



US Army Corps
of Engineers®
San Francisco District

SAN FRANCISCO DISTRICT

Regulatory Division
1455 Market Street, 16th Floor
San Francisco, CA 94103-1398

PUBLIC NOTICE

PROJECT: Jerico Products Sand Mining Operations

PUBLIC NOTICE NUMBER: 2013-00129S

PUBLIC NOTICE DATE: April 22, 2013

COMMENTS DUE DATE: June 7, 2013

PERMIT MANAGER: Sahrye Cohen

TELEPHONE: 415-503-6779

E-MAIL: Sahrye.E.Cohen@usace.army.mil

1. INTRODUCTION: This Public Notice is reissued with the webpage address for the Public Notice corrected. An electronic version of this public notice may be viewed under the *Public Notices* tab on the USACE website: <http://www.spn.usace.army.mil/Missions/Regulatory>. The comment due date is hereby revised to June 7, 2013.

The Jerico Products, Inc. (Jerico) (POC: Mr. William Butler, 707-762-7251), 100 East 'D' Street, Petaluma, California, has applied to the U.S. Army Corps of Engineers (USACE), San Francisco District, for a Department of the Army Permit to conduct sand mining operations of up to 150,000 cubic yards annually between 2013 and 2023 within the 367-acre submerged lands Middle Ground private lease area in Suisun Bay. This Department of the Army permit application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*). Sand Mining activities in this area were previously authorized under USACE permits 2000-249960 and 2000-249130.

2. PROPOSED PROJECT:

Project Site Location: The project site is located in open water in western Suisun Bay at 38°03'47" N and -121°58'57"W. The Middle Ground shoal is located in the middle of the waterway south of Snag Island, north of the City of Bay Point, Between Honker Bay and Suisun Bay.

Project Site Description: The project site is a 367 acre sand shoal with open water ranging in water depths from 15 to 45 feet. Suisun Bay is located between San Francisco Bay and the confluence of the Sacramento and San Joaquin rivers in the San Francisco Bay-Delta Estuary. Suisun Bay is highly bathymetrically variable

and the salinity and turbidity of this area has been greatly impacted over historic time due to freshwater demand, hydraulic mining and ship channel deepening.

Project Description: Two marine aggregate companies currently harvest sand commercially from the San Francisco Bay and the western Delta (the Bay-Delta estuary), including Hanson Marine Operations (Hanson), and Jerico. The Sand Miners harvest sand from specified areas of San Francisco Bay that are leased from the California State Lands Commission (SLC) or, in the case of Middle Ground, owned privately by the Grossi family.

Marine sand mining obtains a marine aggregate that is primarily used for construction activities within the greater San Francisco Bay area, either as fill and base material or as an ingredient in readymix concrete and hot mix asphalt. Sand obtained from the Bay-Delta estuary is used, for example, in the construction and maintenance of highway and freeway systems, commercial and public buildings, and residential construction.

As shown in the attached drawings, the applicant proposes to conduct sand mining operations in Suisun Bay. Jerico Products exclusively uses the stationary potholing method of sand mining. Stationary potholing involves an initial search for an appropriate sand source, followed by "stationary" mining of sand at a site, through anchoring the barge or other means. Stationary potholing may involve mining more than one specific location during a mining event, and may involve some movement within a general site.

Jerico's sand mining equipment consists of two tugboats, the Trig Lind and the Petaluma, and a hopper barge, the J5200, which is equipped with suction dredge equipment. The barge J5200 is 200 feet long by 45 feet

wide, with a loaded draft of approximately 12 feet and an unloaded draft of approximately 3.5 feet. The barge has a total cargo capacity of approximately 1,850 cubic yards. Jerico's equipment and methods limit it to mining in water from approximately 15 feet to 40 feet in depth. The J5200 hopper barge is equipped with a hydraulic (pumping) suction system for sand mining. The hydraulic suction system includes a 14" diameter, 40-foot "drag arm" suction pipe assembly, generally mounted on the side of the barge and connected to large pumps installed in the barge. At the end of the drag arm suction pipe, another shorter (8'-10') section of pipe is fitted at an angle. The end of this pipe is fitted with a set of crossbars that act as a "grizzly" screen to prevent oversized material from entering the suction pipe. Jerico does not utilize a drag head per se, but simply inserts the end of the 14" suction pipe into the substrate.

