



Environmental Assessment  
North Dock Handicap Access Ramp Project, FY 2003.  
Sausalito, California  
December 2002

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## **Purpose**

The U. S. Army Corps of Engineers, San Francisco District, is proposing to construct a handicap access ramp and boat dock in Richardson Bay on the Corps of Engineers' North Pier located in Sausalito, California. Construction on-site would be limited to the required pilings and a pier extension. Pilings would be driven by pile driver into bedrock at a maximum depth of 120 ft. below the mean lower low water level. Gangways, ramps, and floating docks would be assembled offsite and hauled into place upon completion of onsite construction. Work on the project is to commence mid-March 2003, with construction completion anticipated by the beginning of August 2003. The north dock is situated on land operated and maintained by the Department of the Army and its use is currently restricted to state and federal watercraft, with limited exception. The current dock is not handicap accessible and is structurally limited to use by large vessels due to its berthing height.

## **Project Objectives**

The proposed project would establish increased public access by providing a day-use facility compliant with requirements set forth in The Americans with Disabilities Act (ADA) as published in the Title III regulations (28 CFR Part 36, revised July 1, 1994) issued by the Department of Justice. The proposed project satisfies applicable requirements and advances the goals set forth in the *Major Conclusions and Policies* of the *San Francisco Bay Plan*; Chapter 1, Findings and Declarations of Policy (section 66602) of the *McAteer-Petris Act* as amended; and Policies stated in the *Richardson Bay Special Area Plan* (RBSAP); as necessary under the federal consistency requirements of the *Coastal Zone Management Act of 1972*.

## **Project Location**

The proposed project lies on Richardson Bay within the city limits of Sausalito in Marin County, California. Please refer to the location map, (figure 1) which refers to the site as 'Corps of Engineers', and the vicinity map (figure 2) provided.

## **Agencies Involved and Decision Requirements**

The proposed project is to be constructed entirely on land owned and operated by the Department of the Army. Numerous agencies have been consulted throughout this NEPA analysis, including the U. S. Fish and Wildlife Service and the National Marine Fisheries Service to consult on matters regarding threatened and endangered species and the habitat on which they rely. The California Coastal Commission, by way of the San Francisco Bay Conservation and Development Commission (BCDC), will be notified of the project as a condition of provisions

set forth under the *Coastal Zone Management Act of 1972* as amended (16 U.S.C. 1451 et. seq). Decisions regarding selection of the final plan will be made after thorough consultation with users who have expressed interest in using such a facility.

## **Proposed Action and Alternatives**

**Summary:** Through the scoping process, three general alternatives were developed in addition to the no action alternative. This section proceeds through a description of each alternative and defines the differences between the alternatives. Emphasis is placed on how environmental impacts differ between the alternatives and not on specifics with regard to construction. Please refer to each alternative building plan for structural specifics not discussed in this Section.

**No Action:** To comply with the National Environmental Policy Act (NEPA), the Corps is required to consider the effects of taking no Federal action as an alternative to constructing the North Dock Handicap Access Ramp. Under the No Action alternative the existing North Pier would remain unchanged. The Richardson Bay area surrounding the pier would not be filled with any pilings nor shaded by additional structures. Current use of existing facilities would continue to be limited by the Army Corps of Engineers to exclusive users (e.g. state and federal vessels). Currently no public access boat docks with handicap access exist in the Richardson Bay area (per conversation Price, 2002). Some private marinas do have such facilities, but their use is restricted to private members and they are not subject to the strict requirements of the ADA. According to contacts, there are no plans now or into the future to establish an ADA compliant public access boat dock in the Richardson Bay region.

**Proposed Action, Alternative A:** Under this alternative (figure 3), an extension would be constructed from the Army Corps North Pier and would connect four aluminum gangways, in a straight design, to one fixed landing, two floating landings, and a floating dock. This alternative would require installation of 15 concrete piles for support. An area of Richardson Bay approximately 1562 ft<sup>2</sup> would be covered (shaded) by these structures. Given the use of eight 18 in.<sup>2</sup> piles and five 20 inch steel tube piles for support, this would cause the displacement (“fill”) of about 331 ft<sup>3</sup> of Richardson Bay water, 992 ft<sup>3</sup> of soft bay mud, and 826.5 ft<sup>3</sup> of firm sediment. These estimates divide the average 60-foot depth of the piles into 10 ft. of water, 30 ft. of soft bay mud, and 25 ft. of firm sediment. The pillars will rest on bedrock below the firm sediment. The estimates used in Alternatives B and C follow the same parameters.

**Alternative B:** Alternative B (figure 4) represents the initial plan composed by Army Corps engineers that served principally to satisfy ADA requirements. Under this alternative, an extension would be constructed from the Army Corps North Pier and would connect four aluminum gangways, in a switchback design, to two fixed landings, one floating landing, and a floating dock. This alternative would require installation of approximately 17 concrete piles for support. An area of Richardson Bay approximately 1692 ft<sup>2</sup> would be covered (shaded) by these structures. Given the use of ten 16 in.<sup>2</sup> piles and seven 18 in.<sup>2</sup> piles for support, this would cause the displacement (“fill”) of about 370 ft<sup>3</sup> of Richardson Bay water, 1112 ft<sup>3</sup> of soft bay mud, and 927 ft<sup>3</sup> of firm sediment. Concern about limited space and mobility issues due to the proximity of adjacent boat docks helped steer the Corps away from this plan, which would expand the dock 30 more feet south of the existing pier than Alternative A.

**Alternative C:** Alternative C (figure 5) calls for the installation of two separate gangways, one electronically operated ramp that is fully compliant with ADA requirements, and a pedestrian gangway. This alternative would also require the construction of an extension from the existing North Pier, but does not require any floating or fixed platforms. Installation of a total of approximately 6-10 pilings would be required for a net displacement of between 136 to 227 ft<sup>3</sup> of Richardson Bay water, between 409 and 680.85 ft<sup>3</sup> of soft bay mud, and between 340 and 568 ft<sup>3</sup> of firm sediment. An area of Richardson Bay of at least 1408 ft<sup>2</sup> would be shaded by the associated structures.

## **Affected Environment**

### **Richardson Bay Ecology**

An ecologically diverse body of water, most of Richardson Bay is an estuarine environment. Richardson Bay lies within the San Francisco Bay estuary system which provides a complex network of sub tidal channels, basins, mud flats, tidal marshes, rocky shorelines, and sandy beaches all along side fully developed shallow draft harbors, anchorage sites, recreational, and commercial marinas. An extensive review of the ecological composition of Richardson Bay is provided in Part I of the Richardson Bay Special Area Plan (RBSAP) under *Aquatic and Wildlife Resources*. Incorporated here by reference, the RBSAP is reasonably available for inspection from the BCDC. The temporal and spatial limits of potential impacts that could result from the proposed project can best be understood by focusing on the affected environment immediately at the project site.

### **Project Site; Sausalito Shoreline**

The project area is located on the northeastern shore of the city of Sausalito. Construction will take place off of the Corps of Engineers pier, which rests just northwest of Clipper Yacht Harbor (refer to Figure 1). Figure 6 provides a USGS aerial photograph of the project area and the adjacent shoreline. This Sausalito waterfront area is designated by the RBSAP, and approved by the BCDC as a “working waterfront” for such marine-oriented uses as marinas and marina-related facilities, among other commercial uses. Despite its heavily developed state, the project area serves as feeding grounds and as a passageway for a number of bird and fish species, in addition to providing habitat for marine invertebrate species (refer to Appendix B).

At the time of adoption in 1984 the RBSAP approximated that there were 2,000 recreational marina berths in Richardson Bay, most of which were located along the Sausalito waterfront. It was further approximated that an additional 1,000 recreational marina berths were proposed for construction, with 260 already having been granted approval in 1984. As of July 2002, per conversation with Richardson Bay Harbor Master Bill Price, a total of only 2,500 recreational marina berths existed within Richardson Bay. This represents only a modest increase in marina berths within the last 18 years. This is despite the mandate within the RBSAP to increase public access to, and encourage development of, the Sausalito shoreline.

## Compliance

### **Section 10 of the Rivers and Harbors Act and Section 404(b)(1) of the Clean Water Act**

On the basis of the foregoing alternatives analysis, the “North Dock Handicap Access Ramp Project” is in accordance with the guidelines applicable to the public interest analysis required under section 10 of Rivers and Harbors Act of 1899 (33 U.S.C. 403) and section 404(b)(1) of the Clean Water Act of 1977, as amended, (33 U.S.C. 1251 *et. seq.*).

The purpose of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters. Specific sections of the CWA control the discharge of pollutants and waste into aquatic and marine environments.

The “North Dock Handicap Access Ramp Project” is not exempt from Section 401 of the CWA, which requires certification that the permitted project complies with State Water Quality Standards for actions within State waters. See 40 C.F.R. § 131.4(b). The San Francisco Bay Regional Water Quality Control Board (the Board) issues State certification for such projects as the current project. In regard to the current project, objects such as pilings and boat docks are considered pollutants within the meaning of Section 401. Thus, the Corps has submitted the appropriate application for water quality certification to the Board, and expects full concurrence with the Corps’ conclusion that this project will not present any significant water quality impacts. If the Board does, on the other hand, identify significant impacts, this Environmental Assessment and the accompanying Finding of No Significant Impact (FONSI) will be reevaluated prior to the award of the contract to construct the project.

### **Coastal Zone Management Act (CZMA)**

In accordance with the CZMA of 1972, as amended through P.L. 104-150 “The Coastal Zone Protection Act of 1996,” federal agencies are required to undertake their responsibilities in the coastal zone, to the maximum extent practicable, within state guidelines through approved programs.

Within the San Francisco Bay, the San Francisco Bay Conservation and Development Commission’s (BCDC) National Oceanic Atmospheric Administration (NOAA)-approved state management program is the *San Francisco Bay Plan* (Bay Plan), as amended. Under the umbrella of the Bay Plan, the BCDC adopted six “special area plans,” which apply Bay Plan policies in greater detail to specific shoreline areas. One plan from this subset is the Richardson Bay Special Area Plan (RBSAP), adopted in December of 1984, which applies to Richardson Bay.

In Accordance with the RBSAP, the proposed project site falls in an area zoned for “Marine Facilities.” This area does not carry a designation for habitat and wildlife protection (see Fig. 1). (In contrast, “Open Water and Marina” areas do carry wildlife and habitat protection consideration in the Bay Plan.) Therefore, in accordance with the CZMA and the regulations of NOAA’s 15 C.F.R. 930 governing “Federal Consistency with Approved Coastal Management Programs,” this project is consistent with the RBSAP, Bay Plan and state’s McAteer-Petris Act. The Corps has submitted a conclusion that this project is fully consistent with the RBSAP. If the BCDC affirmatively declines to concur with the Consistency Determination, however, this Environmental Assessment and the accompanying FONSI will be reevaluated prior to the award of the contract to construct the project.

## **Endangered Species Act**

The Endangered Species Act of 1973 (ESA) requires that federal agencies seek to conserve threatened and endangered species. Further, federal agencies are directed to cooperate with State and local agencies to resolve water resource issues in concert with the conservation of endangered species. Pursuant to Section 7 of the ESA, the Corps has notified the U. S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) about the proposed project. The USFWS has provided a current species list of plants, animals, and habitats subject to the requirements of the ESA that they believe may occur within the area of the proposed project, and the NMFS provided the Corps with written habitat and species impact concerns. The species lists are included as a part of Appendix C of this EA. Although no impacts are expected to occur to endangered, threatened, or proposed species, a brief Biological Assessment (BA) was prepared for listed species (Appendix B). See 50 C.F.R. § 402.12(k); 50 C.F.R. § 402.14(b) (“A Federal Agency need not initiate formal consultation if, as a result of the preparation of a [BA]...the Federal Agency determines, with the written concurrence of [USFWS and NMFS], that the proposed action is *not likely to adversely affect* any listed species or critical habitat”) (emphasis added). If either the USFWS or the NMFS does, on the other hand, identify impacts, the Corps will proceed with consultation as necessary, and this Environmental Assessment and the accompanying FONSI will be reevaluated prior to the award of the contract to construct the project.

