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Staff report:	9/21/00
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COASTAL DEVELOPMENT PERMIT

Application number ..... 3-00-034, Santa Cruz Small Craft Harbor Maintenance Dredging

Applicant ..... Santa Cruz Port District, (Contact: Brian Foss, Port Director)

Project location ..... Santa Cruz Small Craft Harbor and Beach and Twin Lakes State Beach, City of Santa Cruz (Santa Cruz County).

Project description ..... Request for ten-year permit to: (1) annually dredge approximately 10,000 cubic yards of sediment from inner harbor; (2) annually dispose of 10,000 cubic yards of sediment from inner harbor and approximately 350,000 cubic yards of sediment from harbor entrance channel into the intertidal zone and sandy beach area of Santa Cruz Port District Beach and Twin Lakes State Park Beach; and (3) after-the-fact approval of a temporary offshore dredge disposal pipeline.

File documents ..... *Operations Manual, Santa Cruz Harbor Dredging System*, dated July 1995; *A Sediment Trend Analysis (STA) of Santa Cruz Harbor and its Vicinity: Implications to Dredge Disposal Operations*, dated February 2000; U.S. Army Corps of Engineers, *Santa Cruz and Vicinity Schoaling Study*, January 1994; *Biological Assessment of the Proposed Arana Gulch Upper Harbor Parking, Dry Boat Storage and Dredge Yard Expansion Project,* dated February 12, 1999; Coastal Permit files: 3-81-140, 3-82-217, 3-84-13, 3-84-147, 3-94-13, 3-95-10, 3-95-067, 3-95-067-A2 to Santa Cruz Port District; Consistency Determinations: CD-12-81, CD-46-83, CD-59-84, CD-31-85; and City of Santa Cruz and County of Santa Cruz Local Coastal Programs.

Agency approvals ..... For near shore dredge disposal pipeline: Monterey Bay National Marine Sanctuary (MBNMS) approval dated September 30, 1997; U.S. Army Corps of Engineers (ACOE) approval (CESPN-CP-RS: 1145b) dated September 25, 1997; California State Lands Lease PRC 2836.9. For maintenance dredge operation: (Pending) ACOE Section 404 Clean Water Act application No. 25179S, State Lands Lease PRC 2836.9, Pending State Parks Temporary Use Permit.

Staff recommendation ..... **Approval with Conditions**

Summary of Staff Recommendation

Staff recommends that the Commission **approve, with conditions,** the proposed dredging, dredge material disposal, and temporary offshore disposal pipeline at Santa Cruz Harbor. The project is necessary to restore previously dredged depths in existing navigational channels, turning basins, berthing areas and boat launching ramps as allowed under Coastal Act § 30233. The project is essential for recreational boaters, commercial fisherman and various vessels, as well as other coastal dependent and coastal related operations that make use of the Santa Cruz Harbor, as called for in Coastal Act § 30234.

While the proposed dredging, dredge material disposal, and temporary offshore pipeline would facilitate the continuance of high priority uses under the Coastal Act, they nevertheless raise Coastal Act issues pertaining to the protection of marine resources and environmentally sensitive habitats, maintenance of water quality, preservation of public viewsheds, and minimizing restrictions to public access and recreation.

Generally, the greatest potential for environmental effects from dredge operations lies in the benthic environment. In this case, the subject benthic environment includes ocean bottom flora and fauna of the inner harbor areas and also the sandy intertidal areas of Harbor Beach and Twin Lakes State Beach. These environments are dynamic and contain ever-changing habitats for a variety of benthic species. While the proposal to dispose of dredge material into the surfline and nearshore environment contains the potential to impact marine resources, this permit provides mitigation measures to minimize adverse environmental effects to such resources. Impacts to marine resources would also be temporary in nature and recolonization by organisms would occur over time. In addition, because this permit only allows the disposal of sediments that are suitable for purposes of beach replenishment, long-term adverse impacts to marine resources and environmentally sensitive species and habitats will be avoided.

Water quality impacts resulting from dredging operations can occur through a number of variables including dissolved oxygen, pH, salinity, total suspended solids, and turbidity. While changes to these water quality variables would result from the proposed dredge operation, pre-dredge ambient water quality conditions would recur shortly after each dredge episode. Thus, impacts to these water quality variables are expected to be adverse but short-term and minor in magnitude and scope. In addition, this permit requires that, prior to the disposal of dredge material, the biological, chemical, and physical qualities of sediments be determined through a process of sediment sample analysis. Once the quality of sediments is determined, this permit also requires that the suitability of dredge materials for beach replenishment will be determined by an interagency group consisting of representative from the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Central Coast Regional Water Quality Control Board, California Coastal Commission, State Lands Commission, and Monterey Bay National Marine Sanctuary prior to approving the disposal of dredge material. Given all these requirements, the project will not adversely impact water quality.

The project will affect public views in two ways: (1) the floating dredge itself, along with any floating sections of pipe; and (2) sections of large-diameter pipe placed on the beach to transport sediment for beach replenishment. However, none of these impacts would result in a significant impairment of scenic resources, for the following reasons: (1) the presence of the dredge will simply blend in with other

vessels already visible and should not be counted as an adverse impact, and (2) the surface-lain flexible piping for beach replenishment will be similarly temporary and vary in locale, depending on the particular portion of beach being replenished.

Finally, adverse impacts to public access are possible, but will be of limited duration. The flexible above-ground pipelines used to transport suitable dredge spoils to designated beach replenishment sites create, from time to time as they are move about, a modest impediment to pedestrian travel along or to the beach. These pipelines are generally 16 inches in diameter, and may need to be traversed by persons walking across the beach. However, the conditions of this permit require that the Port manage the placement of these pipelines so that they do not form an unintentional continuous barrier, particularly with respect to the less-nimble beach visitors. Overall, the dredge program is necessary to protect Coastal Act priority uses. Although the transport of dredge materials to beach replenishment sites may potentially impact public access on Santa Cruz Harbor Beach and Twin Lakes State Beach, staff recommends that the dredge program is essential to allow for commercial and recreational boating access. In addition, staff notes that beach replenishment under the proposed project will expand beach area and benefit the overall long-term public use of Harbor Beach and Twin Lakes State Beach. As such, staff recommends that the project is consistent with the public access and recreation policies of the Coastal Act.

