



US Army Corps  
of Engineers.

SAN FRANCISCO DISTRICT

# PUBLIC NOTICE

Regulatory Branch  
333 Market Street

San Francisco, CA 94105-2197

NUMBER: 213921N

DATE: October 4, 2000

RESPONSE REQUIRED BY: October 19, 2000

PROJECT MANAGER: Debra O'Leary TELEPHONE: (415) 977-8442 Email: do'leary@spd.usace.army.mil

1. **INTRODUCTION:** The California Department of Transportation (Caltrans), P.O. Box 23660, Oakland, California 94623-0660 (contact: Liz Weicha, Project Manager 510-286-5547) has modified its application for a Department of the Army permit for the work and placement of fill associated with the construction of a new Benicia Martinez Bridge (Interstate 680) to include the dredging of 50,000 cubic yards of sand. The sand would be removed from a dredging easement just east of the proposed bridge. The dredging is necessary to create a navigational channel for the Maritime Administration's Suisun Bay Reserve Fleet (SBRF). This channel is required to mitigate for the effects the new bridge would have on navigation by the Maritime Administration's Suisun Bay Reserve Fleet (SBRF).

The new Benicia-Martinez Bridge would be located over the Carquinez Straits and connect Solano and Contra Costa Counties of California. The proposed navigational channel would be located east of the new bridge. This modified application is being processed in accordance with the provisions of the Section 404 of Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act (33 U.S.C. 403).

2. **PROJECT DESCRIPTION:** The proposed Benicia Martinez bridge is described in Public Notice 21392N which was issued on November 3, 1997. The purpose of this Public Notice is to describe the dredging of a new navigational channel, which was added to the project description after the previous Public Notice was issued. The dredged material is predominately sand with a silt and clay components of less than 2.7%

As shown on Sheet 3 the dredging easement is located east of the Benicia-Martinez Bridge. The easement is 2,000 feet long (south west to north east) and 833 feet wide closest to the bridge narrowing to 520 feet wide. After dredging the channel would be dredged to a depth of -31 feet.

The dredged sand would be transported to an upland location outside of Corps jurisdiction for either beneficial reuse or unrestricted disposal. Beneficial use could consist of being used as fill in non-aquatic environments or as a component of concrete.

a. **Dredging Description:** Typical sand dredging equipment involves the use of a dredge pump mounted on a self-loading barge with a capacity of approximately 2,500 cubic yards. During the sand dredging operation, the barge is positioned at the shoal and the drag head is lowered to the bottom where a mixture of sand and water (15% sand and 85% water by volume) is pumped up to the barge. As the barge is filled with the slurry mixture, excess water containing up to 3% fine material from the shoal is returned to the Strait to maximize the volume of sand for transportation. The rate of discharge of overflow water averages 16,000 gallons per minute and an average time of discharge is about three hours. A trailing plume is visible behind the barge during the flood and ebb tides and a more localized plume can be seen during the slack tide. Since the drag head is partially buried or "potholed" in the bottom substrate, no incidental addition or redeposit of dredged material normally occurs during the sand dredging operation. To minimize impacts to the estuarine (deep-water) habitat, the dredging would take place during the National Marine Fisheries Service (NMFS) suggested construction window of July 1<sup>st</sup> to

October 31. This dredging would also take prior to any construction activities for the new bridge that would affect the existing deep-water access channel to the SBRF Anchorage.

**b. Purpose:** The dredging is required to provide for deep draft (vessels with a 28 feet draft) vessel access to the SBRF Anchorage. The existing deep draft vessel access located immediately east of the railroad bridge and for a width of 500 feet would be adversely impacted by the proposed bridge location. The United States Navy and the Maritime Administration (MARAD) have deemed maintaining deep draft vessel access to the SBRF Anchorage a matter of National Security.

**Project History:** The proposed bridge was publicly noticed (PN 11-85A) by the Coast Guard at a location of 70 feet east of the Union Pacific Railroad Bridge. The Union Pacific Railroad Company objected to this location on the basis that it would adversely impact repair and/or replacement of the railroad bridge. The Coast Guard then publicly noticed the new bridge under PN 11-85B with the revised location of the bridge being 230 feet east of the railroad bridge. Union Pacific Railroad Company wanted further separation between the two bridges. Caltrans then revised the bridge location to be 490 feet east of the railroad bridge. The Coast Guard for the third time publicly noticed the proposed bridge under PN 11-85C. The Regional Director of MARAD objected to this final location on the basis that it would adversely impact the existing access to the SBRF Anchorage used by deep draft vessels. To mitigate this impact Caltrans would, through the Corps, dredge an area as shown on the attached sheets, to provide for the MARAD Access Channel to the SBRF Anchorage. This channel configuration represents the "minimum

dredging alternative" that meets the requirements of MARAD, the Coast Guard and the Bar Pilots Association for continuous, safe access to the SBRF Anchorage.