The suction pipe may be equipped with small external pipes that extend a few feet above the end of the suction pipe. These pipes pull water into the suction pipe to help create the sand-water slurry when the suction pipe is buried in the substrate such that insufficient water can be drawn through the sand substrate itself. This allows for sand to be mined without moving the suction pipe, and for the suction pipe to be inserted farther under the substrate surface. Jerico sometimes utilizes these suction pipes depending on the consolidation of the material being mined.

As mining commences, the dredge operators determine suitability of the sand for mining. Tests include grab samples to determine the gradation of the sand (coarse or fine) and visual observations of the slurry (a dark color indicates high sand to water proportion, signifying either loose, unconsolidated sand and/or finer sand). Vacuum measurements on the drag arm, density measurements of the slurry and pump RPMs give indications of the slurry density as well. Once the operator has determined a suitable location and the barge has been placed in position, an anchor is dropped from the bow of the barge. The barge is allowed to pivot and shift into position by drifting on the current. Once the barge has drifted to a stable position, the hydraulic suction pipe assembly is lowered into the water using a cable winch system to the substrate surface. The pump is primed and the pipe filled with water when the suction end is lower than 3 ft from the substrate surface. The suction pipe is then slowly lowered into the sand substrate – as much as 5 to 8 ft - which further stabilizes the barge, and mining begins.

If the sand is unsuitable or the substrate too difficult to mine, the operator shuts down the pump, picks up the suction pipe, and proceeds to another location, where the above process is repeated to resume mining.

Water is continually mixed with the sand to create a slurry by entering the drag pipe along with the sand through the main opening, and if necessary through the small water intake pipes that extend a few feet up the drag arm pipe. This slurry is pumped up through the pipe onto the barge utilizing a 5,000 gallons per minute (gpm) pump. The proportion of sand to water in the slurry may vary, depending on the quality and consolidation of sand being mined. Jerico experiences an average proportion of 25% sand/75% water in the sand slurry. As sand is pumped to the barge, adjacent sand is mobilized and falls into the pothole created by the suction head. The suction end is lowered to keep it in the substrate as the pothole is deepened.

Once the sand-water slurry is pumped to the barge, it is discharged into a long loading chute, running lengthwise along the centerline of the barge. This chute has thirteen hydraulically controlled screened openings (gates) at intervals along its bottom, and the sand-water slurry flows through these gates into the barge. The gates are controlled so that sand is distributed evenly in the hopper. Figure 3-7 illustrates the loading chute and gate arrangement. That portion of the slurry that includes aggregate and material larger than the openings in the screened openings (typically ¼ inch – ½ inch), is discharged through a pipe extending below the surface of the water.

The J5200 barge is equipped with screened overflow outlets. Water displaced by accumulating sand within the hopper barge, in addition to fine grained sediments and other material, returns to the receiving waters through surface discharges or overflow weirs or through subsurface discharges. The cargo hopper is also fitted with fine mesh screens along the bottom centerline of the barge where water that has filtered through the sand is also collected and pumped overboard.

These discharges may contain aggregates, fine sediments, aeration bubbles, and plankton, and a visible plume is sometimes created around the barge. Based on the equipment and methods used for sand mining within the estuary, commercial sand characteristically ranges in size from approximately 1 mm to 12 mm (1/2 inch), with larger and smaller particles discharged overboard. The

volume of sediment discharged overboard during a typical mining event within the estuary has not been quantified.

After loading the sand, the barge returns to one of Jerico's or Jerico's customers' offload sites, located in Petaluma, Napa or Collinsville. At the offload site, a conveyor belt mounted on the barge is lowered and moved to the side, and an excavator or front-end loader is used to load the sand onto the barge conveyor belt, which transports the sand to a shore-side conveyor system, where sand is discharged into a pile at the yard for further processing and distribution.