## **Clean Air Act of 1977, as amended (1990), (42 U.S.C. 7401 *et. seq.*)**

The purpose of the Clean Air Act (CAA) is to protect and enhance the Nation’s air quality by regulating emissions of air pollutants, and to promote public health and welfare and the productivity of the population. Under the CAA, the administrator of the U.S. Environmental Protection Agency (EPA) has established a set of National Ambient Air Quality Standards (NAAQS), but the primary responsibility for the prevention and control of air pollution is left to the states. The pollutants of main concern for the NAAQS include the following: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter smaller than 10 microns in diameter (PM<sub>10</sub>). The EPA designates all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) that of the NAAQS. In addition, there are also “maintenance” areas, which include former nonattainment areas that have attained the NAAQS. For areas where the NAAQS are in nonattainment, the state must include measures in the State Implementation Plan (SIP), which will achieve the standards as expeditiously as possible.

Section 176 of the CAA prohibits federal agencies from engaging in any activity that does not conform to the most recently EPA-approved SIP’s purpose of attaining and maintaining the NAAQS. The “North Dock Handicap Access Ramp Project” lies within the Bay Area Air Quality Management District’s (BAAQMD) jurisdiction. The BAAQMD consists of seven counties: Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara and Napa. Presently the County of Marin, wherein lies Sausalito, is in attainment of all the NAAQS, except for ozone. Although the project area lies within an attainment area, the CAA *Amendments of 1990* require that any federally funded project must comply (i.e. complete an analysis) with the air quality standards and regulations that have been established by federal, state, and local regulatory agencies, unless an exemption applies to the proposed action.

The EPA’s general conformity regulations apply only to “major” sources of emissions. 58 Fed. Reg. 63,229 (November 30, 1993). This limitation appears in the regulations in the form

of tonnage thresholds of emissions, below which the conformity of federal action is presumed. See 40 C.F.R. §§ 51.853 (b)(1), (c)(1), (g)(2). The regulations also identify certain categories of government action, such as routine maintenance and repair activities, that are exempt from the conformity rule because the emissions increases they produce, if any, are de minimis. See C.F.R. §§ 51.853(c)(2), (c)(3); 58 Fed. Reg. 63,229 (November 30, 1993) (applying conformity requirements to de minimis actions would generate “vast numbers of useless conformity statements”).

The Corps has determined that the proposed action for the “North Dock Handicap Access Ramp Project” is exempt from preparing a “project conformity analysis” or “conformity determination” because this project falls both within the general exemption for de-minimis emissions, 40 C.F.R. § 51.853(c)(1); see 58 Fed. Reg. 63,229 (November 30, 1993) (“[a]ctions that a federal agency recognizes as clearly de minimis...do not require a positive conformity determination [because they] are exempt from the rule...”), and the specific exemption for “routine maintenance and repair” noted at 40 C.F.R. § 51.853(c)(2)(iv).

### **Magnuson-Stevens Fishery Conservation and Management Act**

Amendments to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) in 1996 (16 U. S. C. 1801 *et. seq.*) require consultation between NMFS and federal agencies on activities that may adversely impact Essential Fish Habitat (EFH) for those species managed under a fishery management plan (FMP). The MSFCMA defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” In written correspondence with the Corps, NMFS stated “the project site is located within an area identified as EFH for various life stages of fish species [managed under] the Pacific Groundfish FMP (1994), the Coastal Pelagics FMP (December 1998), and the Pacific Coast Salmon FMP (July 1997)” (Appendix C). The project site is found within essential fish habitat, but it does not constitute the entire habitat. The proposed plan occupies about 3,000 square feet (0.07 acre) of bay water, which is a fraction of the available habitat provided by adjacent waters.

The Pacific Groundfish FMP consists of over 82 species of fish that typically live on or near the bottom of the ocean. This FMP includes fish species such as the brown rockfish, starry flounder, leopard shark, English sole and Sand sole. The brown rockfish is commonly found around wharf pilings and rocky areas in shallow water (as well as in areas out to about 180 ft.). The construction area is mud bottomed, which reduces the chances of impacting brown rockfish in the area. Construction could disturb local habitat for a short time period, but the additional pilings created with the dock construction may create more habitat. Based on muddy substrate and bay location of the proposed project site, the starry flounder, leopard shark, spiny dogfish, English and sand soles could all inhabit the construction area (Squire 1977). However, because these species are mobile, and the majority of this bay area is not under construction, these fish can avoid the construction site during the construction phase.

The Coastal Pelagics FMP consists of fish species that reside in the water column anywhere from the surface to 1,000 meters deep. This FMP includes fish species like northern anchovy and Pacific sardine. Both northern anchovy and Pacific sardine are typically found in tightly packed schools nearshore and very near the ocean surface (Squire 77). These fish could inhabit the construction area, but they too are highly mobile and would also be able to avoid the construction area.

The Pacific Coast Salmon FMP consists of fish species such as the Chinook salmon. Chinook salmon are an anadromous species that pass through the Sacramento River drainage to the

California coastline. These species are addressed in the Biological Assessment section of this EA (Appendix B).

### **Marine Mammal Protection Act of 1972**

The Marine Mammal Protection Act of 1972 (MMPA), as amended and reauthorized, requires that the USFWS and the NMFS protect and manage marine mammals and their products. NMFS is the primary authority for implementing the act when seals and sea lions may be affected.

Harbor seals, Gray whales, and California sea lions are the only marine mammals known to inhabit Richardson Bay. According to the Marine Mammal Center, very few individuals are present in the Bay in June and July, which consequentially would be the best time for construction. Outside of June and July, construction during the primary Harbor seal pupping period (April/May) should be avoided. Construction, especially pile driving, should halt if Gray whales are sighted in the area, and surveys should be conducted to insure their absence. No significant impact on California sea lions is anticipated because they do not have breeding and pupping areas in Richardson Bay. However, care should be taken if sea lions are found in the area (per. comm. Kathy Zagaebski—please see Appendix B for expanded marine mammal explanation).

### **Noise Ordinance and Control**

It is anticipated that increased noise from construction would be limited both temporally and by location. As mentioned, the northeastern shore of Sausalito is heavily developed and experiences regular use by recreational and commercial vessels. Noise emissions from the short construction phase of the proposed project would not likely considerably exceed the background noise of neighboring marinas and associated boat traffic.

### **Cultural Resources**

Numerous laws, Executive Orders, and Presidential Memoranda have been passed to help protect and preserve the nation's archaeological and historic resources. The proposed project is slated to occur entirely on, in, and over bay water. Therefore, it is not expected that any cultural resources would be impacted. Should any materials of historic or archaeological interest be discovered during any stage of the project, all work would cease. A qualified U.S. Army Corps archaeologist would then assure that all appropriate actions are taken before the project is cleared to proceed.

### **Environmental Impacts**

#### **Organization**

This section covers the potential effects to specific resources should the proposed project be constructed in any of its alternative forms. These effects include: direct, indirect, cumulative, short-term, beneficial and adverse. Table 1 and 2 cover the attributes, magnitudes, and impact mechanisms of some of the major ecological and socioeconomic effects possible if the proposed project is constructed.

**Tables: Environmental Impacts**

KEY: Primary (Direct): P                      MAGNITUDE: Negligible: N  
 Secondary (Indirect): S                      Moderate: M  
 Temporary: T                                      Large: L  
 Continuing: C

**Table 1: Ecological Impacts**

Ecological Attribute	Beneficial	Adverse	Magnitude	Effect Mechanism
<b>Air Quality</b>		PT	N	Equipment/Construction emissions.
<b>Water Quality</b>		PT	N	Increased turbidity.
<b>Noise</b>		PT	N	Construction and pile driving.
<b>Wildlife/Habitat</b>		PC	N	Shading and filling.
<b>Wildlife/Habitat</b>	SC		N	Increased diversity and productivity.
<b>Wetlands</b>	—	N/A	—	No wetlands on project site
<b>Threatened and Endangered Species</b>		PT	N	Noise and turbidity during construction.
<b>Threatened and Endangered Species</b>		SC	N	New fill and obstacle.
<b>Essential Fish Habitat</b>	—	N/A	—	No water or substrate essential to fish spawning, breeding, feeding, or growth to maturity occurs at the project site.
<b>Hydrology (floodplain value)</b>	—	N/A	—	Project and construction would occur entirely on or in water.

**Table 2: Socioeconomic Impacts**

Socioeconomic Issues	Beneficial	Adverse	Magnitude	Effect Mechanism
<b>Growth Inducement</b>		C	N	No growth expected.
<b>Transportation</b>		SC	N	Increased public use.
<b>Recreation</b>	SC		L	Increased public access in an area lacking such facilities.
<b>Cultural Resources</b>	—	N/A	—	No impact anticipated.
<b>Aesthetics</b>		PT	N	Construction equipment and increased turbidity.
<b>Energy</b>	—	N/A	—	No impact anticipated.
<b>Economics</b>	SC		M	Increased public use.
<b>Health &amp; Safety</b>	—	N/A	—	No impact anticipated.

### **Local Area Concerns**

Construction activities, especially pile driving, are expected to have only short-term and localized adverse effects on water and air quality. The small number of piles required for the project (<20) can be driven in less than one week and all other components of the proposed project (floating dock and gangways) would be constructed off site and hauled in subsequent to driving the necessary number of piles. The entire project site is well under one half of one acre in total size. The impact to aesthetic value would be unremarkable. The project area is surrounded by commercial marinas and associated vessels in addition to numerous recreational watercrafts of all sizes.

A reasonable concern falls on the prospect of pile driving, which can have adverse effects on fish. For example, construction of the new Benicia Bridge was halted when an on site biologist discovered that the shock waves from pile driving were killing fish. But, the piles being driven for the bridge were 8 feet in diameter (the biggest piles Cal Trans has dealt with) and they were being driven into solid rock. Cal Trans has never noticed dead fish resulting from pile driving before, even when working with the expansion of the San Mateo Bridge (Oakland Tribune, 6/3/02). Presumably, smaller diameter driving piles have less impact on fish life than larger piles. With this in mind, the biggest piles this dock expansion will use are 20 inches in diameter, and the poles will be approximately 55 ft. below the water-mud line before entering bedrock.

As indicated, the proposed project would occur entirely on property owned and operated by the Department of the Army. On land, the adjacent Army facilities are separated from homeowners by a major thoroughfare, Bridgeway Boulevard. Therefore, there are no concerns from adjacent homeowners are anticipated. Neighbors immediately south of the project area have commercial fishing interests and have expressed no concern over the proposed project construction phase or future use.

### **Direct Impacts**

Construction would have some short-term, localized impacts (e.g. increased turbidity, noise, boat traffic), but these are not expected to be significant. Increased fill in the Bay, resulting from pilings, and decreased surface area for oxygenation, would be minimal and are likely to have no significant impact on the surrounding environment.

### **Indirect Impacts**

There would be a slight increase in boat traffic within the vicinity with completion of the project as user groups learn about availability of the facilities. However, the proposed project is a small dock and can only accommodate a few boats at a time. The proposed project would have no effect on local population density or growth rate. No effects on water quality are anticipated and little or no effect on air or air quality is expected (most of the boats that will use the facility will be sailboats). Aside from an increase in shaded shallow bay habitat, ecosystem effects would be unnoticeable subsequent to initial effects resulting from construction.