Staff Note

Pursuant to Coastal Act § 30610(c), this permit does not apply to entrance channel dredging undertaken by the Santa Cruz Port District. Coastal Act § 30610(c), states that no coastal permit is required for "maintenance dredging of existing navigation channels or moving dredged material from those channels to a disposal area outside the coastal zone, pursuant to a permit from the United States Army Corps of Engineers." However, pursuant to Coastal Act § 30106, a coastal permit is required if dredge material from the harbor entrance channel is proposed for *disposal* onto areas in the coastal zone. The Port District has requested to dispose of entrance channel dredge material into the surfline at Harbor Beach and Twin Lakes State Beach or through a temporary offshore pipeline. These areas are located within the coastal zone. Therefore, this coastal permit applies only to the *disposal* of entrance channel materials, and no coastal permit is required for *dredging* of materials from entrance channel areas.

Staff Report Contents

1. Staff Recommendation on Permit

The staff recommends that the Commission, after public hearing, **approve** the proposed permit subject to the standard and special conditions below. Staff recommends a **YES** vote on the following motion:

Motion. I move that the Commission approve Coastal Development Permit Number 3-00-034 pursuant to the staff recommendation.

Staff Recommendation of Approval. Staff recommends a YES vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve a Coastal Development Permit. The Commission hereby approves the coastal development permit on the ground that the development as subject to conditions, will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either: (1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment; or (2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the development on the environment.

2. Conditions of Approval

Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit amendment is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and

conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

Special Conditions

All conditions of coastal development permit 3-86-175 (Permanent On-shore Disposal Pipeline), attached as Exhibit D, except as modified by this permit or other permits approved by the Commission or by actions of the Executive Director remain in full force and effect.

A. OffShore Disposal Pipeline

1. The permittee shall ensure that, at the sandy beach area of Harbor Beach, the near shore pipeline is at all times buried to a depth of at least 2 to 3 three feet below the sand. This permit does not authorize any rip-rap or other protective devices or measures to protect the offshore disposal pipeline.

2. This permit authorizes the installation of an offshore pipeline no earlier than November 1 and requires that it be removed by May 15 of the next year.

B. Maintenance Dredge Operations

1. **Scope of Permit.** This permit authorizes dredging and disposal of harbor sediments at a rate of 10,000 cubic yards per year (cy/yr) for the inner harbor and 350,000 cy/yr for entrance channel sediments, in coordination with pending ACOE Permit 25179S. If the ACOE permit is amended to allow for more dredging and disposal of up to 400,000 cy/yr, a corresponding increase is allowed under this permit, consistent with ACOE requirements. Any proposed disposal amount over this figure shall require an amendment to this permit. All dredge operations shall be consistent with the Santa Cruz District Dredge Operation Manual revised March 6, 2000, except as modified by Special Condition 7 below.

   a) This permit authorizes a normal Santa Cruz Harbor dredge disposal operation between November 1 and April 30, for a period of five years commencing with the date of permit issuance. Prior to the expiration of this permit, the permittee may submit an amendment request to the Commission to extend the permit for five additional years.

b) Dredge materials shall be over 80% sand and disposed of through the permanent pipeline approved by Coastal Permit 3-86-175 or the temporary offshore disposal pipeline approved by this permit (3-00-034).

c) All dredge materials shall be tested according to the most current ACOE and USEPA testing methods and/or procedures.

d) All dredge materials shall meet Regional Water Quality Control Board (RWQCB) and U.S.E.P.A. Clean Water Act Beach disposal standards.

e) The priority site for dredge material disposal location is into the surfline at Harbor Beach and Twin Lakes State Beach. Use of the offshore disposal pipeline shall only occur when hydrogen sulfide odor is present in quantities that would affect beach users or adjacent residents, when onshore winds exist, or when beach or weather conditions conflict with beach users.

2. **Conformance with ACOE Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review a copy of the ACOE permit (No. 25179S), letter of permission, or evidence that no ACOE permit is necessary, and concurrence by the U.S. Environmental Protection Agency for disposal of dredge spoils.

3. **Conformance with Department of Parks and Recreation Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review a copy of the California Department of Parks and Recreation (DPR) permit, letter of permission, or evidence that no DPR permit is necessary.

4. **Conformance with National Marine Fisheries Service (NMFS) Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review evidence of consultation with the NMFS as to the presence or absence of Steelhead Trout and Tidewater Goby in harbor areas subject to dredge operations. If the NMFS determines that either of these species are present, then the Port District shall consult with the Executive Director as to whether a permit amendment is necessary to prevent impacts to the Steelhead trout or Tidewater goby.

5. **Conformance with U.S. Fish & Wildlife Service Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review evidence of consultation with the USFWS as to the presence or absence of Steelhead Trout and Tidewater Goby in harbor areas subject to dredge operations. If the NMFS determines that either of these species are present, then the Port District shall consult with the Executive Director as to whether a permit amendment is necessary to prevent impacts to the Steelhead trout or Tidewater goby.

6. **Conformance with Regional Water Quality Control Board Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT, permittee shall submit to the Executive Director for review a copy of a valid Regional Water Quality Control Board

(RWQCB) permit, letter of permission, or evidence that no RWQCB permit is necessary.