Although sand mining activity may occur at any time of the day, the operation itself, i.e., mining the sand and loading the barge, typically lasts an average of 4.67 hours, during which time approximately 1,850 cy of sand is harvested. Once the barge is loaded, it travels to an upland offloading location. Depending on the mining and offloading locations, the entire operation – including loading, unloading and travel time – can take anywhere from 8 to 24 hours. Under these circumstances, from an operational perspective, the greatest frequency that the same mining vessel would disturb any single area is two times in any 24-hour period.

The amount and seasonal timing of mining volumes are largely dictated by demand for sand, the weather (seasonality), and regulatory and resource agency permitting conditions. Mining volumes may also be limited by the maximum cubic yardage allowed under the respective leases and permits.

Project Purpose and Need: The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the project is water dependent. The basic project purpose is to obtain aggregate. The overall project purpose is to mine sand in Suisun Bay for commercial resale in the San Francisco Bay Area.

Project Impacts: The applicant has submitted an application for sand mining at the Middle Ground lease location of up to 150,000 cubic yards on 367 acres annually for 10 years. This would result in a maximum of 1,500,000 cubic yards for the period between 2013 and 2023.

Proposed Mitigation: The applicant has proposed avoidance and minimization measures for impacts to jurisdictional waters of the U.S. These include: turbidity reduction during mining, limited annual mining volumes;

water depth limitation to avoid sensitive water column habitats, limited mining areas, monitoring of mining events and locations, hazardous material control and spill prevention and response, sand replenishment and monitoring, limited pumping depths and installation of a positive barrier fish screen on the mining suction head. There is no compensatory mitigation proposed for this project.

Project Alternatives: USACE staff has requested that the applicant submit an alternatives analysis for this project.

3. STATE AND LOCAL APPROVALS:

Water Quality Certification: State water quality certification or a waiver is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 *et seq.*). Current sand mining activities are approved under Regional Board Order No. 00-048, amending Order No. 95-177 on June 21, 2000. The applicant has recently submitted an application to the California Regional Water Quality Control Board (RWQCB) to obtain water quality certification for the project.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, by the close of the comment period.

Coastal Zone Management: Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq.*), requires a non-Federal applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the State's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate State agency has issued a Consistency Certification or has waived its right to do so. Since the project occurs in the coastal zone or may affect coastal zone resources, the applicant has applied for a major permit from the San Francisco Bay Conservation and Development Commission to comply with this requirement.

Coastal zone management issues should be directed to the Executive Director, San Francisco Bay Conservation and Development Commission, 50 California Street, Suite 2600, San Francisco, California 94111, by the close of the comment period.

Other Local Approvals: The applicant has applied for the following additional governmental authorizations for the project: California Department of Fish and Wildlife Incidental Take Statement, California State Lands Commission CEQA process.

4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

National Environmental Policy Act (NEPA): Upon review of the Department of the Army permit application and other supporting documentation, USACE has made a *preliminary* determination that the project neither qualifies for a Categorical Exclusion nor requires the preparation of an Environmental Impact Statement for the purposes of NEPA. At the conclusion of the public comment period, USACE will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's Regulations at 40 C.F.R. Parts 1500-1508, and USACE Regulations at 33 C.F.R. Part 325. The final NEPA analysis will normally address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of USACE and other non-regulated activities USACE determines to be within its purview of Federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis will be incorporated in the decision documentation that provides the rationale for issuing or denying a Department of the Army Permit for the project. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division.