### **Cumulative Impacts**

It is possible that the building of this dock and ramp may encourage future construction in the area. However, considering the recent past, quick expansion is unlikely (refer to the Affection Environment Section of this EA, p. 3).

## **Sediment Disruptions**

As discussed, the construction phase of this project is likely to increase turbidity, and therefore bay water quality, in the short term, as a result of sediment disruption due to pile driving. This disturbance is not likely to have any lingering effects on wildlife, habitat, or aesthetics. While studies on sediments immediately below the project area are lacking, recent studies conducted within one half of one mile from the project site are available and find that there are “no concentrations of concern” following full testing of chemical, conventional and biological analyses of sediments (Pacific EcoRisk 2002, pg. 20, attached as Figure 7).

## **Wildlife and Habitat Impacts**

### **Threatened and Endangered Species List**

Through written correspondence, the USFWS sent two lists of endangered, threatened and species of special concern that occur within San Francisco County and USGS 7.5 Quadrant San Francisco North. These species have been divided into two groups in this EA: species not likely to be impacted by the project which are listed in Appendix A, and species that may be impacted, which are elaborated on in a Biological Assessment (Appendix B).

### **Species Not Likely to be Impacted by the Proposed Project (Appendix A)**

The fact that the project is taking place entirely on, over and/or in saltwater automatically removes any threat to all terrestrial plants<sup>1</sup>; terrestrial<sup>2</sup> and flying mammals<sup>3</sup>; reptiles<sup>4</sup> and amphibians<sup>5</sup> limited to freshwater or terrestrial environments; insects<sup>6</sup>; and bird species generally restricted to riparian and other land based habitats<sup>7</sup>. The relatively shallow, mud-bottom, and slack water condition of Richardson Bay, and the project site in particular, eliminate any threat to very large marine mammals<sup>8</sup>; marine invertebrates restricted to rocky substrates<sup>9</sup>; bird species generally limited to open ocean waters<sup>10</sup>; and reptiles generally limited to open ocean waters<sup>11</sup>. Please refer to Appendix A for the complete list of species that are not likely to be impacted by the project. These species are organized by the numbered categories stated above.

## **Habitat Considerations**

### Arroyo Corte Madera del Presidio Watershed

As addressed in the Biological Assessment (Appendix B), the Arroyo Corte Madera del Presidio Creek Watershed provides essential habitat for species that may occur in the project vicinity, especially anadromous fish. With this in mind, a primary concern should be the possibility of disturbing the watershed bay tributaries and associated species. The closest major tributary enters the bay approximately one-mile Northwest of the project site. Presumably, this distance from the tributary and small scale of construction for the proposed project eliminates the possibility of any direct impacts on the Corte Madera System. Anadromous fish in transit to or from the Arroyo Corte Madera del Presidio System could possibly enter project site, but these fish have the ability to swim away from disturbance. Therefore, this project should not have a direct impact on a fishes’ ability to enter and exit the tributary.

### Essential Fish Habitat – Eelgrass (*Zostera marina*)

Informal consultation with NMFS generated only one possible concern for potential impacts of the proposed project to EFH. Eelgrass beds are known to occur within Richardson Bay and provide important habitat for numerous bird, fish, and invertebrate species, especially as

feeding, spawning, and rearing grounds. Information on the historical distribution of eelgrass in the San Francisco Bay is scarce, although it is generally believed that the San Francisco Bay once contained vast beds of eelgrass. Today, eelgrass distribution is limited by numerous factors including availability of sunlight, tidal reach, salinity, and physical disturbance (Dennison et al. 1985).

There is no sign of eelgrass presence in the proposed project site. High turbidity (visibility < 2 ft.), heavy commercial and recreational boat use of the area, and the relatively deep-water conditions (<8 ft.) make the area unsuitable eelgrass habitat. Numerous dives conducted by Army Corps personnel in and around the proposed project site confirm that eelgrass has not been seen in or around the proposed project site (per comm. Corps personnel). Dive logs reflecting activities conducted in underwater operations within the proposed project area are available from the U. S. Army Corps of Engineers for 18-Sept-01, 2-Jan-02, 20-May-02, and 4-Jun-02.

### Critical Habitat

The following list of salmon species are believed by the USFWS to have specific geographic area(s) that are essential for the conservation of the species and that may require special management and protection within the San Francisco North USGS 7.5 minute quadrangle map.

- Winter-run Chinook salmon
- Central Valley Spring-run Chinook
- Central Valley fall/late fall-run Chinook salmon
- Central California Coastal Steelhead
- Central Valley steelhead
- Coho salmon Central California Coast

Critical habitat would not be jeopardized or adversely modified at the project site, since this site is not essential or even particularly useful for the conservation and continued existence of these species. As described, the project site is a heavily developed shoreline that experiences heavy public and commercial use. This is not ideal habitat for salmon, although these species likely do traverse the project vicinity on their way to and from spawning grounds. Given the scope of the proposed project any modification to habitat caused by the construction, installation, or use of the proposed project would not likely contribute to consequential loss or modification of critical habitat. However, as recommended by the NMFS, it would be advisable to enter the construction phase during times of minimal salmon/steelhead migration.

### **Conclusion**

Based on the findings of this Environmental Assessment (EA), the proposed construction of the North Dock Handicap Access Ramp will not cause any significant negative environmental impacts on the quality of the human environment. Adding a relatively small dock and access ramp to an already commercialized section of the Richardson Bay would not significantly alter habitat for any listed species or species of concern. The environmental affects of the proposed construction would be minor, consisting of temporary underwater disturbances, increases in local noise, and impacts on local air quality. In conclusion, because the proposed project would not create any significant negative environmental impacts, no Environmental Impact Statement (EIS) will be prepared.

## Preparers

Tyson Eckerle  
Biologist  
U.S. Army Corps of Engineers  
U.S. Army Corps of Engineers  
333 Market Ave, 7<sup>th</sup> Floor  
San Francisco CA 94105-2197  
(415) 977-8124

Gilbert Castellanos  
Biologist  
  
333 Market Ave, 7<sup>th</sup> Floor  
San Francisco CA 94105-2197  
(now employed by the U.S. Environmental  
Protection Agency, Washington D.C.)

## List of agencies and persons contacted:

Liz Lewis  
Creek Naturalist  
County of Marin, California  
Department of Public Works  
P. O. BOX 4186  
San Rafael, CA 94913-4186  
(415) 499-6528

Dan Artho  
Environmental Manager  
U. S. Army Corps of Engineers  
CESPK-PD  
1325 J Street  
Sacramento, CA 95814-2922  
(916) 557-7723

Mark Helvey  
Habitat Conservation Division  
Southwest Regional Office  
National Marine Fisheries Service  
777 Sonoma Ave  
Santa Rosa, CA 95404  
(707) 575-6050

Gary Stern  
San Francisco Bay Team Leader  
Southwest Regional Office  
National Marine Fisheries Service  
777 Sonoma Ave  
Santa Rosa, CA 95404  
(707) 575-6060

Kathy Zagzebski  
Stranding Manager  
The Marine Mammal Center  
Marin Headlands  
1065 Fort Cronkhite  
Sausalito, CA 94965  
(415) 289-0184

Carole d'Alessio  
Co-Chair  
Board of Directors  
Friends of Corte Madera Creek  
P. O. BOX 415  
Larkspur, CA 94977  
(415) 457-6045

Robert Leidy  
Wetland Science and Field Program Manager  
U.S. Environmental Protection Agency  
Region 9 Office  
75 Hawthorne Street  
San Francisco, CA 94105  
(415) 972-3463

Dave Wooten  
Fish and Wildlife Biologist  
U. S. Fish and Wildlife Service  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825  
(916) 414-6530

Chris Bandy  
Manager  
U. S. Fish and Wildlife Service  
Antioch Dunes National Wildlife Refuge  
Alameda Wildlife Refuge  
Alameda County, CA  
(510) 521-9624

Harry Mossman  
Biological Technician  
U. S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
2800 Cottage Way  
Sacramento, CA 95825  
(916) 414-6674

Paul Pacheco  
Owner/Operator  
Angel Island – Tiburon Ferry  
21 Main Street  
Tiburon, CA 94920  
(415) 435-2131

Glen Carlos  
Assistant Public Works Engineer  
Berkeley Engineering Division  
2180 Milvia Street  
Berkeley, CA 94704  
(510) 981-6401

Bill Price  
Richardson Bay Regional Authority Administrator  
Richardson Bay Regional Agency  
3501 Civic Center Dr., # 325  
San Rafael, CA 94903  
(415) 971-3919

Edward Aguirre  
U. S. Army Corps of Engineers  
Real Estate Division  
1325 J Street  
Sacramento, CA 95814-2922  
(916) 557-6875

Herb Meyer  
Commodore  
Bay Area Association of Disabled Sailors  
P. O. BOX 77212  
San Francisco, CA 94107  
(415) 281-0212

Jay Hawkins  
U. S. Army Corps of Engineers  
Construction Services  
2100 Bridgeway Boulevard  
Sausalito, CA 94965  
(415) 331-0404

Henry Macner  
U.S. Army Corps of Engineers  
Chief, Navigation Section  
2100 Bridgeway Boulevard  
Sausalito CA, 94965  
(415) 332-0334,

Chris Gallagher  
U.S. Army Corps of Engineers  
Park Manager, Bay Model Visitors Center  
2100 Bridgeway Boulevard  
Sausalito CA, 94965

(415) 332-3871

Billy Martinelli

Captain  
Gaselight Charters  
60 C Libertyship Way  
Sausalito, CA 94965

Ian McIntyre

Captain  
Hawaii Chieftain  
3020 Bridgeway #256  
Sausalito, CA 94965

**References:**

Dennison, W.C. 1985. Role of daily light period in the depth distribution of *Zostera marina* (eelgrass). *Marine Ecol. Prog. Series*. 25: 51-61.

Gangway Design & Planning Guide. Marina Ramp Rider. Marina Accessibility Products Inc. November 2001. [www.marina-acces.com](http://www.marina-acces.com).

Hanson, L.A. 2000. Plants of Shallow Subtidal Habitat and Tidal Flats (with an emphasis on eelgrass) in Goals Project. Baylands Ecosystem, Species and Community Profiles: Life histories and environmental requirements of key plants, fish and wildlife. Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P.R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland, California.

Holstege, Sean. June 3, 2002. New Bay Area spans can kill fish Caltrans acts to prevent deaths. *The Oakland Tribune*. <http://www.oaklandtribune.com>

Rich, Alice A. Phd. 2000. Fishery Resources Conditions of the Corte Madera Creek Watershed, Marin County, California. A.A. Rich and Associates. Fisheries and Ecological Consultants.

Rich, Alice A. 1995. Feasibility Study to Rehabilitate the Fishery Resources of the Arroyo Corte Madera del Presidio Watershed, Mill Valley, California. A.A. Rich and Associates. Fisheries and Ecological Consultants.

Squire, James L. Jr. and Susan E. Smith. 1977. Angler's Guide to the United States Pacific Coast. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service.

The US Army Corps of Engineers Corte Madera Flood Control Project - alternative screening conference document - Draft 2. 2000.