7. **Conformance with Dredge Operation Manual.** PRIOR TO COMMENCEMENT OF OPERATIONS AUTHORIZED UNDER THIS PERMIT. The Santa Cruz Port District shall submit to the Executive Director for review and approval a revised dredge operation manual which includes:

   a) Rewording of Section III.A (Hours of Operation) which states that only by approval of the Executive Director can the dredge operation schedule include additional days per week.

   b) Rewording of Section V, Item B.5 (Dredge Material) which states that dredging equipment shall only be allowed on the beach during the dredge operation season between November 1 to May 15.

   c) Add provision to Section VII (Reports) which requires the submission of a copy of the post-dredge report to the Executive Director for review.

   d) Add provision to Section VIII (Water Pollution) which requires the Port District notify the Executive Director in the event that a foreign substance spill occurs as a result of dredge operations.

   e) Delete sentence 5 of Section V.C.1 (Dredge Material).

   f) Add provision to Section VI (Sediment Sampling) stating that sediment sampling and testing shall also be accomplished under the most current ACOE and USEPA methods, procedures, and protocols.

   g) Add Coastal Permit 3-00-034 to the list of effective Coastal Permits.

   Once approved by the Executive Director, the Port District shall continue to follow the Dredge Operation Manual and improve upon operations and take corrective measures as problems arise. Any change in operation shall be done in consultation and with the review and approval of the Executive Director or Commission as appropriate. All personnel involved in the dredging and disposal operation shall follow the manual. Failure to comply with its provisions will be considered a violation of this permit subject to penalties specified in the Coastal Act.

8. PRIOR TO COMMENCEMENT OF INDIVIDUAL DREDGING EPISODES, the Santa Cruz Port District shall submit to the Executive Director for review and approval,

   a) Sampling Analysis Plan (SAP), describing sediment sampling locations and testing protocols. The SAP must be approved by the Executive Director prior to sediment sampling. The SAP must include a pre-dredge bathymetric survey.

   b) Dredge material Analysis (Chemical and Physical), sampling and testing information, and Regional Water Quality Control Board water quality certification or waiver for disposal of materials.

   c) Dredged materials shall be segregated according to suitability, as determined by the U.S.

Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and U.S. Environmental Protection Agency (USEPA) review of sediment sampling test results, and disposed of accordingly. Uncontaminated dredged materials suitable for beach replenishment will be disposed of at the surfline of Harbor Beach and Twin Lakes State Beach or through the off shore disposal pipeline. **Dredging and disposal from areas where samples do not meet the standards for beach or offshore disposal will require alternative disposal methods that are not approved by this permit. A separate Coastal Development Permit or Amendment to this Permit is required if dredge materials do not meet standards for beach or offshore disposal.**

d) Dredging Operation Plan that includes plans showing specific area(s) and volume(s) to be dredged.

e) Monterey Bay National Marine Sanctuary: Evidence of approval from the Monterey Bay National Marine Sanctuary for disposal of dredge materials or tailing water to Sanctuary receiving waters.

f) Department of Parks & Recreation: A current lease and/or approval as required by the Department of Parks and Recreation for deposition of dredged sand material from the harbor entrance and inner harbor and temporary placement of dredge equipment on portions of Twin Lake State Beach between 6th and 7th Avenues.

9. Dredging equipment, including pipelines and booster pumps, shall be maintained and inspected by Port District staff on a regular schedule to ensure proper operation and to eliminate any potential waterway or beach access conflicts.

10. SUBSEQUENT TO COMPLETION OF INDIVIDUAL DREDGING EPISODES, the Santa Cruz Port District shall submit to the Executive Director for review and approval,

a) Post-Dredge Bathymetric Survey

11. Monitoring Report Submittal. The Santa Cruz Port District shall continue to submit for Executive Director review and approval at least once every three years a report outlining compliance with the operation manual provisions, success of beach nourishment, and any necessary corrective measures. The next report is due July 2001 and a following report in July 2004.

12. Public Access. Permittee shall ensure that dredge operations are conducted as to minimize, to the greatest extent possible, any interference with public access to and along the Santa Cruz Port District Beach and Twin Lakes State Beach. In particular, the permittee shall work with the dredge operator to implement the following measures for those pipeline segments occupying the beach but not in active use. Short-term measures may include, but are not limited to, uncoupling segments to allow unimpaired pedestrian movement, or building small-scale sand ramps over the pipeline. When not in use during the dredge season, the permanent surfline disposal pipeline shall be pulled away from the surfline and buried under 2 to 3 feet of sand and the base of small bluff fronting East Cliff Drive.

3. Recommended Findings and Declarations

The Commission finds and declares as follows:

A. Project Background

Project Location & Setting

Santa Cruz Small Craft Harbor is located in the City of Santa Cruz, at the northern tip of the Monterey Bay, and between Twin Lake and Seabright State Beaches. The Harbor is one of only six harbors located along the Central Coast Area, and lies at the terminus of Arana Gulch amidst the surrounding urban development of the City of Santa Cruz. The San Lorenzo River enters the Monterey Bay approximately 3,000 feet to the west of the Harbor, and several lagoons including Schwan, Corcoran, and Moran, spot the coast between the Harbor and Soquel Point to the east. The coast between Sandhill Bluff, to the north, and Capitola, to the south, is characterized by mostly rocky headland with steep sandstone and shale bluffs and intermittent sandy beaches.

The Santa Cruz Small Craft Harbor fronts the Monterey Bay National Marine Sanctuary (MBNMS) which extends south from a point in Marin County to Cambria Rock in San Luis Obispo County, and extends from high tide seaward typically about 35 miles offshore. The Monterey Bay National Marine Sanctuary is the nation's eleventh largest marine sanctuary, protecting marine resources that include the nation's most expansive kelp forests, one North America's largest underwater canyons, and the closest deep ocean environment to the continental United States.

The Harbor was initially constructed from April 1962 through January 1964, and was subsequently expanded into the upper portion of the former Woods Lagoon in 1972. Permanent jetties placed along the east and west sides of the entrance provide year-round access to the Pacific Ocean. However, winter storms occasionally render the harbor entrance impassable because of the Harbor's entrance configuration. In total, the area of the Harbor encompasses approximately 38 acres of land and 52 acres of water. Within these areas one can find a variety of public amenities including approximately 920 berths and dory ties for commercial and recreational boats, 3.3. acres of sandy beach area on both sides of the jetties fronting the harbor mouth, and over 1,000 parking spaces that support marine related uses. The Harbor is bisected by the Eaton Street bridge. Areas to the north of the bridge are commonly referred to the upper harbor, and those to the south are termed the lower harbor.

