heat input to each unit would be equal to the average annual heat input over the past 3 years), that the boilers at each plant would meet the 2006 NO_x regulatory limit of 0.018 pounds per million British Thermal Units (lb/MMBtu) contained in the Bay Area Air Quality Management District's (BAAQMD) Rules and Regulations using selective catalytic reduction (SCR) systems with 10 ppm ammonia slip to reduce NO_x emissions on the steam boiler units at Potrero and Hunters Point power plants, and that no additional controls would be installed on the peaking turbines. In the second scenario, it was assumed that the Potrero power plant would continue to operate at historical levels, with Unit 3's NO_x emissions controlled using SCR to meet the BAAQMD's regulatory NO_x limit (0.018 lb NO_x /MMBtu effective 1/1/06) with 10 ppm ammonia slip (corrected to 3 percent O₂), and that the Hunters Point power plant would be shut down. In the third scenario, it was assumed that both the Potrero and Hunters Point power plants would be shut down. All scenarios include the NO_x reductions from the offsets to be provided for SFERP.

Calculations for each scenario are shown in Appendix 8.2C, Table 8.2C-4. These calculations show that even with SFERP and continued operation of the Hunters Point and Potrero power plants with the required SCR control in place, there will be a net reduction of over 52 tons per year of nitrogen emissions in southeast San Francisco. Even with the addition of SFERP and the continued operation of the Potrero power plant, the shutdown of Hunters Point will result in a net reduction in nitrogen emissions of approximately 86 tons per year. If both the Potrero and Hunters Point power plants are shut down, the area will see a net reduction in nitrogen emissions of about 169 tons per year.

The habitats and special-status species of San Bruno Mountain are managed under the San Bruno Mountain Habitat Conservation Plan (HCP). Of chief concern are three special-status butterfly species: the mission blue butterfly, (*Plebejus icarioides missionensis*), San Bruno elfin butterfly (*Incisalia mossi bayensis*), and the callippe silverspot butterfly (*Speyeria callippe callippe*). The mission blue butterfly and the San Bruno elfin butterfly are federal-listed as endangered. The callippe silverspot butterfly is federal-listed as threatened. San Bruno Mountain is designated critical habitat for the Bay checkerspot butterfly (*Euphydryas editha* ssp. *bayensis*); however, the population is now considered extinct.

All three species depend on nectar from a variety of sources but require specific larval host plants. Mission blue butterfly larvae feed exclusively on lupine species (*Lupinus albifrons*, *Lupinus variicolor*, and *Lupinus formusus*), which grow in open grassland habitat, rocky slopes, and disturbed areas. California golden violet (*Viola pedunculata*) is the host plant of the callippe silverspot butterfly and is found in a variety of habitats including open grasslands and chaparral. The host plant for the San Bruno elfin butterfly is the pacific stone crop (*Sedum spathulifolium*), which is typically found around rocky outcrops. All three butterfly species have been listed primarily due to habitat loss; however, their host plants are not considered rare.

The primary threat to the three butterfly species at San Bruno Mountain is habitat loss due to the encroachment of non-native species and the expansion of coastal scrub vegetation (Kobernus, 2004). The associated larval host plants are not associated with serpentine soils

and there is a lack of specific data suggesting that nitrogen deposition is a contributing factor to invasive plant growth in San Bruno Mountain butterfly habitat (Kobernus, 2004).

San Bruno Mountain is characterized by a variety of habitats including grassland, woodland, chaparral, coastal scrub, and wetland vegetation communities. The majority of the ten rare plant species identified on San Bruno Mountain are associated with chaparral and coastal scrub communities. Coast rock cress (*Arabis blepharophylla*) and San Franciscan wallflower (*Erysimum franciscanum*) are the only identified special-status plant species associated with serpentine soils. Both species are also associated with other habitats found on San Bruno Mountain and are not exclusive to serpentine conditions.

Nitrogen deposited on the ground must be converted to plant-available forms of nitrogen to affect plant nutrition. Absorption of NO_3 and NH_3 by plant roots is the predominate mode of plant nitrogen nutrition (Marschner, 1995). Nitrogen fertilization of nutrient-poor soils increases nitrogen absorption by plant roots and, consequently, increases the growth rate and biomass production of many species, including the non-native annual grass species that tend to invade native California grasslands. Endemic serpentine vegetation is particularly sensitive to competition from fast growing annual grasses. Serpentine soil communities are relatively nutrient poor and represent the habitat most vulnerable to nitrogen deposition in the Bay Area. Although most vegetation communities are sensitive to competition from invasive non-native plants, including grasses, the following analysis will focus on serpentine grasslands as the worst case scenario.

When soils are fertilized by artificial nitrogen sources, those nitrogen sources are available to all plant species. However, non-native grasses usually have more vigorous growth habitats than serpentine species. The threshold of annual nitrogen deposition rates that can potentially influence ecosystem change to herbaceous plant communities is approximately 5 to 6 kg/ha/year (Calpine Corporation, 2003). Increased fertilization and subsequent succession of endemic serpentine species to non-native grasses currently occurs in grassland habitats throughout the Bay Area. Cattle-grazing has become an important management tool for control of non-native grasses, which increases the survival potential of endemic serpentine plant species and endemic invertebrate species such as the Bay checkerspot butterfly.

