

H. BIOLOGICAL RESOURCES

INTRODUCTION

The Abbott Laboratories project would transform the project site from a barren industrial area once used for stockpiling and processing of salt and bittern, into a modern manufacturing, research and development, office, and warehouse campus. The project would create an office park-like landscape that would include a variety of laboratory, office, manufacturing, parking, and related facilities. The nearly square-shaped project site is bounded on two sides by upland urban development, and on two sides by Redwood Creek (see Figure III-2). The site's waterfront perimeter would be developed as a landscaped amenity for use by both general public and Abbott employees. Buildings would be set back on average of 100 ft from the shoreline and the area within the setback would be landscaped as a parkway. The San Francisco Marine Science Institute (MSI) currently occupies a portion of the project site, including several buildings and a dock. MSI would remain on the site as part of the project and continue to access Redwood Creek to conduct educational and research activities.

Redwood Creek separates the project site and the neighboring developed waterfront from relatively undeveloped marshlands of significant biological value. Bair Island, a significant biological resource, lies just across Redwood Creek from the project site. This section examines the potential for aspects of the project to impact biological resources.

SETTING

The project area was once occupied by tidal marshes interspersed with large, well-developed channels, slough systems, and tidal marsh ponds. Outboard of the marshes were oyster shell beaches, large expanses of tidal flats, and oyster beds. The area has been completely altered from its historical state through the deposition of landfill and subsequent waterfront development. The project site currently consists of artificial fill, primarily of clay and gravel material. The site is currently occupied with salt stockpiles and salt mining equipment, an office building, the Marine Science Institute facility, parking areas, and drainage areas. (see Chapter III, Project Description for details of existing land uses on the project site).

The site lies between urban development in Redwood City and undeveloped marshlands and waters of San Francisco Bay. The site is bounded along the northern and eastern sides by Redwood Creek. Across Redwood Creek to the north is Bair Island, a large open marshlands area that recently became part of the Don Edwards San Francisco Bay National Wildlife Refuge. The project site is separated from the waters of Redwood Creek by an earth-filled levee. MSI currently uses about 1.4 acres of the area along the site's northern waterfront. MSI has several educational and laboratory buildings and a dock for watercraft access to Redwood Creek. MSI would relocate its facilities to the southeastern portion of the site as part of the project, but would continue to access the dock along the northern waterfront as they do now.

HABITATS

There are no terrestrial biological resources within or immediately adjacent to the project area, as the uplands are thoroughly developed for industrial and commercial urban uses. The waters and undeveloped marshlands adjacent to the project area, however, provide several types of habitats for biological resources of significant value. These habitats are of two main types: marshlands and aquatic habitat.

Aquatic Habitat

Aquatic habitat adjacent to or near the site includes Redwood Creek, several small sloughs, and the open waters of San Francisco Bay. Redwood Creek, which is immediately adjacent to the site, is an industrialized, urban waterway, bounded by sparse growths of natural and weedy vegetation, including common pickleweed. The substrate likely found in Redwood Creek varies from coarse sands to fine silts and clays. Water and sediment quality is generally poor and reflective of the adjacent urban development and industrial water uses.

Redwood Creek and adjacent sloughs potentially provide habitat for large aquatic invertebrates, such as dungeness crab and California bay shrimp, as well as for 63 known fishes, including northern anchovy, Pacific herring, kingfish, splittail, jacksmelt and brown rockfish. These waters also provide seasonal foraging habitat for migrating anadromous fishes including Chinook salmon and steelhead trout. Open waters in this area are used by numerous water birds including western grebe, canvasback, Forster's tern, brown pelican, lesser scaup, and Caspian tern. Harbor seals are known to use beaches of the nearby Wildlife Refuge and they could forage in the creeks and sloughs of the area.

Marshlands Habitat

Redwood Creek and contiguous sloughs separate the industrialized waterfront, which includes the project site, from Bair Island and other components of the San Francisco Bay National Wildlife Refuge. Bair Island, a recent addition to the Refuge, is currently undergoing restoration to increase its biological values. This marshland provides a large area of diverse marshlands habitat.

Bair Island actually consists of three islands: Inner, Middle and Outer Bair islands, sometimes referred to collectively as South Shores. Earlier this century the islands were used for cattle grazing. Later, the area was bought by Leslie Salt, which built a series of levees and used the island for salt evaporation ponds. The salt company sold Bair Island to Mobil Land Development, which filed plans to build "South Shores," an office and residential development on the island. Redwood City residents, recognizing the environmental value of the island, mobilized to oppose Mobil's plan. For more than a decade various environmental groups took actions to effect restoration and preservation of Bair islands.