Overall, the Harbor facilitates ocean-related functions such as boat-launching, berthing for commercial vessels and recreational boats, boat repair areas, marine-related retail/commercial businesses, restaurants, sailing programs, yacht club and boat sales. The vast majority of boat use at the Harbor is for recreational purposes, as opposed to commercial fishing.

The inner harbor receives sediment primarily from the Arana Gulch watershed, while the entrance channel and lower harbor receive sediment primarily by way of littoral drift at the harbor mouth. Shoaling of the harbor mouth entrance is the result of natural littoral drift processes that are unavoidable and can only be corrected by regular maintenance dredging. Sediments originating from the Arana Gulch watershed have proved to be the most problematic for the Harbor in recent times. On average, the Harbor receives approximately 1,000 to 15,000 cubic yards of sediment per year from the Arana Gulch

watershed. Much of this sediment collects at the Upper Harbor, and, at times, has rendered these areas impassable to boats (See Figure 1 Below). The Arana Gulch watershed is three-square miles in size and contains steep slopes, various land uses, and development types that, when put together, have created a situation of increased unnatural erosion rates. Though the source of these erosion materials may be out of the Port District's control, it is a regular participant in the Arana Gulch Watershed Alliance (AGWA). AGWA constructs and maintains sediment basins and a variety of other habitat improvement projects along Arana Creek that are aimed at reducing erosion rates.

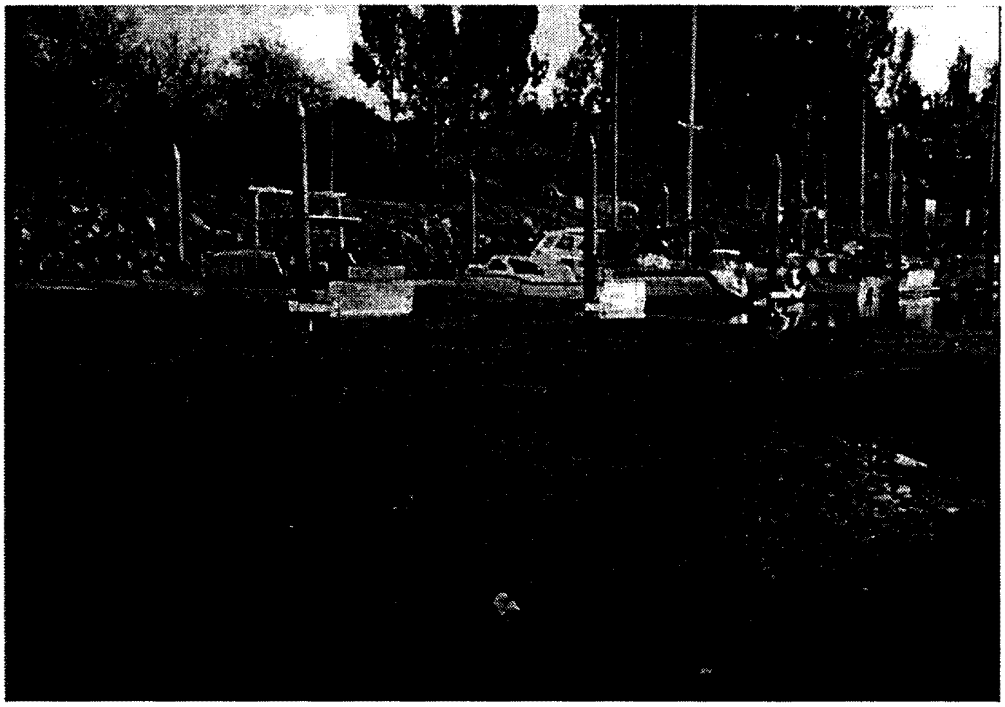


Figure 1. Complete Restriction to Boat Navigation at Upper Harbor after Extreme Sedimentation event.

Permit History

The U.S. Army Corps of Engineers (ACOE), in accordance with its mandate for maintaining navigable harbors and inland waterways, as defined in Section 10 of the Rivers and Harbors Act, has authority over and responsibility for maintaining the federal channel at the Santa Cruz Harbor. Beginning in 1965, the ACOE was the first agency to conduct dredge operations at Santa Cruz Harbor. However, the ACOE handed over its responsibilities to maintain the federal channel to the Port District in 1988. Thus, the Port District is now responsible for dredging both entrance channel and inner harbor areas until the year 2013, under an agreement between the Port District and ACOE.

Dredge operations at the Harbor have previously been authorized by a series of Coastal Permits and Consistency Determinations. Some of these include 3-81-140 for dredging between 1981 and 1983, 3-84-13 for dredging between 1984 and 1986, and CD-12-81, CD-46-83, CD-59-84, and CD-31-85 for individual dredging episodes corresponding to the year of issuance. In order to better facilitate individual dredging episodes, the Commission authorized (Coastal Permit 3-86-175) for the installation of a

permanent on-shore dredge disposal pipeline in 1986. The on-shore disposal pipeline connects to the floating dredge barge and is located just under the sandy surface of Santa Cruz Port District Beach between 5th and 6th Avenues. From here, the Port temporarily connects additional piping to route dredge materials to the surf line. In addition, Coastal Permit 3-86-175 required the Port to submit, for review and approval by the Executive Director, a dredge operation and maintenance manual. The Port fulfilled this condition and has subsequently submitted modifications which have been approved by the Executive Director. More recently, the Commission authorized (3-95-067) a five-year maintenance dredge operation; this previous project is largely representative of the current application. Coastal Permit 3-95-067 has since expired.

