US Army Corps of Engineers

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

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RESPONSE REQUIRED BY: December 1, 2000

Regulatory Branch
333 Market Street
San Francisco, CA 94105-2197 PROJECT MANAGER: Philip Shannin TELEPHONE: (415) 977-8445 Email: pshannin@spd.usace.army.mil

1. **Introduction:** Bell Marine Company, 775 Seaport Boulevard, Redwood City, California 94063, through its agent M. H. Cheney [(510) 339-0665], has applied for a ten-year Department of the Army permit to obtain sand from submerged lands at Middle Ground Island Shoal in Suisun Bay, Benicia Shoal in Carquinez Strait, and Alcatraz Island Shoal in San Francisco Bay, San Francisco and Solano Counties, California. The project purpose is to maintain an uninterrupted supply of commercial grade sand for construction projects throughout the Bay area. This application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. Code 403).

2. **Project Description:** As shown in the attached drawing, the applicant plans to remove up to 250,000 cubic yards of sand annually from Middle Ground Island Shoal, 100,000 cubic yards annually from Alcatraz Island Shoal, and 50,000 cubic yards annually from Benicia Shoal by hydraulic suction, and transport dredged material by barge to existing upland sand yards. Bell Marine has been sand mining at Middle Ground shoal, a privately owned tract, for more than 25 years. The other two shoals are owned by the State of California and leased by Bell Marine, who has been mining these shoals since 1995.

Typical sand mining operations involve the use of a dredge pump mounted on a self-loading barge with a capacity of approximately 2,500 cubic yards. During the sand mining operation, the barge is positioned at the shoal and drag head is lowered to the bottom where a mixture of sand/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 4% fine material from the shoal is returned to the Bay to maximize the volume of sand for transportation. The rate of discharge of overflow water averages 16,000 gallons per minute (gpm) and an average time of discharge is about three hours. A trailing plume is visible behind the barge during flood and ebb tides and a more localized plume can be seen during slack tide.

3. **State Approvals:** The applicant states that he has notified the Regional Water Quality Control Board, San Francisco Bay Region, to determine the need for State water quality certification. If the Regional Water Resources Control Board determines that this project is consistent with the California Water Quality Control Plan, requirements adopted by the Regional Board, and Sections 301, 302, 303, 306 and 307 of the Clean Water Act, the State will issue a Certificate of Conformance with Water Quality Standards to the project proponent.

Those parties concerned with any water quality problems that may be associated with this project should write to the Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street. Suite 500, Oakland, California 94612, by the close of the comment period.

The applicant has also been informed to contact the San Francisco Bay Conservation and Development Commission (BCDC) in order to ensure the project is consistent with the State's coastal zone management program.

4. **Environmental Assessment:** The Corps of Engineers has assessed the environmental impacts of

the action proposed in accordance with the requirements of 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, Appendix B. Unless otherwise stated, the Preliminary Environmental Assessment describes only the impacts (direct, indirect, and cumulative) resulting from activities within the jurisdiction of the Corps of Engineers. The supporting data used in the preparation of this Preliminary Environmental Assessment are on file in the South Section, Regulatory Branch, Corps of Engineers, 333 Market Street, San Francisco, California.

The Preliminary Environmental Assessment resulted in the following findings:

a. IMPACTS ON THE AQUATIC ECOSYSTEM

(1) Physical/Chemical Characteristics and Anticipated Changes

Substrate – The submerged shoals near Middle Ground Island, Benicia Point, and Alcatraz Island cover an area approximately 587 acres in size and vary in depth from –2 feet mean lower low water (MLLW) to –90 feet MLLW. Mining activities could account for the removal of up to 400,000 cubic yards (cy) of sand per year from the three shoal areas. A typical dredging operation would occur in waters 20 feet or more in depth and less than one acre in area. Sand and other sediments transported down the Sacramento and San Joaquin Rivers would probably replace material removed by dredging operations: however, the rate of material replenishment in the shoal areas is not known. Due to the dynamic nature of sediment transport, deposition, and erosion in shoal formation, the physical effects of dredging operations on substrate would be short-term and minimal in magnitude.

Currents/Circulation – The alteration of substrate elevations could affect currents and circulation patterns by obstructing flow, changing the direction or velocity of flow, or changing the dimensions of the water body, particularly in shallow-water areas of Suisun Bay. Considering the dynamic nature of shoal formation and occurrence of mining in deep waters only, the effects of mining operations on currents and circulation would be short-term and minimal in magnitude.

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 - San Francisco Bay is designated as critical habitat for several federally listed threatened and proposed threatened fish species, which include winter-run chinook salmon *(Onchorhynchus tshawytscha)*, steelhead trout *(Onchorhynchus mykiss)* and coho salmon *(Oncorhynchus kisutch)*. The adult fish migrate through San Francisco Bay to reach spawning locations in tribuatries to the bay. Juveniles, born in these tributaries, will travel back through the bay to

reach the ocean. 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 adverse impacts to endangered species are anticipated. However, should such an impact be identified, the Corps will initiate consultation with the National Marine Fisheries Service as required by Section 7 of the Endangered Species Act.