Today, Bair Island is in public ownership as part of the San Francisco Bay National Wildlife Refuge. It is currently one of the largest remaining restorable wetlands in southern San Francisco Bay. Bair Island, and other nearby portions of the Refuge, support an abundance of wildlife, including more than 126 species of birds, including blue herons, egrets and Caspian terns;

13 types of mammals, including harbor seals, sea lions, and salt marsh harvest mouse. Many of these species are classified as rare or endangered (BIAC 2000). Redwood Creek, and contiguous sloughs, isolate the marshlands from general human activity, including activity associated with the project site.

SPECIAL STATUS SPECIES

The project site contains no habitat for endangered species. Adjacent aquatic and marshland habitats, however, provide habitat for several fish and wildlife species listed by federal or state agencies as endangered or threatened (see Table IV.H-1). Of these, the following species are known, or considered likely, to use habitats near the project site (COE, 1995) and might be found in close enough proximity to the site to be affected by the project:

- **California brown pelican** (*Pelicanus occidentalis californicus*) have been observed on Bair Island and in Redwood Creek. This species might forage in the open waters of Redwood Creek adjacent to the project levee. The California brown pelican is listed as endangered by the federal government and is a fully protected species by the California Department of Fish and Game (CDFG).
- **California clapper rail** (*Rallus longirostris obsoletus*) populations are known to exist on Bair Island. Although unlikely because of the scarcity of vegetation along the water's edge, these rails might forage along the levee edge. The California clapper rail is listed as endangered by both the federal and state government.
- **California least tern** (*Sterna antillarum browmi*) have bred on Bair Island in the past. This species might forage in the open waters of Redwood Creek adjacent to the project. The California least tern is listed as endangered by both the federal and state government.
- **peregrine falcon** (*Falco peregrinus*) have been sighted on Bair Island. These falcons might forage for other birds (e.g., pigeons) at the project site. The peregrine falcon has been delisted from the special status fish and wildlife species listing.
- **salt marsh harvest mouse** (*Reithrodontomys raviventris vaviventris*) have been identified in surveys on Bair Island. This mouse might be found in marsh habitat across Redwood Creek from the project. They exist only in areas dominated by common pickleweed which is found in sparse growths along the Redwood Creek levee. The salt marsh harvest mouse is listed as endangered by both the federal and state government.

REGULATORY SETTING

The project would likely require compliance with the following laws and regulations that include protection and/or consideration of biological resources.

U.S. Army Corps of Engineers Clean Water Act – Section 404 Permit. The proposed project might involve placement of fill or other materials in waters of the United States for installation of a storm water outlet. If such an outlet would alter the substrate or other attributes of the waters adjacent to the project, the effects of the structure would be further evaluated for impacts to biological resources before a permit is issued.