Special condition 3 of Coastal Permit 3-95-067 (recently expired dredge maintenance permit) required that the Port District, "improve upon operations and take corrective measures should problems arise. Changes in the operations shall be done in consultation and with the review of the Executive Director or Commission as appropriate." The Port District submitted a revised dredge operation and maintenance manual (dated March 6, 2000) with this application. As stated in the findings below, a condition of this permit requires the Port District to submit a revised manual to the Executive Director for review and approval.

Conditions of Coastal Permits 3-86-175 and 3-95-067 have required that the Port District submit for Executive Director review and approval, at least once every three years, a report outlining compliance with the operational manual provisions, success of beach nourishment, and any necessary corrective measures. To date, the Port District has submited all required reports within a reasonable time period.

Project Description

The Santa Cruz Port District has requested approval of: (1) a ten-year permit to annually dredge approximately 10,000 cubic yards of sediment from inner harbor; (2) the annual disposal 10,000 cubic yards of material from the inner harbor and approximately 350,000 cubic yards of sediment from harbor entrance channel into the intertidal zone and sandy beach area of Santa Cruz Port District Beach and Twin Lakes State Park Beach; and (3) after-the-fact approval of a temporary offshore dredge disposal pipeline.

The Port District proposes to dispose of dredge materials into the surf line between November 1 and April 30 of each year in order to avoid the high beach use season, while a proposed temporary offshore pipeline is proposed to be used when hydrogen sulfide odor or onshore winds are present, or when beach conditions and weather create conflicts with beach users.

Dredge materials to be deposited directly into the surf line would travel from the dredge barge through a Commission approved (3-86-175) permanent pipeline that terminates at the harbor's east jetty. From here, the Port District would connect a flexible high-density polyethylene (HDPE) 16-inch surf line disposal pipeline. The surf line disposal pipeline would then be moved to various portions of Harbor Beach and Twin Lakes State Beach by way of bulldozer in order to optimize beach replenishment.

The offshore disposal pipeline was used during the 1997, 1998, and 1999 dredge seasons and is used to mitigate the noxious odors of hydrogen sulfide that can occur when seaweed gets entrained into the sand in the harbor entrance during storm activity. The offshore disposal pipeline emanates from a Y-pipeline

connection at the east jetty. From the east jetty pipe connection, the offshore pipe parallels the jetty out into the ocean to a point approximately 150 yards off 6th Street. The temporary disposal pipe does not protrude past the east jetty nor does it traverse through the entrance channel. (See Figure 2 below for location of temporary offshore and surfline disposal pipelines) The offshore pipe rests on the ocean floor and is weighted by a 3,000 pound Danforth anchor, except when it is filled with air in order to raise and unbury it. The anchor has a pendant wire to a large float marker that acts as a pick-point for retrieval of the anchor. The offshore pipe is a temporary feature and is placed at the beginning of the dredge season on November 1, and remains in place until the end of the dredge season (May 15). The Port District proposes to use the pipeline whenever hydrogen sulfide odor is present, onshore winds exist, or when beach or weather conditions conflict with beach users. The MBNMS (letter dated 9/30/97) and ACOE (CESPN-CP-RS:1145b) have both approved the offshore disposal pipeline. According to the Port District, the offshore pipe has caused no safety issues over the course of the last three dredge seasons.

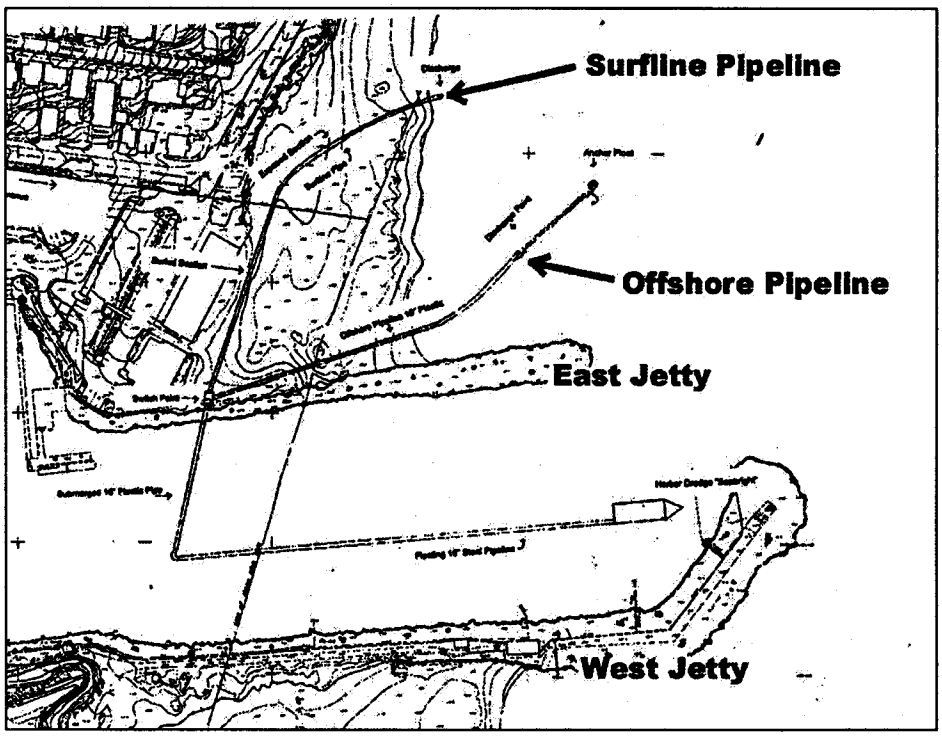


Figure 2. Location of Surfline and Temporary Offshore Dredge Disposal Pipelines.