Background nitrogen deposition rates at San Bruno Mountain are estimated to be approximately 6.169 kg/ha/year. According to nitrogen deposition modeling results, SFERP operation would result in an additional annual average nitrogen deposition of 0.0059 kg/ha/year on San Bruno Mountain. This amounts to a 0.0009 percent increase from ambient levels for a total of approximately 6.175 kg/ha/year. This estimate indicates that current deposition rates already fall within the 5 to 6 kg/ha/year expected to affect herbaceous plants. The potential for deposition from SFERP operation to initiate transformation of vegetation communities on San Bruno Mountain and East Bay is unlikely. Deposition impacts to serpentine communities on San Bruno Mountain most likely already exist, and any potential incremental increase from SFERP operation would be considered cumulative, although very slight. (This analysis assumes continued operation of the Hunters Point and the Potrero power plants.) This scenario is very conservative and highly unlikely as the Hunters Point power plant is expected to be shut down, as described in Section 3, Purpose and Need. Moreover, as described in that section and summarized above, the City is pursuing the SFERP to facilitate the closure of the Potrero power plant.

In addition, the level of nitrogen deposition from the SFERP on plant-available nitrogen would actually be less than the calculated amount because the deposition will be distributed in small amounts during the year and not all of the nitrogen added to the soil during each deposition event is available for plant use due to losses associated with soil processes.

8.2.4.2.6 Noise and Lights from Plant Operations. The SFERP site is zoned industrial and is surrounded by several industrial facilities adjacent to the site. These facilities typically operate 24 hours per day, 7 days per week and have standard industrial lighting and noise emissions. Operation of the plant would produce some noise, as described in Subsection 8.5, Noise. Noise and construction activities would not likely adversely impact wildlife, due to existing noise levels and the lack of local wildlife attractants in the immediate vicinity.

Bright night lighting could disturb wildlife (e.g., nesting birds, foraging mammals, and flying insects). Night lighting is also suspected to attract migratory birds to some areas and, if the lights are on tall buildings or the combustion turbine exhaust stacks, collisions could occur. However, the exhaust stack height of 85 feet is lower in profile than much of the surrounding development. In comparison, stack heights for the nearby Portrero Power Plant's Unit 3 is about 300 feet. As described in Subsection 8.11, Visual Resources, any required stack and facility lighting will be pointed down to minimize impacts.

8.2.4.2.7 Potential for Collision and Electrocution Hazard to Birds. The project would construct three 85-foot-high exhaust stacks that could potentially result in bird collisions. The new approximately 3,000-foot-long electrical transmission lines will be buried, eliminating impacts associated with bird electrocution and collision with aboveground lines. Most 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. A large number of birds migrate along the Pacific Coast, passing through the San Francisco Bay Area. The project area is within a known path for nocturnally migrating birds. However, there are no topographic or ecological features that would attract birds to this location or "funnel" them into the vicinity of exhaust stacks or other elevated features of the project. Because of the relatively low structure height and lack of guy wires and aboveground transmission lines, the potential for bird collisions with stacks and other project structures is considered less than significant.

8.2.4.3 Impacts of Natural Gas and Water Pipeline Construction and Operation

Fuel will be delivered to SFERP via a new 900-foot-long pipeline, to PG&E's San Francisco Line 101, located west of the project site. The primary method of pipeline construction includes excavation of an open trench approximately 4 feet deep and 3 to 7 feet wide, depending on site-specific soil type. The construction corridor will be approximately 50 feet wide. The pipeline corridor will require pavement and concrete cuts and does not intersect sensitive environmental resources. The temporary construction corridor will be used to store the excavated soil, provide access for equipment and vehicles, and space for welding the pipeline prior to installation and backfill.

The project will use recycled water for the majority of its water needs. The system will include a new water treatment facility to be constructed in a pre-engineered building on the SRERP site. A pipeline will be constructed to divert effluent from the City's combined sewer system collection station near Marin Street (see Figure 8.2-2). The pipeline will be approximately 0.76 mile long and the primary method of construction includes locating approximately 1,300 feet of new piping within an existing underground structure (collection box) and approximately 2,700 feet of open trench excavation (approximately 4 feet deep and 3 to 7 feet wide, depending on site-specific soil types) for the remaining pipeline. The construction corridor will be approximately 25- to 75-foot wide. The pipeline corridor will require pavement and concrete cuts and does not intersect sensitive environmental resources. The temporary construction corridor will be used to store the excavated soil, provide access for equipment and vehicles, and space for handling the pipeline prior to installation and backfill.

Potable water will be supplied by a City main located on Cesar Chavez Street. There are no significant habitats present that would be adversely affected by temporary construction of the gas or water lines. Therefore, construction is not likely to result in any impacts to biological resources.