The federally listed threatened delta smelt (*Hypmesus transpacificus*) and Sacramento splittail (*Pogonichthys macrolepidotus*) are likely to inhabit shoals and marshes of Suisun Bay. These species 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. Taking into account the restriction of sand dredging operations to waters 4 feet or more in depth, high ambient suspended sediment loads in the water column compared to the overflow plume, and the low probability of pollutants in the overflow plume, mining activities at Middle Ground Island shoal would not likely cause adverse effects to delta smelt or Sacramento splittail. However, should such an impact be identified, the Corps will initiate consultation with the U.S. Fish and Wildlife Service as required by Section 7 of the Endangered Species Act.

The federally listed endangered tidewater goby (*Eucyclobius newberry*) historically occurred in several tributary drainages of the San Francisco Bay area, which contained shallow water habitat (<3 feet) and low to moderate salinity ranges of 2-15 parts per thousand (ppt). These previously identified populations have disappeared, and the current absence of the tidewater goby, particularly in Suisun Bay, may be explained by the presence of exotic predatory fish, such as striped bass, and other native predators. Although low salinities can periodically occur in Suisun Bay, when the entrapment zone is centered in this area, tidewater goby populations could not persist on a long-term basis as freshwater inflows seasonally diminish or would become highly susceptible to predation. Mining activities at Middle Ground Island shoal would, therefore, not cause any adverse effects to the tidewater goby.

Habitat for Fish, Other Aquatic Organisms, and Wildlife – 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 at the shoal area would likely return to ambient shortly after the completion of each dredge episode. Dredging operations would also result in the removal of benthic organisms and would be adverse but short-term and minimum 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.

This notice initiates the Essential Fish habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposal would impact approximately 587 acres of EFH utilized by various species of sole, shark, and rockfish. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in California waters. Our final determination relative to project impacts and the need for mitigation measures is subject to review by, and coordination with, the National Marine Fisheries Service.

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 minimal impacts on ambient air quality in the immediate vicinity of the dredging site. Since total direct and indirect project emissions would not likely exceed the de minimis levels specified at 40 CFR 93.153, the dredging operations are considered to be exempt from the requirement of a Clean Air Act conformity determination.

(2) Socioeconomic Characteristics and Anticipated Changes

Aesthetic Quality – Dredging equipment and barges are frequently observed throughout San Francisco Bay. 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 applicant and on the local economy would be beneficial, long-term, and minor to major 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 Middle Ground Island shoal or narrow straits at Benicia shoal. Since dredging occurs on a periodic basis, associated impacts on navigation would be adverse but short-term and minor in magnitude.

(3) Historic - Cultural Characteristics and Anticipated Changes

A Corps of Engineers' archaeologist is currently conducting a cultural resources assessment of the permit area, involving review of published and unpublished data on file with city, State, and Federal agencies. If, based upon assessment results, a field investigation of the permit area is warranted, and cultural properties listed or eligible for listing on the National Register of Historic Places are identified during the inspection, the Corps of Engineers will coordinate with the State Historic Preservation Officer to take into account any project effects on such properties.

c. SUMMARY OF INDIRECT IMPACTS

None have been identified.

d. 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 cubic yards of sand per year from these shoal areas and may cause cumulative effects to substrate, water quality and economics.

e. CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of the above identified impacts, a preliminary determination has been made that it will not be necessary to prepare an Environmental Impact Statement (EIS) for the subject permit application. The Environmental Assessment for the proposed action has, however, not yet been finalized and this preliminary determination may be reconsidered if additional information is developed.

5. **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 and its intended use on the public interest. Evaluation of the probable impacts the proposed activity may have on the public interest requires a careful weighing of all those factors, which become relevant in each particular case. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. The decision whether to authorize a proposal, and if so the conditions under which it will

be allowed to occur, are therefore determined by the outcome of the general balancing process. That decision will reflect the national concern for both protection and utilization of important resources. All factors and their cumulative impacts must be considered, relevant to the proposal. These factors include conservation; economics; aesthetics; general environmental concerns; wetlands; cultural values; fish and wildlife values; flood hazards; floodplain values; land use; navigation; shore 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.

6. **Consideration of Comments:** The Corps of Engineers 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 this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

7. **Submission of Comments:** Interested parties may submit, in writing, any comments concerning this activity. Comments should include the applicant's name, the number and the date of this Notice and should be forwarded so as to reach this office within the comment period specified on page one of this Notice. Comments should be sent to: Lieutenant Colonel Peter Grass, District Engineer, Attention: Regulatory Branch. It is Corps policy to forward any such comments which include objections to the applicant for resolution or rebuttal. Any person may also request, in writing, within the comment period of this Notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Additional details may be obtained by contacting the applicant whose address is indicated in the first paragraph of this Notice, or by contacting Philip Shannin of our office at telephone (415) 977-8445. Details on any changes of a minor nature made in the final permit action will be provided on request.