*Federal Register* for Friday, Feb 4, 1994. Dated: January 31, 1994. Mollie H. Beattie, Director, Fish and Wildlife Service. [FR Doc. 95-2546 Filed 2-3-94; 8:45 am

Pacific EcoRisk. 2002. Results of the Sediment Characterization Sampling and Analysis for Marina Plaza Harbor. Prepared by Pacific EcoRisk, 835 Arnold Dr., Suite 104, Martinez, CA 94553

## **Figures**

**Figure 1: Project Location Map**

**Figure 2: Project Vicinity Map**

**Figure 3: Alternative A (Preferred Alternative)**

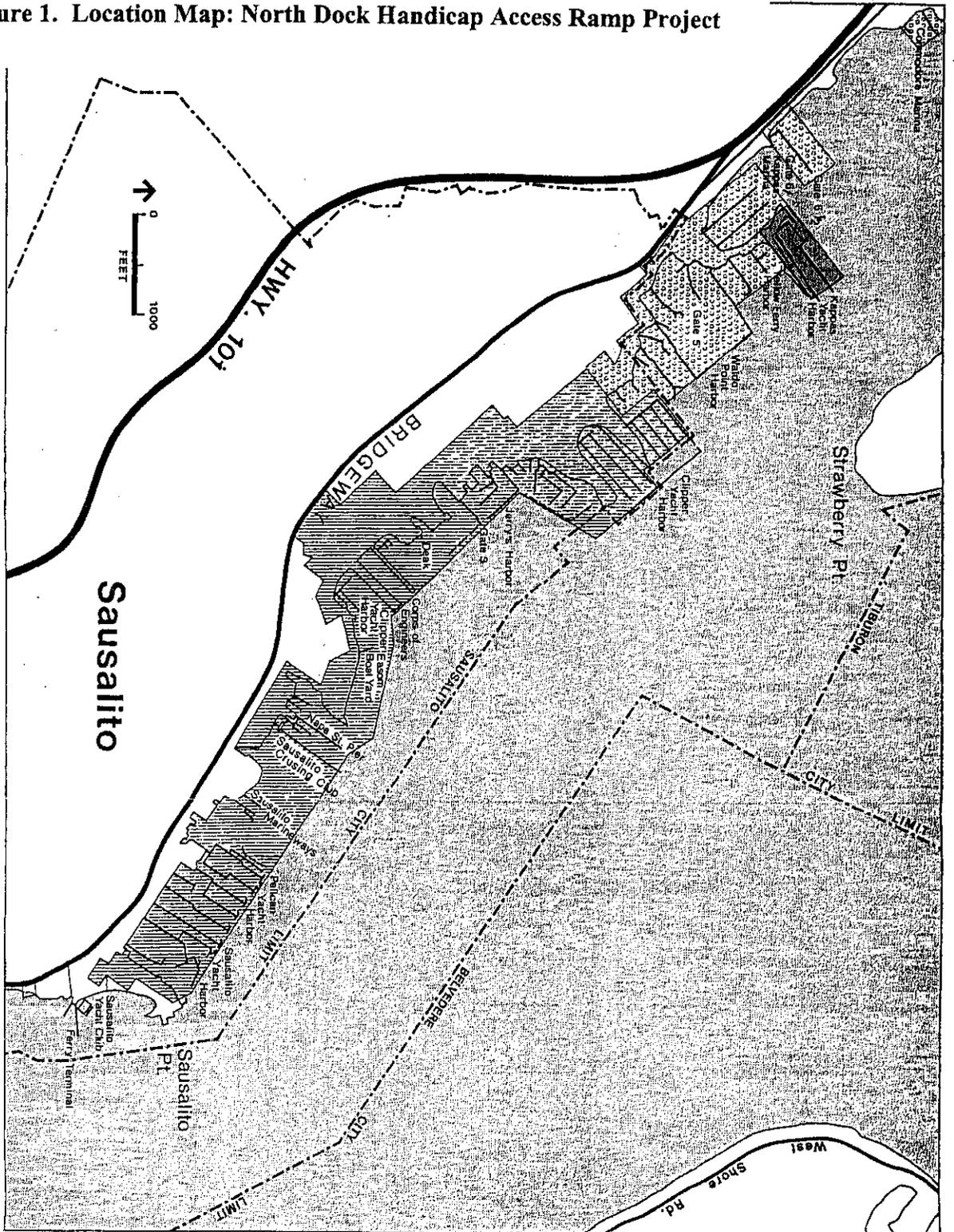
**Figure 4: Alternative B**

**Figure 5: Alternative C (From Marina Accessibility Products Inc.)**

**Figure 6: Aerial Photograph of Marina Area (Project Site)**

**Figure 7: Hazardous/Toxic Waste Tests from a Nearby Site**

Figure 1. Location Map: North Dock Handicap Access Ramp Project



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- WATER USE AREAS**
-  MARINE FACILITIES
  -  HOUSEBOAT
  -  MARINA FACILITIES
  -  OPEN WATER

**PLAN MAP 2**  
Northern Sausalito

**RICHARDSON BAY**  
SPECIAL AREA PLAN

Figure 2. Project Vicinity Map

Plan Map 4  
Central Bay North

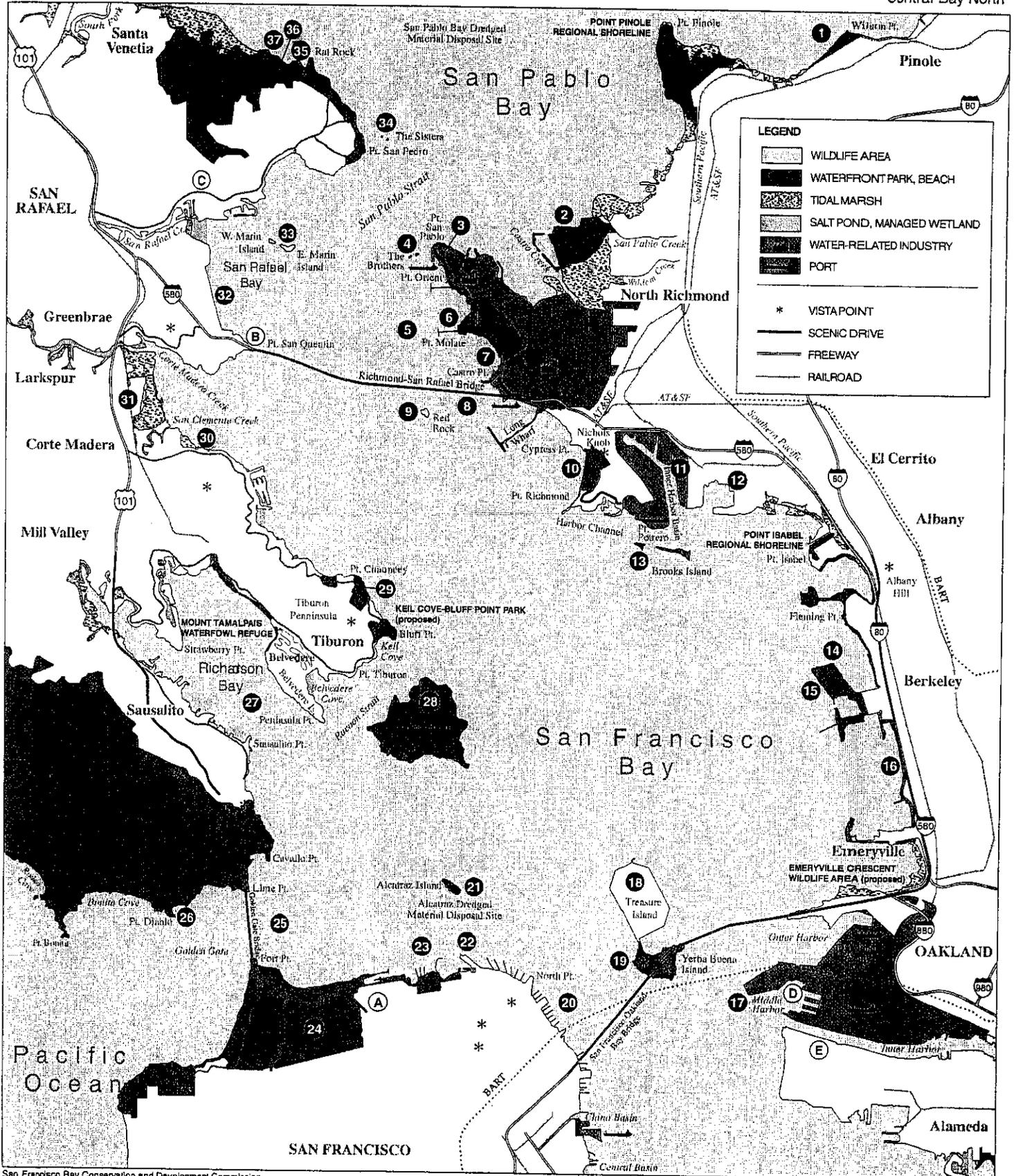
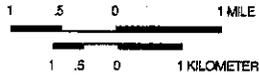


Figure 3. Alternative A Plan

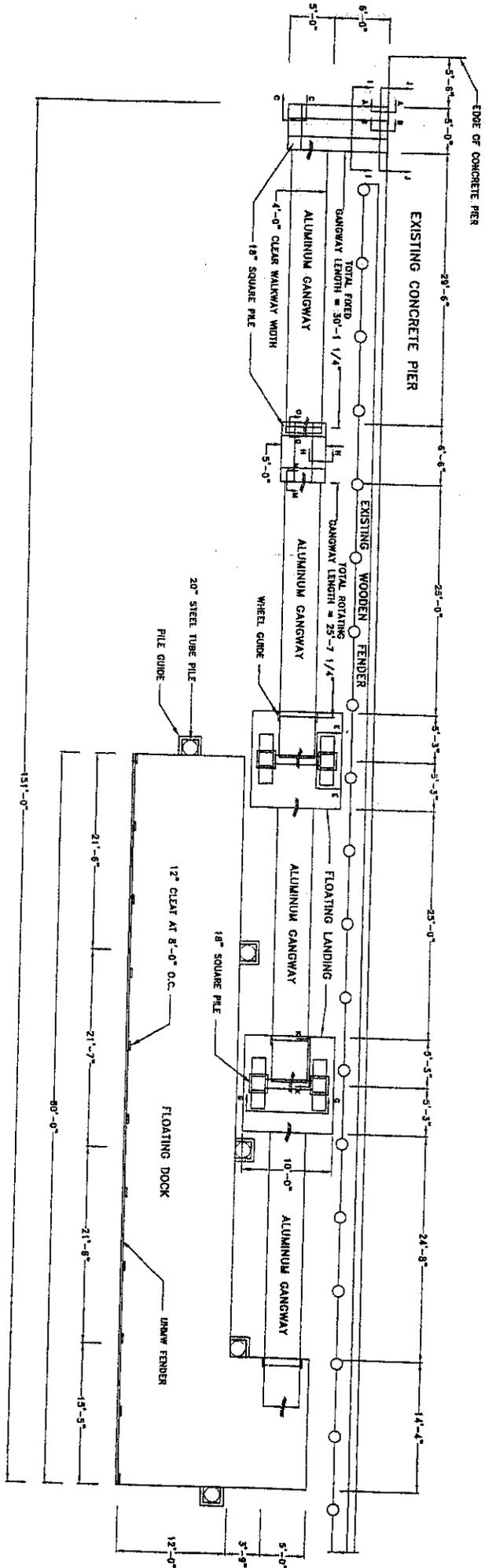
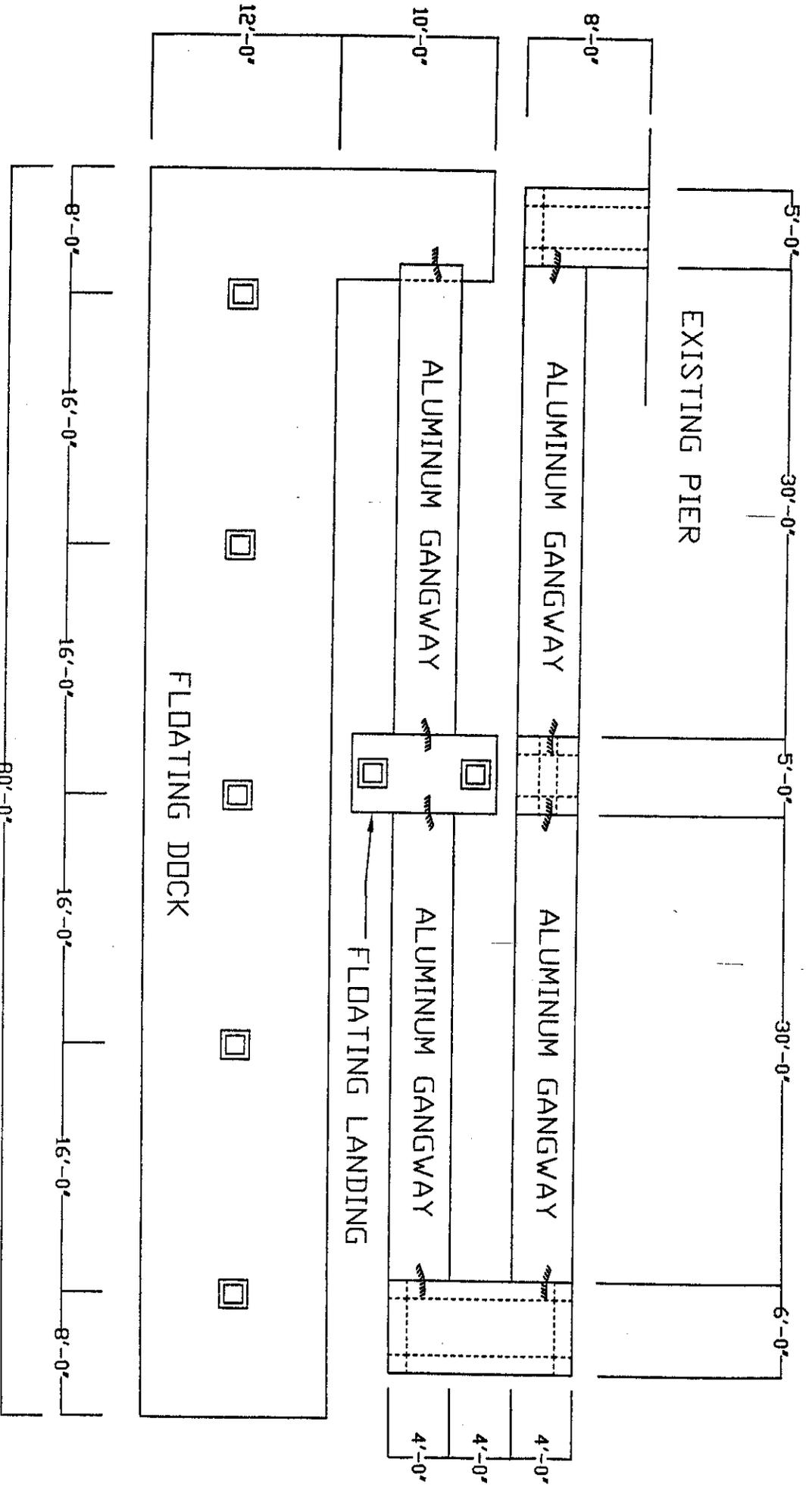