**3. STATE APPROVALS:** The area to be dredged is subject to the jurisdictional purview of the San Francisco Bay Conservation and Development Commission (BCDC) and Caltrans has applied for a permit from BCDC for the New Benicia-Martinez Bridge Project. The MARAD Access Channel dredging is part of the New Benicia-Martinez Bridge Project.

Caltrans has also applied for Water Quality Certification from the Regional Water Quality Control Board.

**4. PRELIMINARY ENVIRONMENTAL ASSESSMENT:** In compliance with the National Environmental Policy Act of 1969 (Public Law 91-190), and pursuant to Council on Environmental Quality's Regulations 40 CFR 1500-1508, and Corps of Engineers' Regulations 33 CFR 230 and 325, the Corps intends to incorporate by reference the Final Environmental Impact Statement (FEIS) prepared by the Federal Highways Administration and Caltrans for the new Benicia-Martinez Bridge. The FEIS was published in August of 1997.

However, the environmental impacts of the proposed dredging were not assessed in the FEIS, therefore, the Corps has assessed the environmental impacts of the proposed sand dredging in accordance with the requirements of NEPA. Unless otherwise stated, the Preliminary Environmental Assessment presented herein describes only the direct, indirect, and cumulative impacts resulting from the proposed sand dredging.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM:

(1) PHYSICAL/CHEMICAL CHARACTERISTICS AND ANTICIPATED CHANGES:

Substrate: As shown on sheet 2, the dredging of 50,000 cubic yards of sand from the dredging easement would remove the three highest portions of a sand bar underlying the middle of the Carquinez Straits. The new bridge is expected to create enough scour of this area that sand would not be redeposited and additional dredging should not be required.

The substrate to be removed is predominately sand with a component of silt and clay of up to 2.7%. After dredging the material would be transported to an upland location outside of Corps jurisdiction for beneficial reuse or uncontained disposal.

Water Quality: Dredging operations and the resulting overflow plume may affect water quality variables, such as dissolved oxygen (DO), total suspended solids (TSS), and turbidity. Turbidity near the dredging site would increase because of additional TSS in the water column. DO levels in the water column would decrease during dredging operations due to increased turbidity. Conditions in the water column would likely return to ambient following each dredging episode. The associated effects of dredging operations on these water quality variables would be adverse but short-term and minimal in magnitude. Under normal aquatic conditions, dredged material would not likely harbor contaminants, since sand particles do not adsorb, absorb, or bind pollutants, and such material is normally exempt from Federal testing requirements [40 CFR Part 230.6(a)]. Toxicity studies previously required by the Regional Water Quality Control Board conclude that no adverse

chemical effects would occur within the water column from the discharge of barge overflow water.

(2) BIOLOGICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Endangered Species: Federally-listed endangered adult winter-run chinook salmon (*Oncorhynchus tshawytscha*) migrate through the Carquinez Strait and Suisun and Honker Bays, to spawning areas in the upper Sacramento River during the late fall and early winter. Juveniles travel downstream through San Francisco Bay to the Pacific Ocean in the late fall as well. The movements of adult and juvenile salmon through the bay system are thought to be rapid during these migrations. Since impacts in the water column during dredging episodes would be short-term, localized, and minor in magnitude, no potentially adverse effects to winter-run chinook salmon that may be near the dredging site are anticipated.

All life stages of the federally listed threatened delta smelt (*Hypomesus transpacificus*) might utilize the Carquinez Straits, when sufficient outflows from the Delta cause the entrapment zone to be centered in Suisun Bay. Delta smelt may be adversely affected by the loss of shallow water habitat, exposure of larvae and juveniles to high concentrations of metals and other contaminants, and reduction of zooplankton food sources from increased turbidity of the water column. Since the area to be dredged is more than 4 feet deep and has high ambient suspended sediment loads in the water column compared to the overflow plume, and the low probability of pollutants in the overflow plume, the dredging activities would not likely cause adverse effects to delta smelt.

Habitat for Fish and Other Aquatic Organisms: Periodic dredging operations would have adverse but short-term minor impacts on fishes and fish habitat by temporarily increasing TSS and decreasing DO levels in the water column. Conditions in the water column in the dredging

easement would likely return to ambient shortly after the completion of each dredging episode. Dredging operations would also result in the removal of benthic organisms on a recurring basis, although recolonization of the substrate occurs rapidly. Since naturally variable substrate conditions may contribute to an unstable benthic community, the associated effects of dredging operations on benthic organisms would be adverse but short-term and minimal in magnitude. Biological studies required by the Regional Water Quality Control Board conclude that no adverse physical effects would occur to fisheries or certain benthic invertebrates, such as Dungeness crabs and Bay shrimp, as a result of dredging operations (MEC, 1993).