Endangered Species Act (ESA): Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. § 1531 *et seq.*), requires Federal agencies to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to ensure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. As the Federal lead agency for this project, USACE has conducted a review of the California Natural Diversity Data Base,

digital maps prepared by USFWS and NMFS depicting critical habitat, and other information provided by the applicant, to determine the presence or absence of such species and critical habitat in the project area. Based on this review, USACE has made a preliminary determination that the following Federally-listed species and designated critical habitat are present at the project location or in its vicinity, and may be affected by project implementation. The project area in Middle Ground shoal is critical habitat for the federally-threatened delta smelt (*Hypomesus transpacificus*). The delta smelt is a small pelagic species that is endemic to the SF Bay-Delta estuary. The project could potentially impact the delta smelt through direct entrainment of individuals, and indirectly through impacts to foraging and spawning habitat. Other federally-listed species that may be affected by the project are: Sacramento River winter-run Chinook salmon ESU (*Oncorhynchus tshawytscha*), Central Valley spring-run Chinook salmon ESU (*Oncorhynchus tshawytscha*), Central California Coast steelhead DPS (*Oncorhynchus mykiss*), Central Valley steelhead DPS (*Oncorhynchus mykiss*), and Green sturgeon DPS (*Acipenser medirostris*). The project could potentially impact these species through direct entrainment of individuals, and indirectly through impacts to foraging habitat. To address project related impacts to these species designated critical habitat, USACE has initiated formal consultation with USFWS and NMFS, pursuant to Section 7(a) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA): Section 305(b)(2) of the MSFCMA of 1966, as amended (16 U.S.C. § 1801 *et seq.*), requires Federal agencies to consult with the NMFS on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. As the Federal lead agency for this project, USACE has conducted a review of digital maps prepared by NMFS depicting EFH to determine the presence or absence of EFH in the project area. Based on this review, USACE has made a *preliminary* determination that EFH for Chinook salmon (*Oncorhynchus tshawytscha*) is present at the project location or in its vicinity, and that the critical elements of EFH may be adversely affected by project

implementation. To address project related impacts to EFH, USACE will initiate consultation with NMFS, pursuant to Section 305(5)(b)(2) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project.

Marine Protection, Research, and Sanctuaries Act (MPRSA): Section 302 of the MPRS of 1972, as amended (16 U.S.C. § 1432 *et seq.*), authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the Act. No Department of the Army Permit will be issued until the applicant obtains the required certification or permit. The project does not occur in sanctuary waters, and a *preliminary* review by USACE indicates the project would not likely affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce, or his designee.

National Historic Preservation Act (NHPA): Section 106 of the NHPA of 1966, as amended (16 U.S.C. § 470 *et seq.*), requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of the Act further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance. As the Federal lead agency for this undertaking, USACE has conducted a review of latest published version of the *National Register of Historic Places*, survey information on file with various city and county municipalities, and other information provided by the applicant, to determine the presence or absence of historic and archaeological resources within the permit area. Based on this review, USACE has made a *preliminary* determination that historic or archaeological resources are not likely to be present in the permit area, and that the project either has no potential to cause effects to these resources or has no effect to these resources. USACE will render a final determination on the need for

consultation at the close of the comment period, taking into account any comments provided by the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, and Native American Nations or other tribal governments. If archaeological resources are discovered during project implementation, those operations affecting such resources will be temporarily suspended until USACE concludes Section 106 consultation with the State Historic Preservation Officer or the Tribal Historic Preservation Officer to take into account any project related impacts to those resources.

5. PUBLIC INTEREST EVALUATION: The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process 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: USACE is soliciting comments from the public; Federal, State and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by USACE will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the project.

7. SUBMITTING COMMENTS: During the specified comment period, interested parties may submit written comments to Sahrye Cohen, San Francisco District, Regulatory Division, 1455 Market Street, 16th Floor, San Francisco, California 94103-1398; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Regulatory Permit Manager. Comments may include a request for a public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent, or by contacting the Regulatory Permit Manager by telephone or e-mail cited in the public notice letterhead. An electronic version of this public notice may be viewed under the *Public Notices* tab on the USACE website: <http://www.spn.usace.army.mil/Missions/Regulatory>.