Figure 4. Alternative B Plan



PLAN

Figure 5. Alternative C Plan: from Gateway Design and Planning Guide

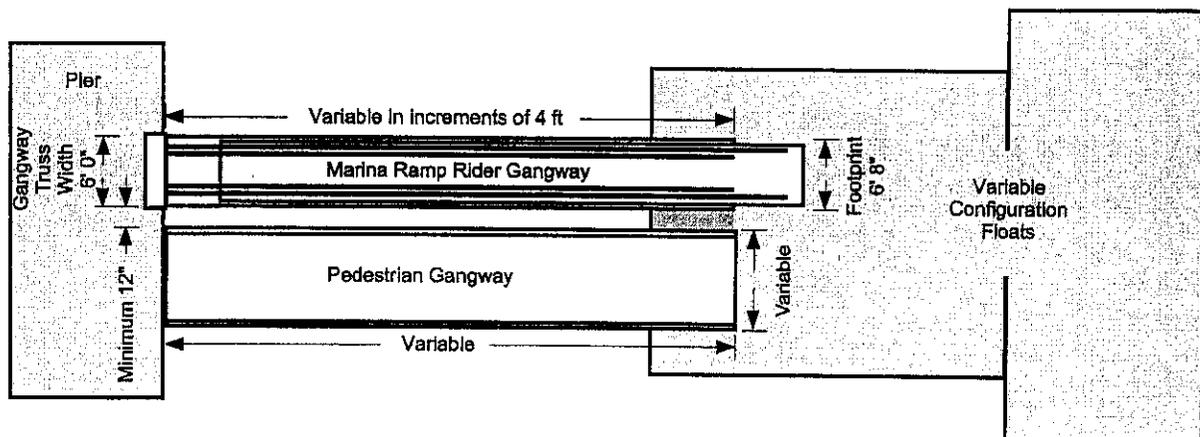
## 2 Gangway Width & Placement

Elevator safety codes require that a Ramp Rider gangway cannot be used as a pedestrian gangway, due to the need to provide for a constantly unobstructed path between the pier and the floating dock for use during emergencies. A Ramp Rider gangway also cannot be attached to an adjacent pedestrian gangway.

**Gangway Truss Width:** The overall width of the Ramp Rider gangway, truss to truss, is 6' 0".

**Lower Landing Footprint Width:** The gangway roller guides (which attach to the floating dock and guide the gangway movement across the dock) extend out by an additional 4" on each side of the gangway, bringing the overall gangway footprint width to 6' 8" at the lower landing.

**Adjacent Gangway:** To allow for installation and servicing requirements, a Ramp Rider gangway must not be less than 12" (measured from the outside of the gangway truss) from an adjacent gangway.



San Francisco, California, United States 10 Jul 1993

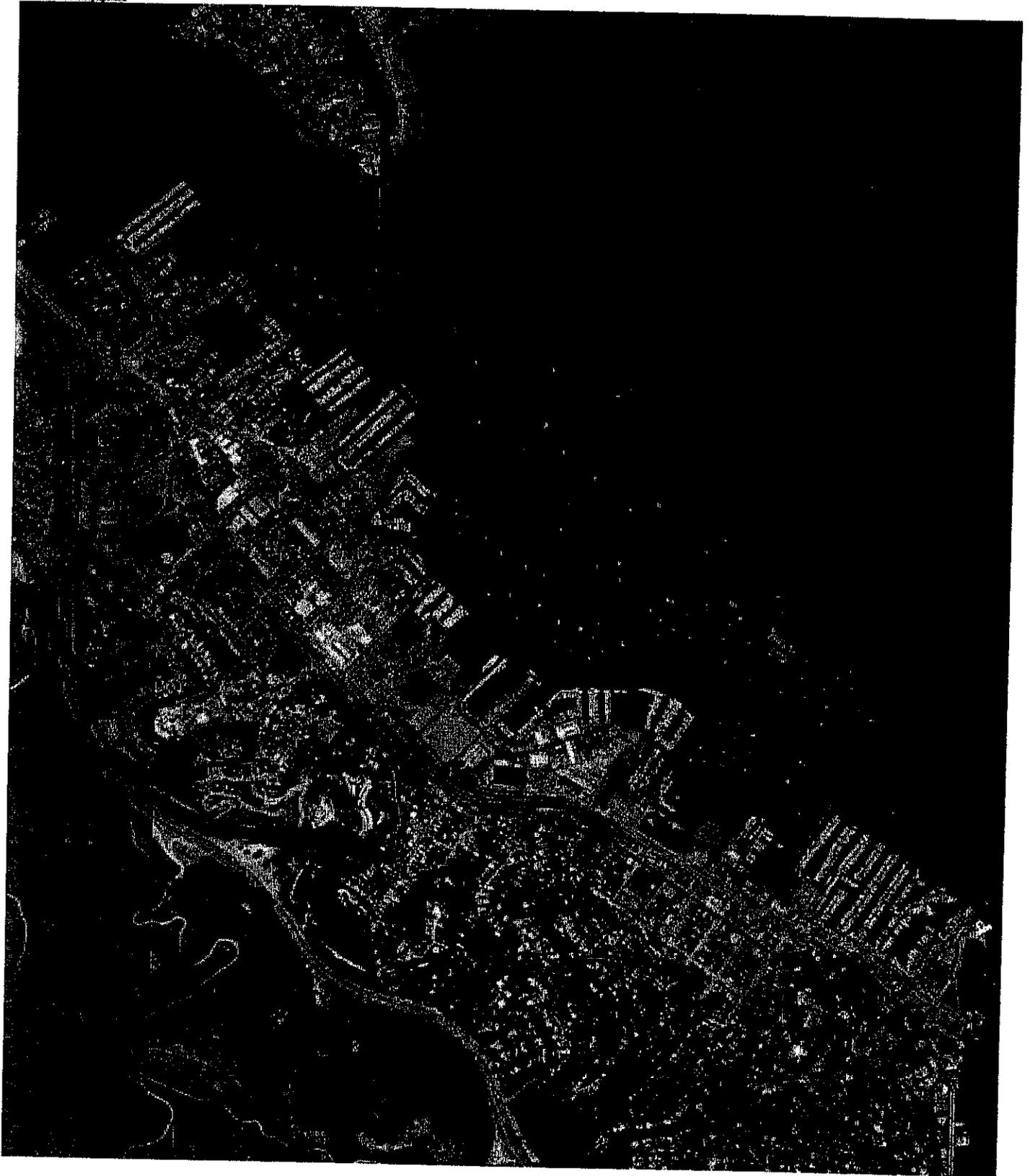


Figure 6: Aerial Photograph of Marina Area (Project Site)

## 5.0 PROPOSED SUITABILITY DETERMINATIONS

The MPH site composite, S01, was submitted for full chemical and conventional analyses and biological testing. Results from analyses of the composite sample indicated that analytical chemistry results were generally within the concentration ranges for San Francisco Bay.

Results from the amphipod and polychaete solid phase bioassays showed no evidence of increased mortality in test sediments compared to reference sediments. Results of water-column toxicity bioassays of the sediment elutriates indicated that narrative water quality limits would be met for unconfined aquatic disposal.

On the basis of the results of the chemical, conventional, and biological analyses for sediments, the following suitability determinations listed in Table 5-1 are proposed.