Sediment Analysis and Dredging Operations. Proper dredge disposal is a function of the biological, chemical and physical qualities of sediments as determined through sediment sample analysis. Previous test results have shown that the harbor entrance channel is primarily sand materials, while inner harbor areas typically contain a mixture of sand, silt, and clay. On the whole, biologic or chemical contaminants have not been an issue at the harbor. However, in order to ensure impacts to water quality and identified sensitive species and habitats are avoided, sediment testing is required prior to dredging to determine the nature and extent of potentially contaminated sediments, and the disposal sites suitable for sediments from each dredging area. Under the conditions of this Coastal Permit (3-00-034), sediment samples will be collected from all of the proposed dredging areas and tested under the most current guidelines of the

ACOE and U.S Environmental Protection Agency (USEPA). Currently, proposed dredge materials are tested according to the guidelines of the ACOE and USEPA document titled "Evaluation of Dredge Material Proposed for Discharge into Waters of the U.S. – Testing Manual" (generally know as the Inland Testing Manual or ITM). Sediment samples will be tested using ACOE and USEPA approved methods and guidelines and analyzed, at a minimum, for: 1) metals; 2) pesticides and PCBs; 3) butylins; 4) organotins; 5) total and water soluble sulfides; 6) total solids/water content; 7) total volatile solids; 8) total organic carbon; and 9) grain size distribution.

However, prior to each dredging episode and before sediment testing can occur, a Sampling Analysis Plan (SAP) must be prepared, describing proposed dredge areas, sediment sampling locations and testing protocols. Actual sampling and testing cannot occur until the Executive Director approves the SAP. Following a review of sediment sampling test results, the ACOE and CCC will, after considering comments from USEPA, MBNMS, California Department of Fish & Game (DFG), and U.S. Fish & Wildlife Service (USFWS), make a determination of discharge site suitability. Following this determination a Dredge Operations Plan (DOP) will be submitted. The DOP will include site plans showing the specific area(s) and volume(s) to be dredged, including planned dredge depths and discharge sites.

Dredging equipment used by the Port District is described in detail in the submitted revised Dredge Operations Manual (Dated March 6, 2000 and attached as Exhibit B). As proposed by the Port District, dredging would be conducted using a hydraulic suction dredge, which removes and transports dredged material in a liquid slurry through 16 inch high density polyethylene (HDPE) pipelines, thereby minimizing disturbance and resuspension of sediments at the dredge site. The dredged slurry would then be pumped to near shore areas at Harbor Beach or Twin Lakes State Beach for beach replenishment or through the offshore pipeline which still adds sandy material to the littoral cell thereby also serving to replenish downcoast beaches. Overall, dredged materials suitable for beach replenishment are discharged above or just below the high tide level from HDPE pipelines set along the beach or just offshore.

This permit does not authorize the dredging and disposal from areas where samples do not meet minimum chemical, biologic, and grain size standards. Sediments that do not meet these standards require alternative disposal methods that are not approved by this permit. In general, potential alternative disposal locations for materials not qualifying for disposal under this permit include: (1) off shore aquatic disposal at a federally approved site (i.e. SF-12 or SF-14 for Central Coast areas), or (2) inland disposal (i.e. landfill). The proper location of alternative disposal is dependent upon the failure of sediment to meet a particular standard. For example, sediments high in chemical contaminants would most likely only be eligible for disposal at a landfill, while sediments only not meeting the grain size requirement might be disposed of at an approved off shore location. In the past, the Port has, on a limited number of occasions, encountered materials which were not eligible for disposal under a Commission authorized permit. Under these circumstances, the Port has submitted an amendment request for disposal at an approved off shore or inland site.

B. Coastal Act Issues

1. Land Use Priorities

Coastal-dependent and coastal-related development are among the highest priority Coastal Act uses.

The Coastal Act defines coastal-dependent and coastal-related as follows:

> *§ 30101: "Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*
>
> *§ 30101.3: "Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

Coastal Act § 30001.5 states in part:

> *The Legislature further finds and declares that the basic goals of the state for the coastal zone are to:*
>
> *(a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources....*
>
> *(c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.*
>
> *(d) Assure priority for coastal-dependent and coastal-related development over other development on the coast.....*

Coastal Act Sections 30234, 30234.5 and 30255 also provides:

> *§ 30234: Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.*
> *§ 30234.5: The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*
>
> *§ 30255: Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.*

The Santa Cruz Harbor is one of only six harbors located along the Central Coast, and is the primary recreational port in Monterey Bay. The Santa Cruz Port District maintains approximately 920 berths and

dory ties within the Harbor which are used by a variety of recreational and commercial boats.

Section 30234 of the Coastal Act provides that facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Section 30234.5 states that the economic, commercial, and recreational importance of fishing activities shall be recognized and protected. Commercial and recreational boating and fishing are coastal-dependent priority uses that can not function without sufficient harbor depths. Hence, the maintenance of adequate berthing and navigational depths in the Harbor is essential, and must be considered a high priority under the Coastal Act. Likewise, the installation of a offshore dredge disposal pipeline serves to implement the maintenance of berthing and navigational depth, and, as such, is also considered a high priority under the Coastal Act.

The proposed dredging activities not only support coastal-dependent uses, but are integral to such uses and therefore have a priority under the Coastal Act. In addition, the use of the offshore dredge disposal pipeline directly supports high priority Coastal Act uses. Accordingly, the Commission finds that the proposed developments are high priority coastal uses that are consistent with the land use priorities of Coastal Act Sections 30001.5, 30222, 30222.5 and 30255.

2. Marine Resources & Environmentally Sensitive Habitats

Coastal Act Sections 30230, 30231, and 30233 afford protection of marine resources and their associated biological productivity and state,

> *§ 30230: Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*
>
> *§ 30231: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*
>
> *§ 30233: (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(l) New or expanded port, energy, and coastal-dependent industrial facilities, including*

commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(7) Restoration purposes.

(8) Nature study, aquaculture, or similar resource dependent activities.

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division.

2a. Biologic Resources

The Santa Cruz Small Craft Harbor is connected to the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS includes many of the most valuable marine resources within the Central Coast

area and encompasses over 5,300 square miles of protected marine waters and includes a diverse complex of marine habitats including deep sea, open ocean, kelp forests, sandy beaches, rocky seashore, estuaries and sloughs. These habitats support a variety of marine life including more than 345 species of fish, 94 species of seabirds, 26 species of marine mammals, 450 species of algae and one of the worlds most diverse invertebrate populations.