8.2.4.3.1 Special-Status Species. Construction of the gas and water pipelines will be confined to road cuts in an industrial area. The work area is adjacent to industrial and commercial development, which are not characterized by natural habitat and do not provide significant biological resources for special-status plant and wildlife species.

8.2.4.3.2 Wetlands and Waters. The gas and water pipelines will not cross any jurisdictional wetlands or navigable water features.

The pipelines will require pressure testing after construction to ensure welds are tight and to remove any accumulated dust or welding residue from the pipeline. To do this, the pipe is filled with water and pressurized, resulting in a potentially large volume of water. If disposed improperly this water could cause adverse effects on the water quality of receiving waters. The City proposes to dispose of pipe-testing water in the combined sewer system. Disposal to the sewer would ensure impacts of wastewater disposal are less than significant.

8.2.4.4 Conflict with Regional Habitat Conservation Plans

There are no countywide or regional Habitat Conservation Plans that would affect development in this industrial area of San Francisco. As discussed earlier, nitrogen deposition from NO_x and ammonia emissions are not expected to result in significant impacts within sensitive habitats covered by the San Bruno Mountain Habitat Conservation Plan.

8.2.4.5 Cumulative Impacts

The proposed project is located within a previously developed area surrounded by similar industrial development. The associated linear facilities will be short in length and will be located within previously developed areas. Air emissions have been projected to be insignificant and are not expected to impact local natural habitat or increase cumulative impacts in the area. The project is not expected to result in significant impacts and there are no other proposed projects in the study area (other than the proposed Potrero Unit 7) that

would have similar impacts on biological resources. The proponent of Potrero Unit 7, Mirant, is in bankruptcy proceedings and the application for certification before the California Energy Commission is currently suspended. Further, it is formal City policy to oppose the construction of Potrero Unit 7. Accordingly, the City considers the construction of Potrero Unit 7 to be highly unlikely. Therefore, the SFERP project is not expected to contribute to any adverse cumulative impacts.

As described earlier, construction of the Jefferson-Martin transmission project along with eight additional transmission projects will eliminate the reliability need for the Hunter's Point Power Plant, which is adjacent to Heron's Head Park and the Bay. PG&E has an agreement with the City of San Francisco to decommission Hunter's Point PP when the plant is no longer needed for electric system reliability. The CAISO, which is responsible for the reliability of the electric system in much of California, has stated in writing that construction of the SFERP project along with four transmission projects expected to be in service by 2007, and another turbine at the San Francisco airport would allow for the release of the RMR Agreement for the Potrero PP without an adverse impact on reliability. Thus, construction of the SFERP would support the shutdown of an outdated and less efficient facility. Both the Hunters Point and Potrero power plants also take cooling water directly from the Bay, resulting in the potential impingement of fish, aquatic invertebrates, and other aquatic species. To the extent these plants are closed, this impact would be eliminated.

8.2.5 Proposed Mitigation and Monitoring

The construction and operation of the SFERP project is not expected to result in significant biological impacts; therefore, no biological monitoring is proposed and mitigation measures are limited to the following design guidelines intended to minimize avian impacts.

8.2.5.1 Foraging and Migratory Birds

The project site and transmission line design will minimize potential impacts to resident and migratory birds. The proposed mitigation measures include:

1. Underground transmission lines to prevent bird collisions and electrocutions commonly associated with aboveground lines.
2. Provide safety lighting that points downward on the turbine exhaust stacks to reduce avian collisions, if such lighting is required.

8.2.5.2 Nitrogen Deposition

Nitrogen deposition at San Bruno Mountain already exceeds the threshold limits of 5 to 6 kg/ha/year and so, to avoid the potential for significant cumulative impacts, ERCs are being surrendered to fully mitigate the project's impacts, as described in Subsection 8.1, Air Quality. The surrendering of ERCs will reduce the overall nitrogen emissions in the greater Bay Area due to the regulatory approach employed in BAAQMD's ERC program. When a facility such as SFERP is required to acquire ERCs for a project, it must secure and surrender a greater number of ERCs than the emissions of the pollutant. This is commonly defined as the offset ratio. The oxides of nitrogen emissions offset ratio in the BAAQMD is 1.15 to 1, which means that for every pound of oxides of nitrogen expected to be emitted from SFERP, 1.15 pounds of ERCs must be secured and surrendered. Further, the City has committed to

offsetting its emissions of oxides of nitrogen at a ratio of 1.19 to 1, which means that for every pound of oxides of nitrogen expected to be emitted from the SFERP, 1.19 pounds of ERCs will be secured and surrendered.

In addition, as described above, the Hunters Point power plant is expected to be shut down by the time the SFERP is placed in service. Moreover, with the Hunters Point power plant on a well-defined path for closure, the City is pursuing the SFERP and a small facility at the San Francisco Airport, to facilitate the closure of the Potrero PP. The permanent closure of Hunters Point power plant will reduce nitrogen emissions in the southeast San Francisco area by 57.9 tons per year. The permanent closure of the Potrero PP would reduce nitrogen emissions in southeast San Francisco by an additional 465 tons per year from historical levels that have contributed to background deposition concentrations. These reductions in the nitrogen emissions have the potential of reducing the nitrogen deposition on the San Bruno Mountain sensitive habitat areas.