**Table 5-1 Proposed suitability determinations for disposal of dredged material from the Marina Plaza Harbor**

Site ID	Testing	Chemistry	Bioassays	Disposal Recommendation
				In-Bay
S01	ITM	No concentrations of concern	Passed	SUAD

ITM – Inland Testing Manual

SUAD – Suitable for unconfined aquatic disposal

**Figure 7. Near-by Sediment Tests (1/2 mile from project site)**

## Appendix A

### Species not likely to be affected by the proposed project

#### <sup>1</sup> PLANTS

---

*Abronia umbellata* ssp. *umbellata* - pink sand-verbena (SLC)  
*Arabis blepharophylla* - coast rock-cress (SLC)  
*Arctostaphylos hookeri* ssp. *franciscana* - San Francisco manzanita (SC)  
*Arctostaphylos hookeri* ssp. *ravenii* - Presidio (=Raven's) manzanita (E)  
*Arenaria paludicola* - marsh sandwort (E)  
*Astragalus nuttallii* var. *virgatus* - Nuttall's milk-vetch (SLC)  
*Astragalus tener* var. *tener* - alkali milk-vetch (SC)  
*Atriplex californica* - California saltbush (SLC)  
*Castilleja affinis* spp. *affinis* - Coast Indian paintbrush (SLC)  
*Castilleja ambigua* ssp. *ambigua* - salt marsh owl's clover (=johnny-nip) (SLC)  
*Castilleja exserta* spp. *Latifolia* - purple owl's clover (=wideleaf Indian paintbrush) (SLC)  
*Chenopodium californicum* - California goosefoot (SLC)  
*Chorizanthe cuspidata* var. *cuspidata* - San Francisco Bay spineflower (SC)  
*Cirsium andrewsii* - Franciscan thistle (SC)  
*Cirsium occidentale* var. *compactum* - compact cobweb thistle(SC)  
*Clarkia davyi* - Davy's clarkia (SLC)  
*Clarkia franciscana* - Presidio clarkia (E)  
*Collinsia corymbosa* - Round-headed Chinese houses (SC)  
*Croton californicus* - California croton (SLC)  
*Eriogonum caninum* - Tiburon buckwheat (SLC)  
*Erysimum franciscanum* - San Francisco wallflower (SC)  
*Fritillaria liliacea* - fragrant fritillary (=prairie bells) (SC)  
*Gilia capitata* ssp. *chamissonis* - San Francisco (=bluehead, Chamisso's, dune) gilia (SC)  
*Gilia millefoliata* - yarrow-leaf (=manyleaf, dark-eyed) gilia (SLC)  
*Grindelia hirsutula* var. *maritima* - San Francisco gumplant (SC)  
*Helianthella castanea* - Diablo helianthella (=rock rose) (SC)  
*Hesperolinon congestum* - Marin dwarf-flax (=western flax) (T)  
*Horkelia cuneata* ssp. *cuneata* - wedgeleaf horkelia (SLC)  
*Horkelia cuneata* ssp. *sericea* - Kellogg's horkelia (SC)  
*Layia carnosa* - beach layia (E)  
*Lessingia germanorum* - San Francisco lessingia (E)  
*Lillium maritimum* - coast lily (SC)  
*Linanthus grandiflorus* - large-flowered (=flower) linanthus (SC)  
*Linanthus rosaceus* - rose linanthus (SC)  
*Microseris paludosa* - marsh microseris (=marsh silverpuffs) (SLC)  
*Monardella undulata* - curly-leaved (=curlyleaf) monardella (SC)  
*Navarretia squarrosa* - skunkweed (=skunkbush) (SLC)  
*Orobanche californica* ssp. *californica* - California broomrape (SLC)  
*Piperia elegans* - coast (=elegant) rein-orchid (=piperia) (SLC)  
*Plagiobothrys chorisianus* var. *chorisianus* - Choris's (=artist's) popcorn-flower (SLC)  
*Plagiobothrys diffusus* - San Francisco popcornflower (CA)  
*Plagiobothrys reticulatus* var. *rossianorum* - Greene's popcorn flower (SC)  
*Sanicula maritima* - adobe sanicle (SC)  
*Silene verecunda* ssp. *verecunda* - Mission Delores (=San Francisco) champion (SC)  
*Sparina foliosa* - Pacific cordgrass (=California cordgrass) (SLC)  
*Stellaria littoralis* - seashore (=coast, beach) starwort (SC)  
*Tanacetum camphoratum* - dune (=camphor) tansy (SC)

*Triphysaria floribunda* - San Francisco owl's-clover (SC)  
*Triquetrella californica* - California triquetrella moss (SLC)

## <sup>2</sup> TERRESTRIAL MAMMALS

---

*Reithrodontomys raviventris* - salt marsh harvest mouse (E)  
*Sorex vagrans halicoetes* - salt marsh vagrant shrew (SC)  
*Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)  
*Zapus trinotatus orarius* - Point Reyes jumping mouse (SC)

## <sup>3</sup> FLYING MAMMALS

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*Corynorhinus (=Plecotus) townsendii townsendii* - Pacific western big-eared bat (SC)  
*Eumops perotis californicus* - greater western mastiff-bat (SC)  
*Myotis evotis* - long-eared myotis bat (SC)  
*Myotis thysanodes* - fringed myotis bat (SC)  
*Myotis volans* - long-legged myotis bat (SC)  
*Myotis yumanensis* - Yuma myotis bat (SC)

## <sup>4</sup> REPTILES LIMITED TO FRESHWATER OR TERRESTRIAL ENVIRONMENTS

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*Clemmys marmorata marmorata* - northwestern pond turtle (SC)  
*Clemmys marmorata pallida* - southwestern pond turtle (SC)  
*Phrynosoma coronatum frontale* - California horned lizard (SC)

## <sup>5</sup> AMPHIBIANS LIMITED TO FRESHWATER OR TERRESTRIAL ENVIRONMENTS

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*Rana aurora draytonii* - California red-legged frog (T)  
*Rana boylei* - foothill yellow-legged frog (SC)

## <sup>6</sup> INSECTS

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*Adela opterella* - Opler's longhorn moth (SC)  
*Cicindela hirticollis gravida* - sandy beach tiger beetle (SC)  
*Coelus globosus* - globose dune beetle (SC)  
*Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)  
*Icaricia icarioides missionensis* - mission blue butterfly (E)  
*Incisalia mossii bayensis* - San Bruno elfin butterfly (E)  
*Lichnanthe ursina* - bumblebee scarab beetle (SC)

## <sup>7</sup> BIRDS RESTRICTED TO RIPARIAN AND OTHER LAND-BASED HABITATS

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*Agelaius tricolor* - tricolored blackbird (SC)  
*Ammodramus savannarum* - grasshopper sparrow (SC)  
*Amphispiza belli belli* - Bell's sage sparrow (SC)  
*Asio flammeus* - short-eared owl (SC)  
*Athene cucularia hypugaea* - western burrowing owl (SC)  
*Botaurus lentiginosus* - American bittern (SC)  
*Buteo regalis* - ferruginous hawk (SC)  
*Chaetura vauxi* - Vaux's swift (SC)  
*Chlidonias niger* - black tern (SC)  
*Contopus cooperi* - olive-sided flycatcher (SC)  
*Cypseloides niger* - black swift (SC)  
*Dendroica occidentalis* - hermit warbler (SC)  
*Elanus leucurus* - white-tailed (=black shouldered) kite (SC)  
*Empidonax traillii brewsteri* - little willow flycatcher (CA)  
*Geothlypis trichas sinuosa* - saltmarsh common yellowthroat (SC)  
*Haliaeetus leucocephalus* - bald eagle (T)  
*Lanius ludovicianus* - loggerhead shrike

*Laterallus jamaicensis coturniculus* - black rail (CA)  
*Melanerpes lewis* - Lewis' woodpecker (SC)  
*Melospiza melodia pusillula* - Alameda (South Bay) song sparrow (SC)  
*Numenius americanus* - long-billed curlew (SC)  
*Oceanodroma homochroa* - ashy storm-petrel (SC)  
*Riparia riparia* - bank swallow (CA)  
*Selasphorus rufus* - rufous hummingbird (SC)  
*Selasphorus sasin* - Allen's hummingbird (SC)

#### <sup>8</sup> VERY LARGE MARINE MAMMALS

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*Balaenoptera borealis* - sei whale (E) (NMFS)  
*Balaenoptera musculus* - blue whale (E) (NMFS)  
*Balaenoptera physalus* - finback (=fin) whale (E) (NMFS)  
*Eubalaena glacialis* - right whale (E) (NMFS)  
*Megaptera novaeangliae* - humpback whale (E) (NMFS)  
*Physeter catodon* (=macrocephalus) - sperm whale (E) (NMFS)

#### <sup>9</sup> MARINE INVERTEBRATES RESTRICTED TO ROCKY SUBSTRATES

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*Haliotes cracherodii* - black abalone (C) (NMFS)  
*Haliotes sorenseni* - white abalone (E) (NMFS)

#### <sup>10</sup> BIRD SPECIES GENERALLY LIMITED TO OPEN OCEAN WATERS

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*Diomedea albatrus* - short-tailed albatross (E)  
*Synthliboramphus hypoleucus* - Xantus' murrelet (SC)

#### <sup>11</sup> REPTILES GENERALLY LIMITED TO OPEN OCEAN WATERS

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*Caretta caretta* - loggerhead turtle (T) (NMFS)  
*Chelonia mydas* (incl. *agassizi*) - green turtle (T) (NMFS)  
*Dermochelys coriacea* - leatherback turtle (E) (NMFS)  
*Lepidochelys olivacea* - olive (=Pacific) ridley sea turtle (T) (NMFS)

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#### Key:

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(E) Endangered - Listed (in the Federal Register) as being in danger of extinction.  
(T) Threatened - Listed as likely to become endangered within the foreseeable future.  
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service.  
(C) Candidate - Candidate to become a proposed species.  
(CA) Listed by the State of California, but not by the Fish & Wildlife Service.  
(D) Delisted - Species will be monitored for 5 years.  
(SC) Species of Concern - Other species of concern to the Sacramento Fish & Wildlife Office.  
(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.

## APPENDIX B

### **BIOLOGICAL ASSESSMENT**

December 2002

#### **ENDANGERED, THREATENED, AND PROPOSED SPECIES**

The U.S. Fish and Wildlife Service (FWS) provided the Corps with a list of endangered (E); threatened (T); proposed threatened or endangered (PT, PE); candidate (C); species of concern (SC); and species of local concern (SLC) for the project area on July 31st, 2002 (Appendix C). This list covers not only the San Francisco North Quad, in which the project is located, but contains a more extensive species list for San Francisco County.

The list for San Francisco County consists of the following: forty listed species- ten mammal species; five bird species; four reptile species; two amphibian species; nine fish species; three invertebrate species; and six plant species. It also consists of the following: one candidate invertebrate species; one de-listed mammal species; one de-listed bird species; eight species of concern mammals; twenty-three species of concern bird species; three species of concern reptile species; one species of concern amphibian species; four species of concern fish species; five species of concern invertebrate species; eighteen species of concern plant species; and seventeen species of local concern plant species. No significant impacts are expected to occur to any of the above species or their habitats from the construction of the North Dock Handicap Access Ramp.

Likewise, the list for the San Francisco North Quad, consists of the following: thirty-seven listed species- nine mammal species (eight of them are NMFS species); six bird species; two amphibian species; eleven fish species (eight are NMFS species); three invertebrate species (one is NMFS species); and six plant species. It also contains the following: two candidate fish species (both NMFS species); one candidate vertebrate species (NMFS); one de-listed mammal species; one de-listed bird species; eight species of special concern mammals; twenty-four species of special concern bird species; three species of special concern reptiles; one species of special concern amphibian species; one species of special concern fish species; five species of concern invertebrate species; and fifteen species of special concern plant species and twenty-one species of local concern plant species. Although no significant impacts to any listed or candidate species or their habitats are expected, a brief Biological Assessment was prepared for listed mammals, fish and birds who may inhabit or visit the project area.

The National Marine Fisheries Service (NMFS) provided the Corps their species list in a letter, dated August 21st, 2002. It contained one endangered, and four threatened fish species, and three Essential Fish Habitat (EFH) species (discussed within EA in the Magnuson-Stevens FCMA section).

Many websites were consulted during the formulation of this BA. The addresses for heavily used sites are included in the text for convenience.

## Marine Mammals

### Gray whale

Occasionally, gray whales (*Eschrichtius robustus*) have been seen in the vicinity of the project site. However, this is very rare. In 2000 and 2001 an unusually high number of gray whales were sighted within the San Francisco Bay, and some within Richardson Bay. Most of these were often either dying or already dead when sighted. The reason for the high number of gray whale deaths and sightings is still unknown by scientists.

Delisted in 1994, the eastern North Pacific stock of gray whales has been removed from the List of Endangered and Threatened Wildlife, as it is no longer considered endangered or threatened under the ESA. As required by the ESA, NMFS continued to monitor this gray whale population for a five-year period following delisting. The gray whale is now determined to be neither in danger of extinction, nor likely to become endangered within the foreseeable future. However, the Marine Mammal Protection Act (MMPA) protects this species.