Beginning in 1962, the Santa Cruz Small Craft Harbor was developed in a coastal estuary known formerly as Woods Lagoon that formed at the base of the Arana Gulch watershed. Water originating from the Arana Gulch watershed drains into Harbor through four 72-inch culverts that extend beneath the Upper Harbor parking area. Except for the coastal salt marsh and brackish marsh habitat areas of Arana Gulch to the north, the Harbor is now essentially a man-made environment that is devoid of the natural estuarine habitat that once prevailed. Open waters of the harbor are surrounded, from the east and west jetties at the Harbor mouth to the north harbor dry boat storage yard, entirely by urban development. Thus, for the most part, the tidal waters of the Harbor are an enclave that is surrounded by urban harbor development consisting of floating docks, rip-rap, roads and parking lots, boats, and various buildings. Nonetheless, some marine mammals, fish and seabirds make use of the urban aquatic and terrestrial environments provided in the Harbor. In particular, CCC staff has observed seals resting upon the occasional sand bar and shorebirds resting upon the various poles, masts, and other structural development of the Harbor.

Generally, the greatest potential for environmental effects from dredged material discharge lies in the benthic environment. In this case, the subject benthic environment includes ocean bottom flora and fauna of inner harbor areas and also the sandy intertidal areas of Harbor Beach and Twin Lakes State Beach. Under the proposed project, dredge slurry would be pumped from Harbor navigational channels and berths into the surfline at Harbor Beach and Twin Lakes State Beach or immediately offshore in the vicinity of the harbor's east jetty. The substrate of benthic environment in these locations consists of sandy beach and/or a sandy ocean bottom. These environments are dynamic and contain ever-changing habitats for a variety of benthic species.

More specifically, sandy beach areas included in the project area are very harsh environments, encompassing most of the rigors of the rocky intertidal (high wave action, wide temperature range, periodic tidal exposure) with the addition of high abrasion levels and lack of firm substrate for attachment. Beach fauna exhibit the characteristics of communities in harsh environments, namely low species diversity but large numbers of individuals of each species.[1] Because meiofauna (organisms inhabiting the interstitial spaces between the sand grains) are a distinct fauna from the more obvious macrofauna, The distribution of meiofauna is strongly influenced by the grain size of the sand. If there is a significant silt component in the sediment, the interstitial spaces are filled by the silt particles, impacting the interstitial fauna. However, in this case, because Special Condition B.1.b of this permit only allows the disposal of sandy material (over 80%), the impacts to meiofauna will be temporary and less than significant.

Despite the barren appearance of sand beaches, they harbor a diverse and abundant assemblage of

[1] Jim Oakden, Moss Landing Marine Laboratories, Monterey Bay National Marine Sanctuary Site Characterization.

macrofauna. These animals generally live buried in the sand, and are highly mobile, and are somewhat more difficult to study than, for instance, the more sessile organisms of rocky intertidal zones. Because the beach is a physically rigorous environment, physical factors often limit the distribution of these organisms.

The areas which macrofauna and meiofauna depend upon are subject to the influences of waves and tidal currents that keep beach material (their habitat) in continuous motion. Material generally moves across the beach or foreshore or even offshore in a process called littoral transport. This process generally moves material in an easterly direction at Santa Cruz Small Craft Harbor and is most rapid under storm conditions. Beach structure at the project site is consistent with other Central California beaches in that it exhibits a classic beach structure that is are backed by a coastal cliffs, followed to seaward by the berm, beach flat, trough, and bar. In addition, there is a seasonal onshore-offshore movement of sand here, with steeper beach slopes and offshore bars in the winter, and gradual consistent slope in the summer.

Wave action produces a coarse, poorly consolidated, well-sorted (i.e. low variation in grain size), and therefore easily moved beach deposit behind the surf zone. Large waves lift these surface sediments into a granular suspension tossed shoreward and then seaward by the passing waves. [2] Extreme storm waves can remove as much as a meter of surface sediments at water depths greater than 10 meters. The physical stability of the beach deposit increases with increasing water depth as wave-generated bottom currents decrease. As a result, bottom sediments grade from coarse to fine sand with increasing water depth and decreasing wave disturbance. [3] Thus, under the proposed project, the relatively coarse sandy dredge materials are expected, for the most part, to remain deposited on beach areas as they migrate downcoast through the process of littoral drift.

In terms of species inhabiting inner harbor areas, according to a biological assessment of the upper harbor by Ecosystems West, dated February 12, 1999, the Tidewater goby (*Eucyclogobius newberri*) historically occurred in Woods Lagoon. Tidewater Goby is a federally listed endangered species. In particular, Tidewater gobies were known to occur within Woods Lagoon in 1984, although recent studies to establish presence or absence have not been conducted. A March 12, 1993 letter from Keith Anderson, Senior Fisheries Biologist, of the California Department of Fish & Game (DFG), concludes that the Tidewater goby are probably not present in the developed harbor area (See Exhibit D for 1993 DFG letter). In addition, the February 12, 1999 biological assessment states that Steelhead trout (*Oncorhynchus mykiss*) historically occurred within Woods Lagoon. Steelhead trout is a federally listed threatened species. However, recent studies to establish presence or absence of Steelhead trout within developed harbor areas have not been conducted. The Commission notes, however, that ideal habitat for both of these species does not occur in the harbor, but rather may be located to the north of the harbor in Arana Gulch and outside of areas subject to dredge operations. Nonetheless, it is possible that these species may be impacted in some way by dredge operations. As such, Special Conditions 4 and 5 require that, in the event the NMFS or USFWS determine that the Steelhead trout or Tidewater goby are present, then the Port District shall consult with the Executive Director as to whether an amendment to this permit is necessary in order to prevent impacts to these species. In addition, the Commission also finds

[2] Bascom, W.N., *Waves and Beaches, the Dynamics of the Ocean Surface,* published 1964.
[3] Oliver et al., *Caging Manipulations in Marine Soft-Bottom Communities: Importance of Animal Interactions or Sedimentary Habitat Modifications,* 1980.

that, only as conditioned by Special Conditions 1, 4, 5, 6, 7, 8, and 9 which ensure that impacts to all other marine resources and environmentally sensitive habitats and species are minimized, can the proposed project be found consistent with the above listed policies of the Coastal Act.