8.2.6 Involved Agencies and Agency Contacts

Because the project has no federal nexus, will not impact any state or federal listed species or state species of concern and will not cross any streams, no agency contacts are provided.

8.2.7 Required Permits and Permit Schedule

Because no streams will be crossed, no federal, state, or local permits are required for Biological Resources.

8.2.8 References

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TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
Plants					
Franciscan manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	FSC, 1A	Coastal scrub (serpentine).	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Evergreen shrub. Last recorded in 1942. Now only grown in cultivation. Nitrogen emissions will not impact serpentine habitat.
Presidio manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	FE, CE, 1B	Chaparral, coastal prairie, coastal scrub/serpentine outcrop.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Evergreen shrub. Currently known only from the Presidio area. Nitrogen emissions will not impact serpentine habitat.
San Francisco gumplant	<i>Grindelia hirsutula</i> var. <i>maritima</i>	FSC, 1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland/sandy or serpentine.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Perennial herb. Nitrogen emissions will not impact serpentine habitat.
Marin western flax	<i>Hesperolinon congestum</i>	FT, CT, 1B	Chaparral, valley and foothill grassland/serpentine.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Annual herb. Nitrogen emissions will not impact serpentine habitat.
white-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	FE, CE, 1B	Valley and foothill grassland (often on serpentine).	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Annual herb. Currently known from one location near Highway 280. Nitrogen emissions will not impact serpentine habitat.
adobe sanicle	<i>Sanicula maritima</i>	FSC, 1B	Chaparral, coastal prairie, meadows and seeps, valley and foothill grassland/clay, serpentine.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Perennial herb. Nitrogen emissions will not impact serpentine habitat.
Santa Cruz microseris	<i>Stebbinsoseris decipiens</i>	FSC, 1B	Broadleaved upland forest, closed-coned coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland/open areas, sometimes on serpentine.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Annual herb. Nitrogen emissions will not impact serpentine habitat.
San Francisco owl's-clover	<i>Triphysaria floribunda</i>	FSC, 1B	Coastal prairie, coastal scrub, valley and foothill grassland/usually serpentine.	Low. Project area is industrial and has no native soils. May be found on San Bruno Mountain.	Annual herb. Nitrogen emissions will not impact serpentine habitat.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
Invertebrates					
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT	Serpentine grassland with adult nectar sources and larval host plant (dwarf plantain and owls clover).	Low. Project area is industrial and has no native soils or associated nectar sources. Historically found on San Bruno Mountain.	SFERP nitrogen emissions will not likely impact butterfly host and nectar plants located in surrounding serpentine habitat.
Mission blue butterfly	<i>Icaricia icarioides missionensis</i>	FE	Dunes and grassland areas with <i>Lupinus</i> host plant.	Low. Project area is industrial and has no native soils or associated nectar sources. Found on San Bruno Mountain.	Restricted to three metapopulations including San Bruno Mountain in San Mateo County, Twin Peaks in San Francisco, and the vicinity of Skyline College in San Mateo County, California (NatureServe, 2005). SFERP Nitrogen emissions will not likely impact this species' host and nectar plants.
San Bruno elfin butterfly	<i>Incisalia mossii bayensis</i>	FE	Wooded canyons with cliffs and rocky outcrops. Stonecrop host plant.	Low. Project area is industrial and has no native soils or associated nectar sources. Found on San Bruno Mountain.	Current population restricted to San Bruno Mountain, Milagra Ridge, Montara Mountain, and Whiting Ridge (NatureServe, 2003). SFERP nitrogen emissions will not likely impact this species' host and nectar plants.
callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	FE	Dry woodlands, foothill grasslands, and chaparral communities. Violet host plant.	Low. Project area is industrial and has no native soils or associated nectar sources. Found on San Bruno Mountain.	Closest metapopulation found on San Bruno Mountain. SFERP nitrogen emissions will not likely impact this species' host and nectar plants.
Opler's longhorn moth	<i>Adela oplerella</i>	FSC	Serpentine grasslands with its larval food plant, California cream cups.	Low. Project area is industrial and has no native soils or associated nectar sources. Found on San Bruno Mountain.	SFERP nitrogen emissions will not likely impact this species' host and nectar plants located in surrounding serpentine habitat.
Birds					
California brown pelican	<i>Pelecanus occidentalis californicus</i>	FE, CE	Coastal, pelagic, and offshore islands. Breeding colonies typically on offshore islands.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height, potential for bird collisions is less than significant.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
double-crested cormorant	<i>Phalacrocorax auritus</i>	CSC	Found along the coast and inland water bodies. Typically nest colonial in trees or rocky areas near water.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Long-billed curlew	<i>Numenius americanus</i>	FSC, CT, MB	Winter habitat is primarily open land near, wetland, and agricultural fields in the Central Valley.	Low. Project area is industrial and has no biological resources to attract wildlife.	Winters in Central Valley. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
bank swallow	<i>Riparia riparia</i>	FSC, CT	Typically in riparian areas or near water. Colonial nester in burrows in coastal bluffs, cliffs, and banks.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
California least tern	<i>Sterna antillarum browni</i>	FE, CE	Coastal. Nest on sandy beaches and mud flats.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Bald eagle	<i>Haliaeetus leucocephalus</i>	FT, MB	Primary presence in California during winter migration. Associated with a variety of habitats. Nest sites typically found in fork of tall tree or ledges near water.	Low. Project area is industrial and has no biological resources to attract wildlife.	Migration season autumn through late winter. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Cooper's hawk	<i>Accipiter cooperii</i>	CSC	Woodland and otherwise forested areas.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT, CSC	Coastal. Sandy beaches and mudflats.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