Gray whales have incredibly sensitive hearing. Therefore, in respect to the gray whale, it is imperative to avoid pile driving if any gray whales are present. Should this species be sighted during any phase of construction, in accordance with MMPA, all construction activities would be halted and every effort made to eliminate the potential for Level A and/or Level B harassment (16 U.S.C. 1362, sec. 3). Construction would resume upon determination that gray whales are no longer in the area.

### Steller Sea Lion

Listed as threatened under the ESA in 1990 the Steller, or Northern, sea lion (*Eumetopias jubatus*) eastern U. S. Stock occurs from Alaska to the Central California Coast. This species is also listed as “depleted” under the MMPA. Despite its listing and increased protection from state and federal agencies, this stock continues to experience a steady decline in total population. Off the California coast, populations found at Año Nuevo have declined dramatically from historical levels. While Steller sea lion populations appear to have stabilized off parts of the California and Oregon Coast, the reason for its initial and continued decline elsewhere remains uncertain. In the project area there is little concern for encountering Steller sea lions since this species tends to remain offshore or haul out in unpopulated rocky and sandy areas. As discussed in the EA, the project site is heavily developed and would not serve as appealing habitat for Steller sea lions. Consultation with local experts confirms the lack of Steller sea lion presence in Richardson Bay (per comm. Kathy Zagzebski, Marine Mammal Center). Should any Steller sea lions be observed during construction, all work would halt in accordance with the MMPA, until any risk of “take” has subsided (<http://www.pinnipeds.fsnet.co.uk/species/steller.htm>).

### Guadalupe fur seal

Once thought extinct, the Guadalupe fur seal (*Arctocephalus townsendi*) now numbers only in the hundreds worldwide. Its prime habitat consists of rocky areas at the base of high cliffs and in sea caves, but the Guadalupe fur seal is rarely seen even in its primary home range along the Pacific coast from southern California down into Mexico. This species is not likely to be seen in the project area. Consultation with local experts confirms the lack of Guadalupe fur seal presence in Richardson Bay (per comm. Marine Mammal Center). Due to lack of suitable habitat and absence from the project area, the Guadalupe fur seal would not be impacted by the proposed project.

### Harbor Seal

Harbor seals (*Phoca vitulina*) are not listed as an endangered, threatened, or proposed species in either state or federal listings. Their protective jurisdiction rests with the NMFS under the Marine Mammal Protection Act. They are present in the Richardson Bay, and may be found in the immediate project area. Currently, Harbor seals utilize a floating dock as a haul out (resting) area in the Harbor between the project site and Waldo Harbor (see Figure 1). The best way to avoid negatively impacting Harbor seals is to avoid construction during their pupping time, which usually falls in April and May (per. comm. Kathy Zagzebski). If any Harbor seals are found frequenting the site during construction, the Marine Mammal Center should be consulted before construction continues. The biggest disruption created by the construction of the North Dock would result from driving the piles into the bay. This portion of the project should be done outside of pupping time. If the pile driving is done outside of the pupping season, the project should not significantly impact Harbor seals ([http://www.nmfs.noaa.gov/prot\\_res/laws/MMPA/MMPA.html](http://www.nmfs.noaa.gov/prot_res/laws/MMPA/MMPA.html); <http://www.tmmc.org/learning/education/pinnipeds/harborseal.asp>).

### California Sea Lion

California sea lions (*Zalophus californianus*) are protected by the MMPA. In the greater Bay Area they are primarily found on Pier 39 and Seal Rock, but may spend some time in the Richardson Bay. Minimal impact from construction is expected because California sea lion rookeries (breeding grounds) are located away from the San Francisco Bay. As stated in the EA, in regards to the California sea lion, the best time for construction is in June and July, when these sea lions are away from the Bay breeding. Care should be taken to make sure these sea lions are not present during pile driving, as all marine mammals are hypersensitive to noise (<http://www.tmmc.org/learning/education/pinnipeds/casealion.asp>).

### **Bird species**

#### California brown pelican

The California brown pelican (*Pelecanus occidentalis californicus*) was listed as an endangered species by state and federal agencies in 1971 and 1970 after being heavily impacted in the late 1960's and early 1970's by DDT contamination. While populations continue to increase the species remains vulnerable to reduced food supply resulting from years of over fishing, habitat encroachment through development, and from oil spills. In the project site and in northern California, brown pelicans are "fairly common to common June to November, rare to uncommon December to February and May, and very rare and irregular March and April" (DFG-Wildlife and Habitat Data Analysis Branch, 2002). Given the anticipated project construction dates of mid-March through July 2003, the project construction phase would overlap with the beginning of Richardson Bay's brown pelican season. However, the project covers a very small portion of the Bay, and brown pelicans are strong flyers that do not breed in or around the project site. Thus the proposed project poses no considerable threat to the population (<http://www.dfg.ca.gov/whdab/B043.html>).

#### California clapper rail

A state and federally listed endangered species, the California clapper rail (*Rallus longirostris obsoletu*) has been impacted through habitat encroachment, pollution, and predation by introduced species. A common resident of coastal wetlands and brackish areas around San Francisco, California clapper rails occur in high marsh vegetation, along salt marshes and

mudflats, and along tidal creeks. Strict habitat requirements preclude this species from inhabiting the proposed project site. It is not anticipated that the California clapper rail would be impacted by the proposed project (<http://www.dfg.ca.gov/whdab/B144.html>).

#### American peregrine falcon

Threatened with extinction in the late 1960's and early 1970's, mostly as a result of DDE contamination, the American peregrine falcon (*Falco peregrinus anatum*) was listed by federal and state agencies as endangered in 1970 and 1971, respectively. Federal delisting was initiated in 1995, with continuous monitoring by USFWS eventually leading to full delisting in 1999. Under state law the American peregrine falcon continues to receive full protection. The state of the population of American peregrine falcons in California is uncertain, although it likely is increasing. This species is a rare visitor to the north coastal areas of California; breeding populations are more likely to be seen along the central and southern coasts. Bay-shores and bay water do not create critical habitat for the peregrine falcon, therefore this species is not likely to be impacted by any stage of the proposed project (<http://www.dfg.ca.gov/whdab/B129.html>).

#### Common loon

The common loon (*Gavia immer*) is a common visitor to the entire coastal range of California, although it is believed to no longer breed in the state. This species receives no federal protection, but is listed as a species of concern (highest priority) in the state of California. Heavily impacted by human disturbance, especially while nesting, this species breeds in deep freshwater lakes along protected shores and on isolated islands. No impact is anticipated on this species given its infrequent use of the proposed project site, and its ability to dive or fly away from disturbance (<http://www.dfg.ca.gov/whdab/B003.html>).

#### Harlequin duck

Almost completely gone from its former breeding range along the mountain-rivers of California, the harlequin duck, (*Histrionicus histrionicus*) is now a relatively rare species in the state. A species of special concern in the state of California, this species currently has no federal status; however, the Region 5 office of the USFWS is currently leading a *status review* of the species. The harlequin duck winters along the California coast from Point Conception north, however even during this period it is rare to very uncommon. Harlequin ducks visit established feeding sites where they consume marine invertebrates within turbulent, shallow, and rocky coastal areas. Given the rare occurrence of the harlequin duck in California and its coastal habitat requirements, it is not expected that the proposed project would have any impact on this species (<http://www.dfg.ca.gov/whdab/B096.html>).

#### Elegant tern

A bird species of special concern in the state of California, the elegant tern (*Sterna elegans*) has no official federal status. This species forages just beyond the ocean break and in protected bays and lagoons where it feeds primarily on small fish species. It is rarely found any considerable distance from the coast. There is only one known nesting colony in the U.S., and it is located in Southern California. During the fall months from late July through October the elegant tern is a fairly common visitor to the San Francisco Bay and can be seen in moderate numbers. If approved on schedule, the proposed project construction and installation phase would overlap with one month of the time period elegant terns are most likely to occur within the project vicinity. However, as stated earlier, the small size of the project area limits the project's potential impacts on the elegant tern (<http://www.dfg.ca.gov/whdab/B229.html>).

### Western snowy plover

Federally listed as threatened in 1993, the western snowy plover (*Charadrius alexandrinus nivosus*) has suffered a reduction in total population over the past several decades. Key reasons for this decline include habitat loss and human disturbance, especially of nesting sites along flat, open sand beaches. They feed on a variety of invertebrates within the wet sand along the surf, on dry sand above the high tide mark, along estuary banks, and on salt marshes and salt ponds. The Pacific coast population breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. In fall and winter, the snowy plover is common on sandy marine and estuarine shores, uncommon at salt ponds, and rare at the Salton Sea. Other nesting habitats exist in the form of salt pans, dredge disposal sites, dry salt ponds, and salt pond levees. Preferred nesting sites include sand spits and dune-backed beaches. The San Francisco Bay area serves as one of the eight major breeding areas for snowy plovers in the state, however, given the lack of sandy beaches immediately within the proposed project site and heavy use by humans, this area does not provide suitable habitat for nesting, foraging, or transient use by snowy plovers. No impact is expected on this species as a result of any phase of the proposed project (<http://ecos.fws.gov/tess/frdocs/1993/93-5086.html>; [http://sacramento.fws.gov/es/animal\\_spp\\_acct/western\\_snowy\\_plover.htm](http://sacramento.fws.gov/es/animal_spp_acct/western_snowy_plover.htm)).

### California least tern

Federally and state listed as endangered in 1970, the California least tern (*Sterna antillarum [=albifrons] browni*) is one of three distinct subspecies of least tern heavily impacted by hunting for their feathers during the 19<sup>th</sup> century. For the California least tern population, habitat encroachment of salt marshes, sand dunes, and estuaries through numerous human activities has had a continuing impact. A migratory bird, the California least tern nests along the entire California coast south of Marin county from spring through the early summer months. California least terns nest colonially on sandy beaches and mudflats. These sites are always located along the estuaries, river mouths, and bays within which they can forage for several small fish species. A vast majority (>75%) of California least terns breed in or along the central and southern California coast, with limited, but important numbers also nesting in specific sites within the San Francisco Bay, although no breeding sites are known in the project vicinity.

The California least tern may occur in the project vicinity and within the project site, however the project site would provide only transitory feeding habitat. The project site and entire north shore of Sausalito is surrounded by rip-rap and fully developed shores with only limited sandy beaches heavily used by recreational and commercial interests. These rocky shores and the excessive human presence provide unfavorable habitat for these birds; however, some disruption of feeding activities is possible during the construction and installation phase of the proposed project. In addition, the entire construction and installation phase would occur over a relatively short time period, further limiting any likely effects. Should California least terns enter the project site during the construction or installation phase, they could easily escape any threat or disturbance by flying away (<http://www.dfg.ca.gov/whdab/B234.html>; <http://biology.usgs.gov/s+t/SNT/noframe/ca168.htm>).

## **Fish Species**

### Tidewater goby

The tidewater goby (*Eucyclogobius newberryi*) is a native Californian species that inhabits tidal streams, coastal lagoons, and brackish bays at the mouths of freshwater streams. Habitat encroachment, introduced species, and habitat degradation have all been a major detriment to this species, which was classified as federally endangered in 1994. Tidewater gobies are unique

because they apparently lack a true marine phase in their life history. This apparent absence of a marine phase, or affinity for very low salinity water, may account for their discontinuous distribution along the California coast. While historical and local extinctions from high flows of storm water may have reduced populations of tidewater gobies in the past, loss of habitat from stream channelization, ground water pumping that permits saltwater intrusion, and poor land management practices are modern threats to this fish species. Given this restriction to brackish water conditions, and the lack of any such ecosystems in the project site, it is determined that this species would not be impacted by the proposed project (<http://endangered.fws.gov/r/fr94527.html>).