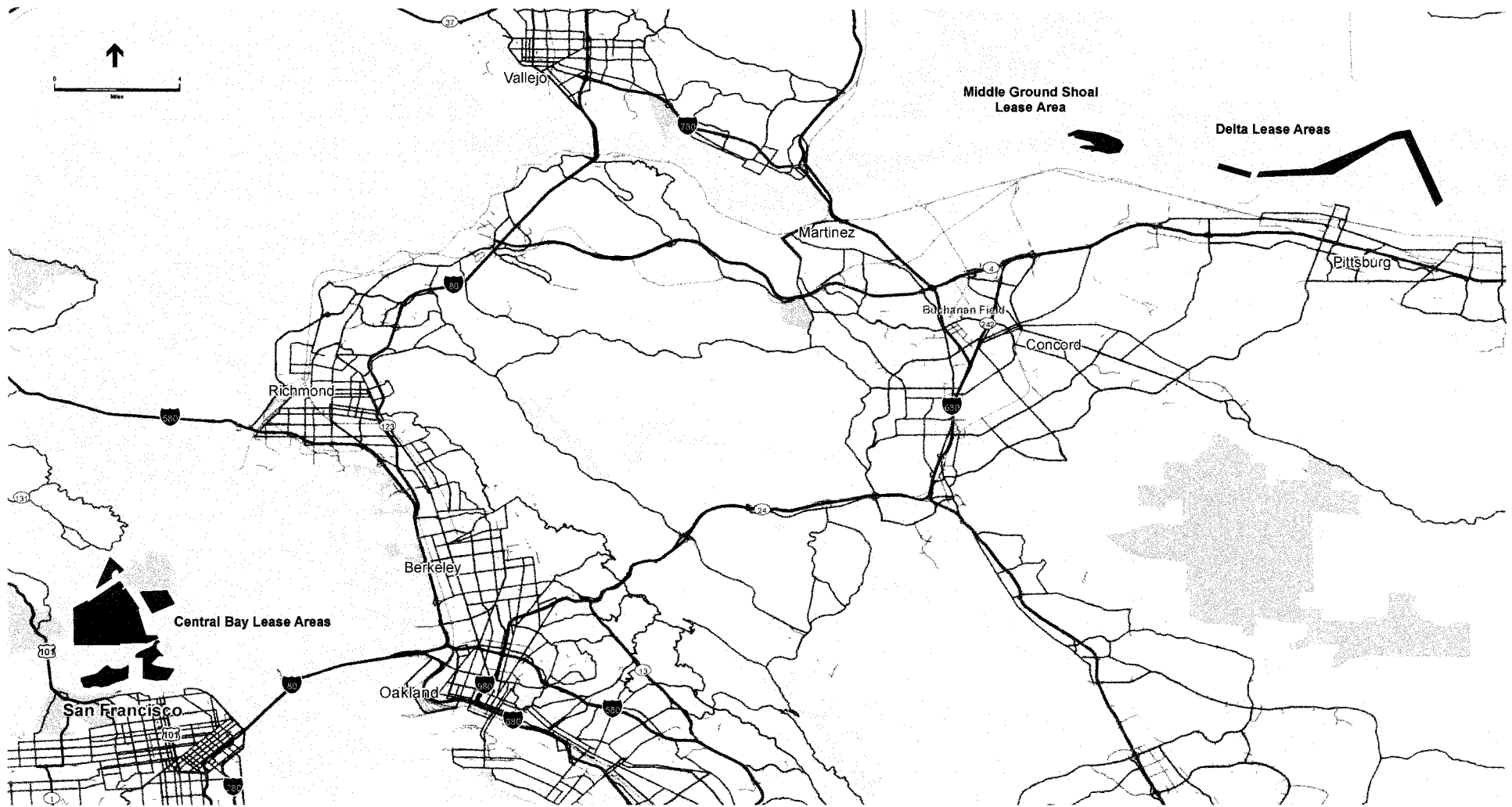


Figure 2-1 – General Areas of Sand Mining



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2013-00129
Jerico Products Sand Mining
April 20, 2013