northern harrier	<i>Circus cyaneus</i>	CSC	Wetlands, marshes, and open fields.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
white-tailed kite	<i>Elanus leucurus</i>	FSC, FP, MB	Abundant in California's Central Valley where it is commonly associated with riparian and open habitats. Their platform nests are located in trees or shrubs.	Low. Project area is industrial and has no biological resources to attract wildlife.	Typically breed between January and August. Primarily a local resident and is known to form communal roosts in the fall and winter. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	FSC, CSC	Dense marsh and riparian vegetation.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Loggerhead shrike	<i>Lanius ludovicianus</i>	FSC, CSC, MB	Typically associated with open lowland and foothill scrub or riparian woodland habitats with adequate hunting perches. Nests are typically well-concealed and built in dense shrubs or trees.	Low. Project area is industrial and has no biological resources to attract wildlife.	Largely nonmigratory and has been known to defend year-round territories. In California the breeding period typically begins in March and may extend into August. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Red knot	<i>Calidris canutus</i>	FSC	Coastal. Sandy beaches and mudflats.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Vaux's swift	<i>Chaetura vauxi</i>	FSC, CSC	Woodland areas near water. Old growth coniferous and deciduous forest. Cavity nester.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Black swift	<i>Cypseloides niger</i>	FSC, CSC	Woodland and riparian areas near water. Cliff nester, often behind waterfalls.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Little willow flycatcher	<i>Empidonax traillii brewsteri</i>	CE, MB	Associated with dense willow riparian vegetation.	Low. Project area is industrial and has no biological resources to attract wildlife.	Breeding May-September. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
American peregrine falcon	<i>Falco peregrinus anatum</i>	FD, CE, MB	Typically found along mountain ranges, river valleys, and coast lines. Nests are simple scrapes and often located on cliff ledges or other platform surfaces.	Low. Project area is industrial and has no biological resources to attract wildlife.	The breeding season typically begins in March. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Black oystercatcher	<i>Haematopus bachmani</i>	FSC	Typically found along rocky coasts and island areas.	Low. Project area is industrial and has no biological resources to attract wildlife.	Breeding typically begins in the late spring. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Harlequin duck	<i>Histrionicus histrionicus</i>	FSC, CSC	Habitat includes a variety of aquatic areas in the northwestern US and Canada. Typically breeds along mountain streams and lakes. Nonbreeding birds often found offshore.	Low. Project area is industrial and has no biological resources to attract wildlife.	Current distribution is rare in California. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Marbled godwit	<i>Limosa fedoa</i>	FSC	Breeding habitat typically found on the plains of Canada and the northern US. Nonbreeding habitat includes coastal areas.	Low. Project area is industrial and has no biological resources to attract wildlife.	Significant migration along the California Coast. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Lewis' woodpecker	<i>Melanerpes lewis</i>	FSC, MB	Associated with open forest and oak woodlands. Found along riparian woodland corridors in Central California. Cavity nester.	Low. Project area is industrial and has no biological resources to attract wildlife.	Breeding season begins in mid-April. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
whimbrel	<i>Numenius phaeopus</i>	FSC	Nesting areas found in the tundra areas of the far north. Nonbreeding habitat includes coastal areas.	Low. Project area is industrial and has no biological resources to attract wildlife.	Found along the Pacific Coast in the winter. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
Ashy storm-petrel	<i>Oceanodroma homochroa</i>	FSC, CSC	Open ocean. Typically nests on islands. The Farallon Islands off of San Francisco are a crucial nesting location.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Black skimmer	<i>Rynchops niger</i>	FSC, CSC	Found along coastal areas and sometimes on inland freshwater areas. Primarily nest on protected sandy.	Low. Project area is industrial and has no biological resources to attract wildlife.	Primarily breeds in southern California. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Rufus hummingbird	<i>Selasphorus rufus</i>	FSC, MB	Occur in coniferous forest and riparian woodlands in the Central Valley with nearby nectar sources. Build cup nest in trees, shrubs.	Low. Project area is industrial and has no biological resources to attract wildlife.	Typically breeds in California March-July. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Allen's hummingbird	<i>Selasphorus sasin</i>	FSC	Coastal chaparral, brushland, and forests edges.	Low. Project area is industrial and has no biological resources to attract wildlife.	Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Elegant tern	<i>Sterna elegans</i>	FSC, CSC	Found along coastal areas and occasionally on inland lakes. Typically nest on sandy beaches.	Low. Project area is industrial and has no biological resources to attract wildlife.	Currently known to breed in only five sites in southern California and northwestern Mexico. San Francisco is part of the nonbreeding range. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Tricolored blackbird	<i>Agelaius tricolor</i>	CSC, MB	Associated with wetland areas with dense vegetation such as cattails, tule, bulrush. Forage in grassland and agricultural fields.	Low. Project area is industrial and has no biological resources to attract wildlife.	Nest in large colonies. Breeding season is April-July; however has also been reported in October and November. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.