#### Delta smelt

An endemic species with limited distribution within the Sacramento-San Joaquin Estuary, Delta smelt (*Hypomesus transpacificus*) populations vary significantly from year to year as a result of numerous factors such as water flows and changes in food availability. Delta smelt are restricted to brackish water. “They usually inhabit salinity ranges of less than 2 parts per thousand (ppt) and are rarely found at salinities greater than 14ppt” (<http://www.delta.dfg.ca.gov/data/dsstatus/dsstatus.html>). With a typical salinity at or above 20ppt, the Sausalito, Richardson Bay area does not provide suitable habitat for the delta smelt. This species would not be impacted by the proposed project.

#### Longfin smelt

A federal species of concern, the longfin smelt (*Spirinchus thaleichthys*) has a very broad home range extending from Alaska to Monterey Bay, California. The primary impact to longfin smelt populations has been changes in freshwater flows and loss of habitat in the estuaries and rivers they use for spawning. During most of the year, this species can be found throughout the San Francisco Bay system in fresh, brackish, and salt-water environments. In the fall months this species congregates from its broad range as far out as the Gulf of the Farallons to areas within Suisun Bay, Montezuma Slough, and the lower reaches of the Sacramento and San Joaquin Rivers. Because they are often found close to shore within the mid to lower water column, juvenile and adult longfin smelt could be found in the proposed project site during construction and installation. Should this longfin smelt occur within the project site during these periods, they have the ability swim to adjacent waters during any disturbance. The short time frame for completion of the proposed project further reduces threat to this species. There would be little to no impact on this species as a result of any phase of the proposed project.

#### Sacramento splittail

An entirely endemic species, the Sacramento splittail (*Pogonichthys macrolepidotus*) is confined to the Delta, Suisun Bay, Suisun Marsh, and Napa Marsh. A federally listed threatened species, the Sacramento splittail has been in major decline for most of the past several decades due to habitat alterations such as dams and water diversions. This species does not inhabit the proposed project site and would not be impacted by the proposed project ([http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1999\\_register&docid=fr08fe99-12.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=1999_register&docid=fr08fe99-12.pdf)).

#### River lamprey and the Pacific lamprey

The river lamprey (*Lampetra ayresi*), and the Pacific lamprey (*Lampetra tridentata*), are both federal species of special concern and share a similar life history. Land use patterns leading to habitat degradation are the leading cause of concern for these species. Both are anadromous and

do not feed during their migration into freshwater spawning sites. Both species have been found in coastal streams, tributaries and the San Francisco bay, but they reproduce solely in freshwater streams. California is the southernmost extent of the river lamprey's distribution, with the few accounts of its presence in state waters usually isolated to the Sacramento-San Joaquin Bay River Delta. The Pacific lamprey has a much more southerly distribution well into the rivers and tributaries of southern California. The Pacific lamprey is known to occur completely isolated within freshwater ecosystems of some states, including California; however, most populations are anadromous.

While information is not readily available as to the total distribution and basic population trends, both species populations are generally considered to be secure. Some stocks of these species are listed by the state of California as threatened, however, this does not include any species that would enter, cross, or use the project site. There are no expected impacts on these species as a result of any phase of the proposed project because of their absence from the project site (<http://elib.cs.berkeley.edu/kopec/tr9/html/fam-lampreys.html>).

### Green sturgeon

Currently a species of special concern, the green sturgeon (*Acipenser medirostris*) is now well into the review process by NMFS for listing under the ESA as threatened or endangered. The green sturgeon is an anadromous species living most of its life in salt-water, open ocean environments. Adults migrate into brackish and freshwater systems only to spawn, and juveniles spend a few years growing in these systems before migrating into saltwater environments. Suitable spawning sites have been decreasing at an increasing pace over the last century such that only two, and possibly three, spawning populations remain. These populations are estimated to consist of only a few hundred females. The Sacramento River serves as one of these sites. Spawning in the Sacramento River occurs over the spring and summer months, however green sturgeon are thought to inhabit San Francisco Bay area waters, in various life stages, throughout the year.

An uncommon species in general, there is a chance that green sturgeon could be found within the proposed project area during construction and installation. However, this species could easily swim away from any disturbance. Further, the short period of construction, pile driving, and installation of the proposed project would pose a very limited threat to the species (<http://www.nwr.noaa.gov/1salmon/salmesa/pubs/GreenSturgeonPetition.pdf>, <http://www.biologicaldiversity.org/swcbd/species/grnsturgeon/>, and [http://www.psmfc.org/habitat/edu\\_gsturg\\_fact.html](http://www.psmfc.org/habitat/edu_gsturg_fact.html)).

### Salmon species

A number of salmon "species," or Evolutionarily Significant Units (ESU), are known to occur within the proposed project area. Please refer to NOAA Technical Memorandum NMFS F/NWC-194, *Definition of "Species" Under the Endangered Species Act: Application to Pacific Salmon*. As prescribed by the Magnuson-Stevens Act, and amendments (16 U. S. C. 1801 *et seq.*), and the Endangered Species Act, NMFS, USFWS, and other interested parties have been consulted with regard to the potential effects of the proposed project should it be approved and constructed (see list of contacts in the EA). The following subsections cover salmon species that the USFWS and NMFS believe may occur, or be affected by, the proposed project. Comments received through informal consultation are incorporated.

The following species of Pacific Salmon are anadromous. Like other anadromous fish species, these salmon populations have suffered from numerous habitat disruptions caused by poor land-use practices; examples include pollution, interruptions in water flows, increases in

turbidity and sedimentation in spawning habitat, and loss of habitat. A highly variable family of fishes, salmon can exhibit extraordinary diversity in life history patterns, even within species (i.e. steelhead and rainbow trout). Some species can complete their entire life cycle without ever entering saltwater environments. Some, like the Coho, are semelparous (spawn only once and then die), while others are, or can, reproduce iteroparously (producing offspring in successive, e.g., annual or seasonal batches). All Pacific salmon have received increased attention over the past several years as stocks have continued to decrease and more information is gathered about species level distinctions and unforeseen impacts from previous recovery efforts. If any of the fishes discussed below are found in the project site, their high mobility would allow them to avoid the dangers of construction.

For more detailed information please refer to the numerous papers and public information available from such sources as The American Fisheries Society (<http://www.fisheries.org>) and NMFS-Northwest Fisheries Science Center (<http://research.nwfsc.noaa.gov/>).

(a) Coho salmon — Central California Coast Evolutionarily Significant Units (ESU)

This ESU of the Coho salmon (*Oncorhynchus kisutch*) includes all naturally spawning populations of Coho salmon from Punta Gorda, California south to the San Lorenzo River, as well as populations in tributaries of the San Francisco Bay, not including the Sacramento-San Joaquin Bay River Delta. The closest tributary, and therefore critical habitat, is at the mouth of the Arroyo Corte Madera del Presidio Watershed (please review the Habitat Considerations Section of the EA). However, this tributary is over a mile away. On top of that, Coho salmon have not been found in the Arroyo Corte Madera del Presidio Watershed since the 1980's (per comm. Leidy, per comm. Lewis). Thus, these Coho salmon may pass through the site, but minimal impact would be expected.

(b) Steelhead — Central California Coastal ESU

Listed as a threatened species in 1997, the Central California Coastal Steelhead (*Oncorhynchus mykiss*) occurs in numerous coastal streams of California including the drainages of San Francisco and San Pablo Bays, excluding the Sacramento-San Joaquin Bay River Delta. The Arroyo Corte Madera del Presidio Watershed serves as habitat and spawning areas for this species. Steelheads are likely to enter this watershed and could be found near the proposed project site from December through February. Young steelhead (~1-3 years old) most likely leave these watersheds to open ocean feeding sites between April and May, when they may come into conflict with the project. According to the scheduled timing for the proposed project, it is somewhat likely that young steelhead, and less likely that adult steelhead, may traverse the proposed project site during some phase of construction and installation. However, the threat to this species is very small given the ability of these fish to swim away from disturbances. Further, the small scope and size of the proposed project means that an inconsequential area (<0.5 acre) would be impacted. Given this context, and expressed NMFS informal agreement (Helvey, per comm.), the U.S. Army Corps of Engineers believes that this proposed project would not have consequential effects on any life stage of Central California Coastal ESU steelhead (<http://www.nwr.noaa.gov/reference/frn/1997/62FR43937.pdf>; <http://www.nwr.noaa.gov/1salmon/salmesa/stlhccc.htm>).

(c) Steelhead — Central Valley ESU

The Central Valley steelhead was listed as threatened in 1998. This ESU consist of all naturally spawning populations that inhabit the Sacramento-San Joaquin Bay River Delta, not including the San Francisco and San Pablo Bays and their tributaries. While this species does not spawn in the Arroyo Corte Madera del Presidio Watershed, individuals or groups of fish may occur within the project area as they migrate across the bay to their spawning grounds accessed via East Bay river mouths. The proposed project is not likely to affect Central Valley ESU steelhead (<http://www.nwr.noaa.gov/1salmon/salmesa/stlhccv.htm>).

(d) Chinook salmon — winter-run ESU

Listed as an endangered species in 1994, the winter-run Chinook (*Oncorhynchus tshawytscha*) includes all naturally spawning populations that inhabit the Sacramento River and its tributaries. This species is not likely to be found in the project area, but may traverse the project site while migrating to or from its spawning grounds. The proposed project is not likely to affect the winter run ESU Chinook salmon (<http://www.nwr.noaa.gov/1salmon/salmesa/chinsrw.htm>).

(e) Chinook salmon—Central Valley spring-run ESU

The spring-run Chinook (*Oncorhynchus tshawytscha*) was listed as threatened in 1999. This ESU contains all naturally spawned populations of spring-run Chinook salmon in the Sacramento River and its tributaries in California. Like winter-run Chinook, this species is not likely to be found in the project area (<http://www.nwr.noaa.gov/1salmon/salmesa/chincvs.htm>).

(f) Chinook salmon — Central Valley fall/late fall-run

The Central Valley fall and late fall run ESU of the Chinook salmon, (*Oncorhynchus tshawytscha*) includes all naturally breeding populations of Chinook salmon that spawn in the rivers and tributaries of the Sacramento and San Joaquin Bay River Delta. Reviewed by NMFS for possible listing as threatened under the ESA, in late 1999, NMFS determined that this ESU did not warrant listing at the time, but that it would continue as a candidate species. This species is not likely to occur within the proposed project area (<http://www.nwr.noaa.gov/1salmon/salmesa/chincvf.htm>).

(g) Chinook salmon— unknown origin

Over the last several years Chinook salmon (*Oncorhynchus tshawytscha*), of unknown ESU, have been sighted in Arroyo Corte Madera del Presidio (Leidy, per comm.). Specifics with regard to the origin of these fish, population and life history characteristics, and other pertinent information is lacking. Chinook salmon enter and leave the spawning grounds in time periods just in advance of steelhead. Adult Chinook salmon would likely congregate at the mouth of these systems starting as early as August, as the fish wait for the first significant rains of the season to open up access to these watersheds. New, young Chinook would be exiting the creeks into Richardson Bay and out into the open ocean by April. No consequential effect is anticipated for this species; the project site is not located at the mouth of the Arroyo Corte Madera del Presidio System.

### **Summary of Biological Assessment**

The proposed construction and installation of the North Dock Handicap Access Ramp is not expected to adversely affect any kind of the bird, fish, plant, mammal, amphibian, reptile, and invertebrate species listed in either of the FWS's two lists (San Francisco County & San Francisco North Quad) or any of the fish species or their habitats listed in the NMFS letter. Potential impacts to marine mammals and birds such as impaired visibility for foraging and reduced food availability within the immediate project area would be temporary and localized in the marina construction area, and cease after construction is completed. In addition, marine mammal, bird, and fish species are highly mobile and capable of avoiding the immediate construction area.