Public Notice

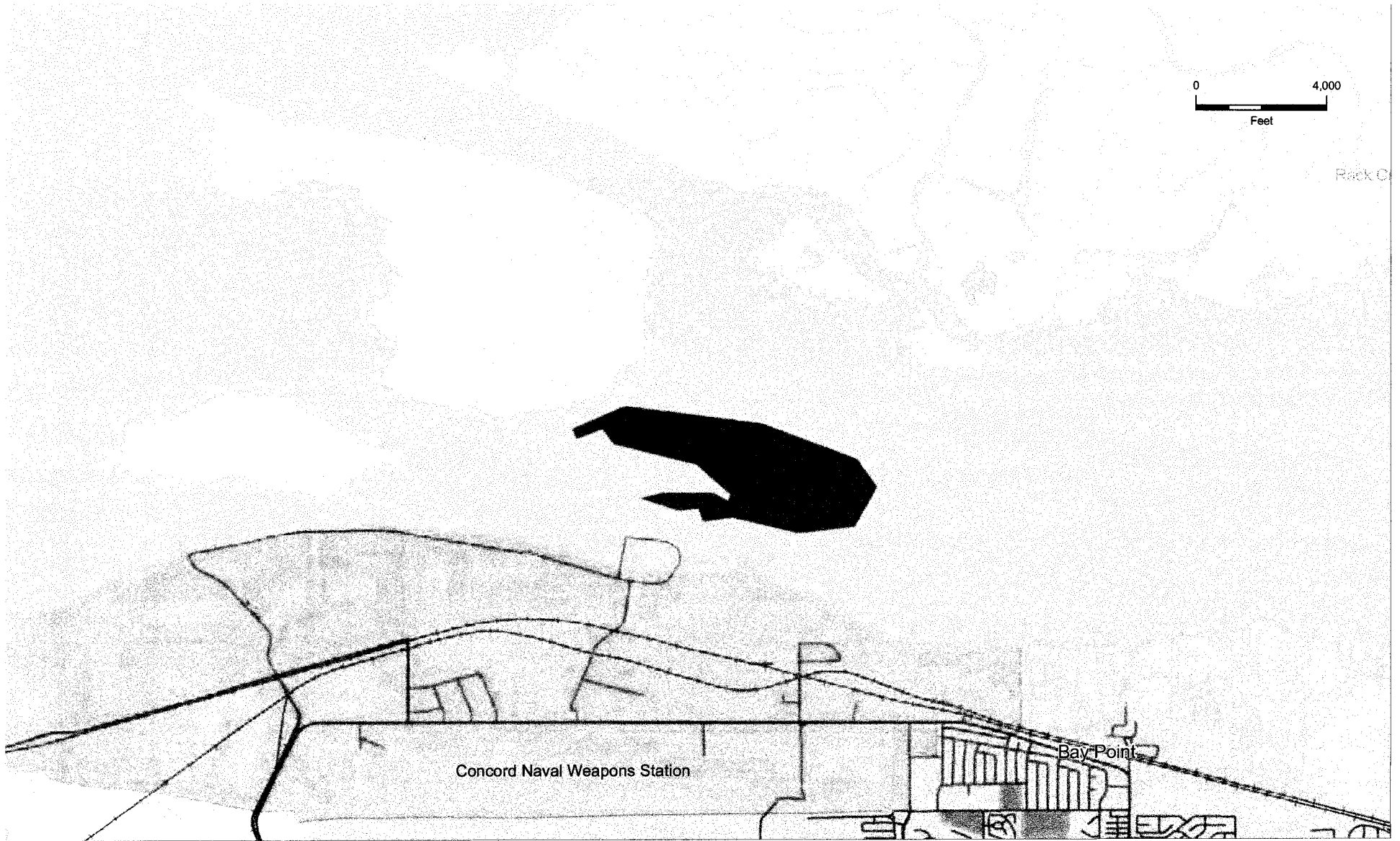


Figure 2-2 - Middle Ground Lease Location



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2013-00129
Jerico Products Sand Mining
April 20, 2013
Public Notice