## b. IMPACTS ON RESOURCES OUTSIDE THE AQUATIC ECOSYSTEM:

### (1) PHYSICAL CHARACTERISTICS AND ANTICIPATED CHANGES

Air Quality: Dredging equipment would generate various air pollutant emissions, causing adverse but short-term and minimal effects on ambient air quality in the immediate vicinity of the dredging area. Total direct emissions of criteria pollutants generated by dredging operations occurring in USACE jurisdiction (waters of the United States and adjacent wetlands) would not likely exceed the *de minimis* levels specified at 40 CFR 93.153. The USACE has neither a practicable means nor a continuing program responsibility to control indirect project emissions.

### (2) SOCIOECONOMIC CHARACTERISTICS AND ANTICIPATED CHANGES

Aesthetic Quality: Dredging equipment and barges are frequently observed throughout San Francisco Bay. Dredging activities are proposed for continuous operation including weekends and State holidays. The impact of periodic dredging operations, transportation of dredged material, and

the overflow plume on visual resources would be adverse but short-term and minimal in magnitude.

Economics: Since sand dredged from the shoal is sold for commercial construction purposes, associated impacts of dredging operations on the applicants and on the local economy would be beneficial, long-term, and minor to major in magnitude.

Recreational Fishing: Shallow, sandy substrates in the dredging easement might support various sport fish species such as striped bass and sturgeon, generating diverse recreational fishing activity from May to October. Substrate modifications and the overflow plume caused by dredging activity may temporarily alter fish schooling and feeding in the area and reduce fishing success, particularly during peak use periods. The adverse effects of dredging activities on fishing would be short-term and minor to moderate in magnitude.

Transportation (Navigation): Stationary barges during dredging operations could pose a hazard to ship traffic, particularly where passage is confined by shallow waters at the shoal. Since dredging operations occur only on a periodic basis and do not normally enter the designated channel area, ship traffic would not likely be affected by this activity.

The new channel would improve navigational access of the SBRF anchorage. This is considered a major beneficial effect.

### (3) HISTORIC - CULTURAL CHARACTERISTICS AND ANTICIPATED CHANGES

Since the shoal areas are comprised of recently deposited sediments, archeological resources would not likely be encountered during dredging operations. However, if any archaeological resources are encountered during the dredging operations, Caltrans would consult with the State Historic Preservation Officer pursuant to Section

106 of the National Historic Preservation Act and take into account any project effects on such properties.

**c. SUMMARY OF CUMULATIVE IMPACTS:**

Sand dredging occurs within portions of Central San Francisco Bay at Point Knox, Alcatraz, and the Presidio shoals, in Suisun Bay at Middle Ground Island shoal, and within areas of the Sacramento-San Joaquin Delta estuary. Combined dredging operations account for the removal of approximately 1.3 million cy of sand per year from these shoal areas and may cause cumulative adverse effects to substrate, water quality, benthic organisms and beneficial effects to navigation and economics.

**d. CONCLUSION AND RECOMMENDATIONS:**

Based on an analysis of the identified impacts, a preliminary determination has been made, concluding that it will not be necessary to prepare an Environmental Impact Statement for the proposed activity. This Environmental Assessment has not yet been finalized, and the preliminary determination may be reconsidered if additional information is developed.

**5. EVALUATION OF ALTERNATIVES:**

Projects involving fill discharges into waters of the United States must comply with the guidelines promulgated by the Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C.1344(b)). An evaluation pursuant to the Guidelines presume that, for non-water dependent projects, other practicable, less environmentally-damaging alternatives exist, unless clearly demonstrated otherwise by the applicant.

**6. PUBLIC INTEREST EVALUATION:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. This decision will reflect the

national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

**7. CONSIDERATION OF COMMENTS:** The Corps is soliciting comments from the public; Federal, State, and local agencies, and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of the proposed activity. All comments received will be considered in the determination whether to issue, modify, condition, or deny a permit for the proposed activity. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental factors which are addressed in a final Environmental Assessment or Environmental Policy Act. Comments are also used to determine the overall interest of the proposed activity.

**8. SUBMISSION OF COMMENTS:** During the specified comment period, interested parties may submit written comments to the San Francisco District, Regulatory Branch, citing the applicant's name, and public notice date and number in the letter. Comments may include a request for a public hearing on the project prior to a determination on the application; such requests shall state, with particularity, the reasons for holding a public hearing. All comments will be forwarded to the applicant for resolution or rebuttal. Additional information may be obtained by contacting the Regulatory Branch at (415) 977-8454.