**TABLE IV.H-1
SPECIAL STATUS FISH AND WILDLIFE SPECIES WITH THE
POTENTIAL TO OCCUR IN THE PROJECT AREA**

Common name Scientific name	Listing Status USFWS/CDFG/	Habitat
SPECIES LISTED OR PROPOSED FOR LISTING		
Fish		
Tidewater goby <i>Eucyclogobius newberryi</i>	FT/CSC	Shallow waters of bays and estuaries. Prefer large lagoons. Found in many coastal lagoons from SF to Ventura County.
Delta smelt <i>Hypomesus transpacificus</i> Critical habitat designated	FT/CT	Restricted to the Sacramento-San Joaquin Delta, including Suisun and San Pablo Bays and the Carquinez Strait.
Coho salmon—Central California coast ESU <i>Oncorhynchus kisutch</i> Critical habitat designated	FT/CE	Accessible SF Bay areas and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.
Steelhead – Central California Coast ESU <i>Oncorhynchus mykiss irideus</i> Critical habitat designated	FT/CSC	Accessible SF Bay areas and coastal rivers and streams. Known to spawn in several South Bay streams in Santa Clara and San Mateo Counties.
Steelhead-Central Valley ESU <i>Oncorhynchus mykiss irideus</i> Critical habitat designated	FT/--	Spawn in the Sacramento and San Joaquin Rivers and their tributaries, migrate through San Francisco and Suisun Bays, as well as the Delta region
Chinook salmon—spring run <i>Oncorhynchus tshawytscha</i> Critical habitat designated	FT/	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-San Joaquin Delta
Chinook salmon—fall/late fall run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FC/	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay, require clean water and gravel beds for spawning
Chinook salmon—winter run <i>Oncorhynchus tshawytscha</i> Critical habitat designated	FE/CE	Spawning restricted to the Sacramento River. Requires clean, cold water with gravel beds.
Chinook salmon—Central Valley spring-run <i>Oncorhynchus tshawytscha</i> Critical Habitat designated	FT/CT	Spawning and rearing restricted to Sacramento River basin, migrate through San Francisco Bay and Sacramento-San Joaquin Delta
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	FT/CSC	Slow moving river sections and dead-end sloughs with flooded vegetation for spawning and foraging for young.
Birds		
California brown pelican <i>Pelecanus occidentalis californicus</i>	FE/3511	Nests on coastal islands of small to moderate size that afford protection from predators.
California clapper rail <i>Rallus longiostris obsoletus</i>	E/E	Found only in dense marshland vegetation, such as cordgrass beds.
California least tern <i>Sterna antillarum browni</i>	FE/CE	Colonial breeder on sand beaches, alkali flats, land fills, or paved areas

**TABLE IV.H-1 (Continued)
SPECIAL STATUS FISH AND WILDLIFE SPECIES WITH THE
POTENTIAL TO OCCUR IN THE PROJECT AREA**

Common name Scientific name	Listing Status USFWS/CDFG/	Habitat
Mammals		
salt marsh harvest mouse	E/E	Lives in areas dominated by common pickleweed which occurs in the intertidal zone in many areas of San Francisco Bay
harbor seal	MMPA	Colonial species found on sand beaches in many areas within San Francisco Bay.
FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Fish		
Pacific lamprey <i>Lampetra tridentata</i>	FSC/--	Pacific Ocean and estuaries; spawning in coastal streams from Alaska to Baja California
Longfin smelt <i>Spirinchus thaleichthys</i>	FSC/--	Sacramento-San Joaquin estuary in the salt or brackish water portions of the estuary, require fresh water, sandy-gravel substrates, rocks, and aquatic vegetation for spawning
Birds		
American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Nests near wetlands, lakes, rivers, or other water on cliffs, banks, human structures
Long-billed curlew <i>Numenius americanus</i>	FSC/--	Lake beaches, nests in both dry and wet uplands
Ashy storm petrel <i>Oceanodroma homochroa</i>	FSC/	Coastal/oceanic habitats. Nests on islands with natural cavities or provided burrows.
Double-crested cormorant <i>Phalacrocorax auritus</i>	--/CSC	Nests along coast on isolated islands or in trees along lake margins
Elegant tern <i>Sterna elegans</i>	FSC/CSC	Salt marsh dikes, sand beaches, and flats

STATUS CODES:

Federal Categories (U.S. Fish and Wildlife Service)

FE = Listed as Endangered by the Federal Government
 FT = Listed as Threatened by the Federal Government
 FPE = Proposed for Listing as Endangered
 FPT = Proposed for Listing as Threatened
 FC = Candidate for Federal Listing
 FSC = Federal Species of Concern
 FSLC = Federal Species of Local Concern

MMPA = Marine Mammal Protection Act

State Categories (California Department of Fish and Game)

CE = Listed as Endangered by the State of California
 CT = Listed as Threatened by the State of California
 CR = Listed as Rare by the State of California

3511 = Fully Protected Species
 * = Special Animals
 CSC = California Species of Special Concern

San Francisco Bay Conservation and Development Commission (BCDC) – Review and Concurrence. BCDC has two types of jurisdiction along the bay; 1) “Bay Fill,” and 2) “Bay Fill with a 100-foot Shoreline Band.” In the “Bay Fill” jurisdiction areas, BCDC would review any bay fill activity. Bay fill is defined as fill below the mean high water (MHW) elevation and will only be allowed if the project is “bay dependent.” An example of “bay dependent” use might be a dock or shore protection (rock rip rap). In general, earth fill below the MHW mark would not be allowed by BCDC.