U.S. Army Corps
of Engineers
San Francisco District
Regulatory Division

USACE File #2013-00129
Jerico Products Sand Mining
April 20, 2013
Public Notice

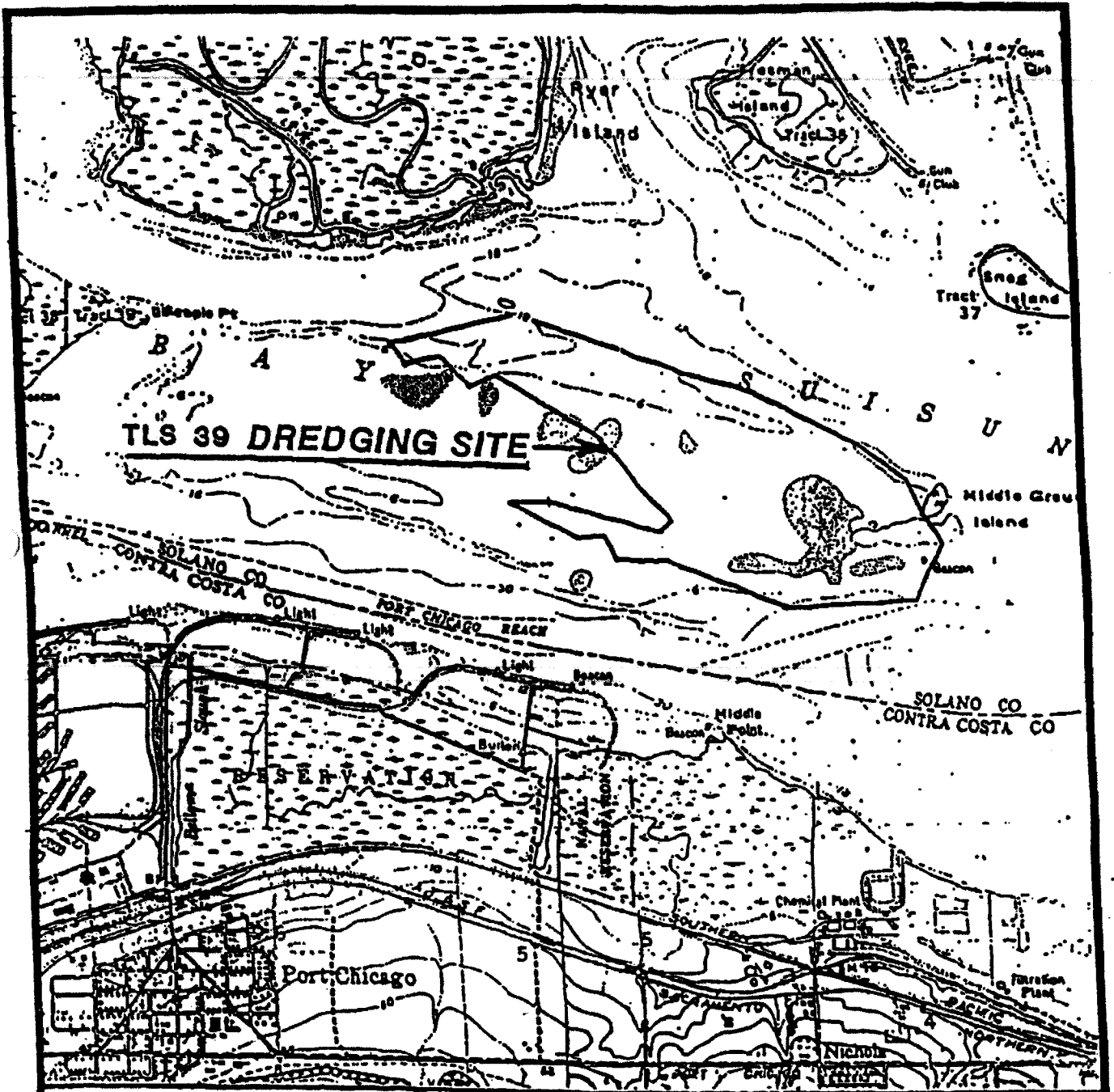


Exhibit B: Site Map

PORT CHICAGO, CALIF. · HONKER BAY, CALIF.
SE 1/4 CARQUINEZ STRAIT 1/4 QUADRANGLE SW 1/4 PITTSBURG 1/4 QUADRANGLE

1000 0 1000 2000 3000 4000 FEET



Location:
Suisun Bay, Solano County