TABLE 8.2-2
Special-Status Species Potentially Occurring in SFERP Project Area (as indicated by CNPS, USFWS, CNDDDB, and site reconnaissance)

Common Name	Scientific Name ^a	Status ^b	Primary Habitat ^d	Potential Occurrence in Project Area	Comments
Western burrowing owl	<i>Athene cunicularia hypugaea</i>	FSC, CSC, MB	Habitats includes open grassland habitat with fossorial mammal burrows, often associated with ground squirrels. Use small mammal burrows for cover and natal dens.	Low. Project area is industrial and has no biological resources to attract wildlife.	Breeding season is typically from February through August. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.
Ferruginous hawk	<i>Buteo regalis</i>	FSC, MB	Associated with a variety of habitats but commonly found in open grassland areas. Use large stick nests in trees.	Low. Project area is industrial and has no biological resources to attract wildlife.	Uncommon winter resident in California. Breeding typically from March-July. Because of low structure height and underground transmission lines, potential for bird collisions is less than significant.

SOURCE: California Dept. of Fish and Game, 2005; California Native Plant Society, 2001.

Notes:

^a Scientific names are based on the following sources: AOU (1983); Jennings (1983); Zeiner et al. (1990a-c).

^b Status. Status of species relative to the Federal and California State Endangered Species Acts and Fish and Game Code:

Federal Status

FE Federally listed as endangered.

FT Federally listed as threatened.

FPE Proposed endangered.

FPT Proposed threatened.

Candidate for listing as federally endangered or threatened. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

FD Delisted from Federal threatened or endangered status.

FSC Federal Species of Special Concern. Proposed rules have not yet been issued because they have been precluded at present by other listing activity.

MB Migratory Bird Treaty Act. of 1918. Protects native birds, eggs, and their nests.

California Status

CE State listed as endangered. Species whose continued existence in California is jeopardized.

CT State listed as threatened. Species that although not presently threatened in California with extinction are likely to become endangered in the foreseeable future.

CSC California Department of Fish and Game "Species of Special Concern." Species with declining populations in California.

FP Fully protected against take pursuant to the Fish and Game Code Sections 3503.5, 3511, 4700, 5050, 5515.

Other Status

CNPS California Native Plant Society Listing (does not apply to wildlife species).

Plants, rare, threatened or endangered in California and elsewhere and are rare throughout their range. According to CNPS, all of the plants constituting List 1B meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection) of the California Department of Fish and Game Code and are eligible for state listing.

^c Season. Blooming period for plants. Season of use for animals. RES = Resident; SUMR = Summer; WNTR = Winter.

^d Primary Habitat. Most likely habitat association.