In the “Bay Fill with a 100-foot Shoreline Band” jurisdiction areas, the same rules would apply as described above, but BCDC also has jurisdiction over the 100-foot band along the shore from the MHW elevation. Within this 100-foot band, BCDC requires the maximum feasible access consistent with the project. At a minimum, this would require walking paths, benches, landscaping, and signage along the shoreline, and often public parking within or adjacent to this area. BCDC has a list of approved landscaping materials for these areas.

The width of the public access area required by BCDC is negotiable. Typically this will vary from 50 to 100-feet and would depend on the constraints of the site plan, and the public amenities offered.

The McAteer-Petris Act, which created BCDC, defines the locations in the bay for each type of jurisdiction. According to the definitions in the Act, BCDC’s jurisdiction along Redwood Creek (to the confluence of Smith Slough west and south of the site) is “Bay Fill.” Therefore, the BCDC jurisdiction along the northern shoreline of the site is up to MHW, or elevation of 104.05 for this area of the bay.

The waters associated with Yacht Harbor, however, are not considered Redwood Creek but are part of the Bay Waters. Therefore, the eastern edge of the site is subject to the 100-foot Shoreline Band jurisdiction.

State Lands Commission – Leasing Authority. The State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the US in 1850. The State Lands Commission manages these resources for the public trust. Submerged lands are subject to the jurisdiction even if filled or diked. The submerged lands of the project site would be within the Commission’s leasing authority.

Regional Water Quality Control Board (RWQCB) – Review and Certification. The RWQCB reviews any action that discharges water or places other materials into waters of the US to determine that such actions do not violate State water quality standards. The SWQRB will review the project Stormwater Pollution Prevention Plan for compliance with NPDES requirements designed to avoid project runoff from introducing pollutants into Redwood Creek (see Section IV.C, Hydrology and Water Quality).

US Fish and Wildlife Service (USFWS) Endangered Species Action – Section 7 Consultation. USFWS would require compliance with conditions to mitigate potential harm to any endangered species, listed by the service, likely to be affected by the project. As discussed

below, no endangered species potentially found near the project site are likely to be affected by the project and consultation in accordance with this law is therefore not required.

National Oceanic and Atmospheric Administration (NOAA) Fisheries, Endangered Species Act Section 7 Consultation. NOAA would require compliance with conditions to mitigate potential harm to any federally listed endangered marine species likely to be affected by the project. As discussed below, no marine fish or mammal species that are potentially found near the project are likely to be affected by the project, and consultation in accordance with this law is therefore not required.

California Department of Fish and Game – Consultation. In accordance with the California Endangered Species Act, CDFG has responsibility for protection of State-listed species as identified above that may occur near the project. As discussed below, no State listed species potentially found near the project are likely to be affected by the project and consultation in accordance with this law is therefore not required.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The following criteria, the first two of which were derived from the significance criteria set forth in the Appendix G of the CEQA Guidelines, are commonly used in CEQA documents.

According to these criteria a project would have a significant effect on the environment if it were to:

- substantially affect a rare or endangered species of animal or plant, or the habitat of the species;
- substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any native resident or migratory fish or wildlife species;
- have a substantial adverse effect on any riparian habitat or other sensitive natural communities; or,
- conflict with any established conservation plans or policies protecting biological resources.

IMPACT ANALYSIS

There is no habitat for biological resources on the project site that would be directly affected by project implementation. The project would not affect any riparian habitat or other natural community; diminish habitat for fish, wildlife or plants; or, interfere with the movement of any species. The project site does not lie within an area protected by any established plans or policies protecting biological resources. The project would not affect land use or habitat on the nearby protected marshlands of Bair Island and the San Francisco Bay Wildlife Refuge.

Vegetation and upland species found in the nearby marshlands would be isolated from the project by open waters of Redwood Creek and contiguous waters. Aquatic and marshlands wildlife could, however, be affected by their proximity to the boundaries of project facilities. Sensitive biological resources could, for example, be affected by increased noise, light, or other unnatural factors that might result from the project during, or following, construction.

CONSTRUCTION IMPACTS

Impact H.1: Increased noise levels during construction could result in disturbances to rare or endangered wildlife species, especially shore birds and other users of the adjacent aquatic habitat. (Less than Significant)

While such an impact is possible, the area surrounding the project site includes various other industrial and commercial uses that provide a general background noise level consistent with that expected at the project site during construction.

Although the construction activities would alter noise levels currently found at the site, it is not expected that changes would be sufficient to affect use of adjacent waters by sensitive wildlife species. Any species particularly sensitive to noises likely to be generated from the project would not likely be found immediately adjacent to the site because of ambient noise levels from other local harborside development that occurs regularly (e.g., salt and bittern handling). Additionally, Mitigation Measures F.1a – F.2c would ensure that short-term construction-related noise impacts would be mitigated to less than significant levels (see Section IV.F, Noise).

Mitigation: None required.

Impact H.2: Construction of the proposed project could result in increases in pollutants such as oil and grease, contaminated sediments or stormwater runoff that could adversely affect biological resources. (Less than Significant)

As discussed in Section C, Hydrology and Water Quality, the project sponsor would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in order to avoid adverse effects during and following construction, which could degrade the adjacent water quality sufficient to harm wildlife users. Implementation of the SWPPP and adherence to the Best Management Practices contained within the SWPPP would reduce potential impacts to water quality and wildlife users to a less than significant level.

Mitigation: None required.

PROJECT OPERATION**Impact H.3: Increased human activity on the project site may attract non-native nuisance wildlife. (Less than Significant)**

Greater use of the site by humans, as well as increased artificial habitat (e.g., buildings, trees, trash bins) might introduce food and other items that attract non-native nuisance wildlife, such as pigeons, crows, rats, and insects, as well as domestic species such as cats and dogs. These species could compete with or prey upon sensitive special status wildlife (e.g, saltmarsh harvest mouse is highly susceptible to predation from cats, dogs, and rats). The likelihood of this impact is mitigated, however, by the presence of Redwood Creek, which separates the project site. Significantly increased competition or predation by species that can access natural habitat, such as crows or pigeons, is unlikely as these species already exist in abundance throughout the waterfront area and surrounding environs.

Additionally, any of the rare and endangered species of concern that might be found in waters adjacent to the project would be sensitive to disturbance from human presence. The waterfront and levees of the project area are currently thoroughly industrialized and already experience heavy human presence from boat traffic and adjacent urban development. It is unlikely that the increased use of the shoreline by humans that would be attributable to the project would be appreciably distinguishable by wildlife from the existing ongoing background of human activities in the area. Any species found immediately adjacent to the project would already be acclimated to human presence and not be substantially affected by additional light pedestrian use of the levee in the project area.

Mitigation: None required.

Impact H.4: Increased light levels and human activity on the project site may disturb wildlife using adjacent aquatic habitats. (Less than Significant)

Sensitive and valuable species that might use the waters adjacent to the project might avoid use of these waters because of increased light levels attributable to the project. It is unlikely that this potential impact would be sufficiently substantial to affect any species found near the project. None of the endangered species noted above are nocturnal species. There are no other known nocturnal species (e.g., bats or owls) that would likely use the adjacent waters.

Mitigation: None required.

CONCLUSIONS

The project would have no direct effects on biological resources, as no biological resources exist within the area of direct impact. None of the indirect, or offsite effects to valuable biological resources identified as potentially occurring in the vicinity of the project are likely to be sufficiently substantial to cause significant effects according to the criteria defined above. Although sensitive biological resources of substantial value are found near the project site, none of the potential indirect or offsite effects would be appreciably greater in quantity, occurrence, or magnitude than the existing effects of other shoreline development surrounding the project site. Any valuable species sensitive to potential indirect effects (e.g., noise, light, human presence) would already be adapted to levels of effect similar to that which would occur from project implementation. The project would therefore have no significant impacts to biological resources.

REFERENCES – Biological Resources

(The references cited below are available at the Redwood City Planning Services Department, 1017 Middlefield Road, Redwood City, California, unless specified otherwise below.)

California Department of Fish and Game, *Natural Diversity Database*, version 2.1.2, updated January 2, 2003.

Goals Project, *Baylands Ecosystem Habitat Goals, A Report of Habitat Recommendations Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project*, U.S. Environmental Protection Agency, California/S.F. Bay Regional Water Quality Control Board, 1999. Available online: <http://www.sfei.org/sfbaygoals/docs/goals1999/final031799/pdf/sfbaygoals031799.pdf>

Port of San Francisco, *Waterfront Land Use Plan: Final Environmental Impact Report*, adopted June 1997, State Clearinghouse No. 94123007, (Republished January 2000), and as amended July, 2000, and October, 2000.

US Army Corps of Engineers, San Francisco District, Pacific Shores Center Public Notice, Number 16783S41, July 21, 1995.