- | | |
|---|-----------------------------------|
| 1, ADOBE SANICLE | 37, MONTARA MANZANITA |
| 2, ALKALI MILK-VETCH | 38, NORTHERN COASTAL SALT MARSH |
| 3, AMERICAN BADGER | 39, NORTHERN HARRIER |
| 4, ANGEL ISLAND MOLE | 40, POINT REYES BIRD'S-BEAK |
| 5, ARCUATE BUSH MALLOW | 41, PRESIDIO CLARKIA |
| 6, BANK SWALLOW | 42, PRESIDIO MANZANITA |
| 7, BAY CHECKERSPOT BUTTERFLY | 43, ROBUST SPINEFLOWER |
| 8, BEACH LAYIA | 44, ROSE LEPTOSIPHON |
| 9, BENT-FLOWERED FIDDLENECK | 45, ROUND-HEADED CHINESE HOUSES |
| 10, BUMBLEBEE SCARAB BEETLE | 46, ROUND-LEAVED FILAREE |
| 11, BURROWING OWL | 47, SALINE CLOVER |
| 12, CALIFORNIA BLACK RAIL | 48, SALTMARSH COMMON YELLOWTHROAT |
| 13, CALIFORNIA CLAPPER RAIL | 49, SALT-MARSH HARVEST MOUSE |
| 14, CALIFORNIA LEAST TERN | 50, SALT-MARSH WANDERING SHREW |
| 15, CALIFORNIA RED-LEGGED FROG | 51, SAN BRUNO ELFIN BUTTERFLY |
| 16, CALIFORNIA SEABLITE | 52, SAN BRUNO MOUNTAIN MANZANITA |
| 17, CALIFORNIA TIGER SALAMANDER | 53, SAN FRANCISCO BAY SPINEFLOWER |
| 18, CALLIPPE SILVERSPOT BUTTERFLY | 54, SAN FRANCISCO CAMPION |
| 19, CHORIS'S POPCORN-FLOWER | 55, SAN FRANCISCO COLLINSIA |
| 20, COASTAL TRIQUETRELLA | 56, SAN FRANCISCO GUMPLANT |
| 21, COMPACT COBWEBBY THISTLE | 57, SAN FRANCISCO LESSINGIA |
| 22, COOPER'S HAWK | 58, SAN FRANCISCO OWL'S-CLOVER |
| 23, DARK-EYED GILIA | 59, SAN FRANCISCO POPCORN-FLOWER |
| 24, DIABLO HELIANTHELLA | 60, SANTA CRUZ MICROSERIS |
| 25, DOUBLE-CRESTED CORMORANT | 61, SANTA CRUZ TARPLANT |
| 26, DUNE GILIA | 62, SERPENTINE BUNCHGRASS |
| 27, FRAGRANT FRITILLARY | 63, SOUTHERN SEA OTTER |
| 28, FRANCISCAN MANZANITA | 64, TIBURON INDIAN PAINTBRUSH |
| 29, FRANCISCAN THISTLE | 65, TIBURON JEWEL-FLOWER |
| 30, KELLOGG'S HORKELIA | 66, TIDEWATER GOBY |
| 31, MARIN WESTERN FLAX | 67, TOMALES ISOPOD |
| 32, MARSH MICROSERIS | 68, WESTERN LEATHERWOOD |
| 33, MARSH SANDWORT | 69, WESTERN POND TURTLE |
| 34, MIMIC TRYONIA (=CALIFORNIA BRACKISHWATER SNAIL) | 70, WESTERN SNOWY PLOVER |
| 35, MISSION BLUE BUTTERFLY | 71, WHITE-RAYED PENTACHAETA |
| 36, MONARCH BUTTERFLY | 72, WHITE-TAILED KITE |

 SAN BRUNO MOUNTAIN STATE PARK

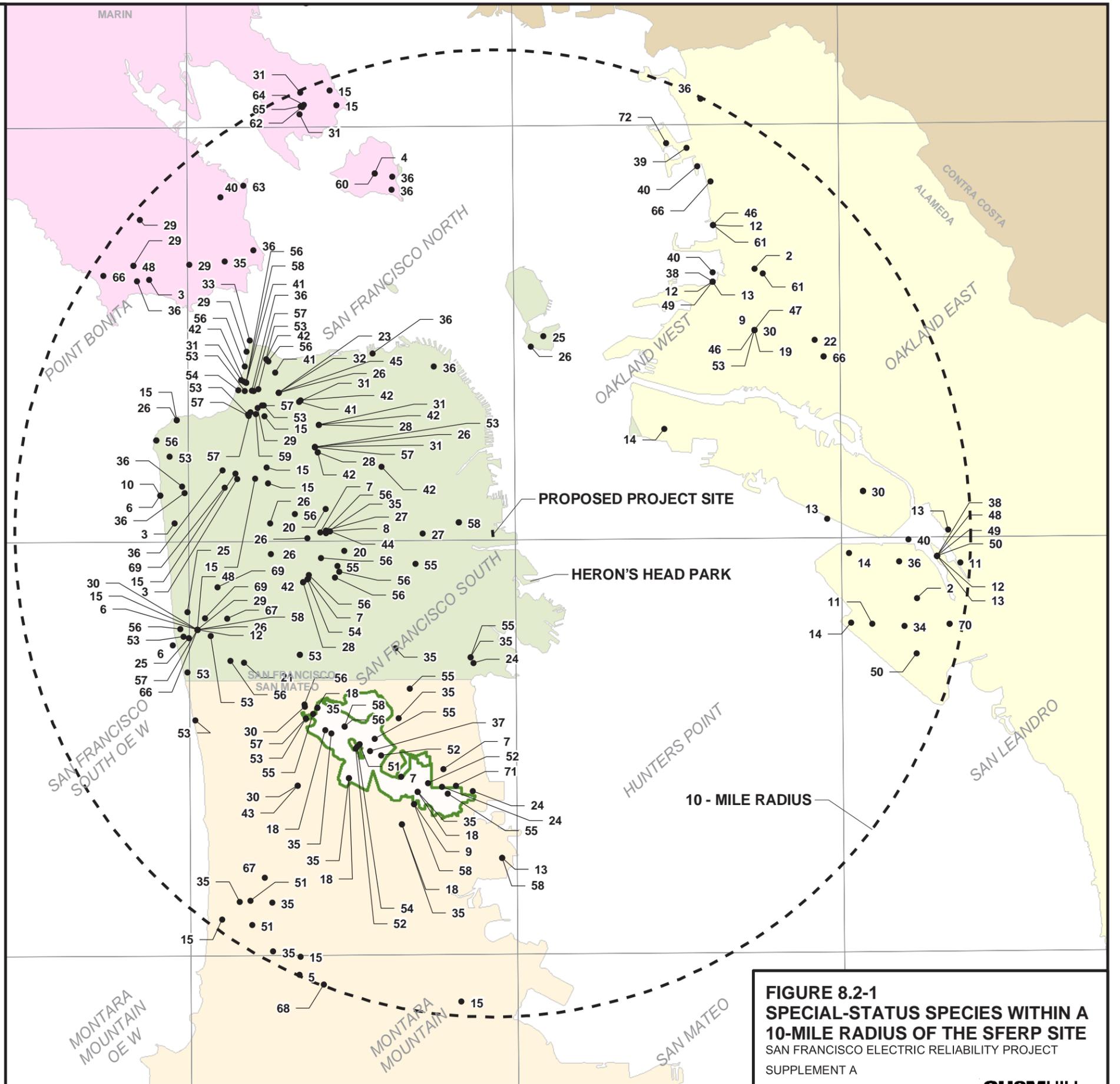


FIGURE 8.2-1
SPECIAL-STATUS SPECIES WITHIN A
10-MILE RADIUS OF THE SFERP SITE
 SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
 SUPPLEMENT A

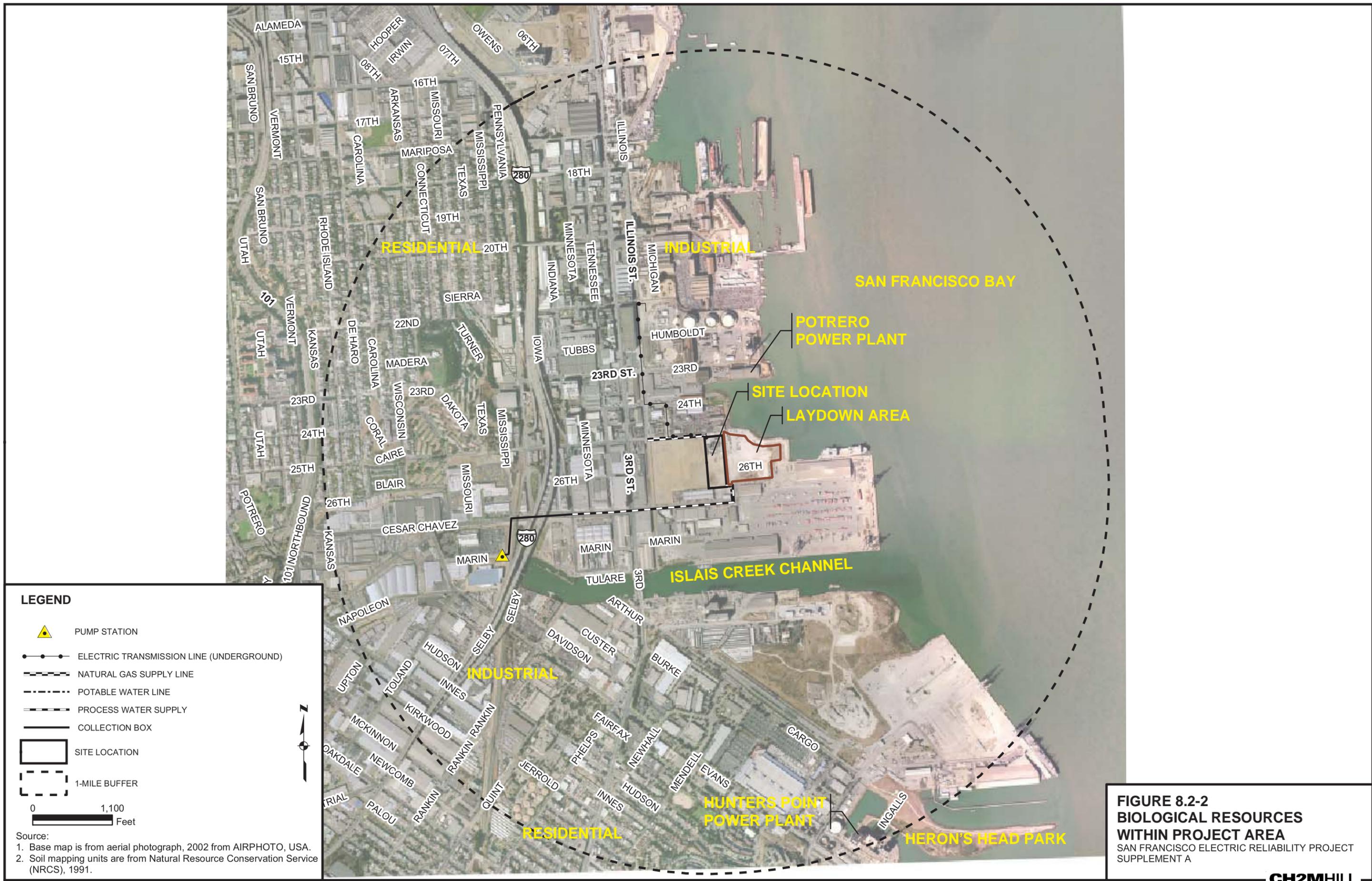


FIGURE 8.2-2
BIOLOGICAL RESOURCES
WITHIN PROJECT AREA
 SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
 SUPPLEMENT A