Furthermore, though the applicant has requested a permit life of 10 years, the Commission finds that a permit life of such length would be inconsistent with the resource protection policies of the Coastal Act. The areas subject to dredge operations are dynamic environments that are and will continue to be subject to a variety of natural and man-made processes. There is a myriad of potential future changed circumstances that may affect the future implementation of this permit. For example, the Harbor lies at the juncture of the Pacific Ocean and Arana Gulch watershed. There is a continual and substantial exchange of energy and matter between these two areas. In addition, various land uses and development types and biotic communities interact on a daily basis in this area. In short, potential future changed circumstances that may affect the implementation of this permit might include: (1) future listing of specie(s) that occurs within harbor areas, or (2) unforeseen rise in contaminant levels of harbor sediments from new upstream land uses or spill events. Therefore, in order to enable the implementation of this permit in a manner which best addresses potential future changed circumstances, the Commission finds that, only as conditioned by Special Condition 1(a), which limits this permit to a period of five years, can the project be found consistent with the above listed resource protection polices of the Coastal Act. The conditions of this permit enable the Port to apply for an amendment to extend this permit for five additional years prior to its expiration.

2b. Dredging and Dredge Spoils Disposal

Section 30233 of the Coastal Act allows for the dredging of harbor waters in order to maintain depths necessary for navigation where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. It also specifies that dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

Proposed dredging areas in the Harbor include areas where deposition routinely reduces depths in and around navigational channels and berthing areas. During extreme depositional events, vessels must time their maneuvers in and out of the Harbor with the tides. Maneuvering within the Harbor has also at times proved difficult during low tides when many vessels rest on the muddy bottom sediments. Continued sediment inflows can be anticipated. This can, at times, result in severe impairment of harbor capacity and risk to vessels if no action is taken. No feasible alternatives to the proposed dredging have been identified.

Impacts to biological resources are anticipated to be the same as those associate with previous annual dredge episodes. The primary impact to biologic resources resulting from dredging occurs through the disturbance, transport, and destruction of benthic organisms on and in the material to be dredged. However, recolonization by these organisms would occur over time. While, dredge material disposal may induce turbidity and cause stress on planktonic larvae and filter feeder organisms such as worms and shellfish, such stress would be temporary.

The removal of sediment from dredge areas could have short-term, adverse impacts on fish and fish habitats by temporarily increasing the Total Suspended Sediments (TSS) in the water column and possibly decreasing Dissolved Oxygen levels during dredge operations. However, as proposed, dredging will be conducted using a hydraulic dredge, which removes and transports dredged material as liquid slurry, thereby minimizing disturbance and resuspension of sediments at the dredge site. This will minimize adverse environmental impacts to marine and wildlife habitats and water circulation during dredging, consistent with Coastal Act requirements. Nonetheless, as discussed above, the project contains the potential to impact listed fish or fish habitat, namely the Steelhead Trout and/or Tidewater Goby. Potential impacts to these species are addressed through Special Conditions 4 and 5, as discussed above.

The proposed project represents a comprehensive program for operations and maintenance activities necessary to maintain and improve navigation channels and berthing areas for recreational boating and commercial fishing. Offshore and surfline disposal sites have been established for beach replenishment. The USACOE and MBNMS have approved these dredge disposal sites. Because there are no feasible less environmentally damaging alternatives available to maintain adequate depths within the Harbor; because feasible mitigation measures are provided through Special Conditions 1, 2, 4, 5, 6, 7, 8, 10, and 11 to minimize adverse environmental effects; and because suitable sediments will be conveyed to appropriate beach replenishment sites, the Commission finds that the proposed dredging project (as described by the Special Conditions above) is consistent with Coastal Act Sections 30230 through 30233 described above.

2c. Water Quality

Coastal Act § 30232 requires provisions to prevent spills and ability to contain and cleanup spills should they occur and states,

> *§ 30232: Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*
>
> *§ 30231: The biological productivity and the quality of coastal waters, [..] appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment,.....*

To date, prior to each dredge episode, the suitability of the proposed dredge material for disposal in any of the proposed aquatic locations has been evaluated by an interagency group consisting of representatives from the ACOE, the U.S. Environmental Protection Agency, The Central Coast Regional Water Quality Control Board, the Commission, the State Lands Commission, and the Monterey Bay National Marine Sanctuary. Advisory to this interagency group are the U.S. Fish & Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish & Game. The group has considered chemical and biologic test results, as well as grain size analyses, submitted by the Port

District. Since 1998, the interagency group has considered test results according to the guidelines within the testing manual entitled "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual (the Inland Testing Manual or ITM, published in February, 1998 by the U.S. Environmental Protection Agency and the ACOE). After considering test results, the group then reaches a consensus opinion as to whether or not proposed dredge material is suitable for aquatic disposal. This process would continue under this Coastal Permit.

Anticipated water quality impacts would occur through variables such as dissolved oxygen (DO), pH, salinity, total suspended solids (TSS), and turbidity. Turbidity near the dredging and disposal sites would increase because of additional TSS in the water column. DO levels in the water column would decrease during disposal events due to increased turbidity. While these impacts would occur, the pre-dredge operation ambient water quality condition recurs shortly after each dredging episode, and thus the impact to these water quality variables is expected to be adverse but short-term and minor in magnitude and scope. In addition, the conditions of this permit require evidence of approval from the California Regional Water Quality Control Board prior to dredge operations authorized under this permit.

To ensure that the proposed method of dredge spoil disposal is consistent with Federal, State, and local regulations regarding the protection of water quality, Special Condition 7 requires that the submission of specific dredge plans, for each dredging episode to be undertaken during the term of this permit, be accomplished with written evidence that the ACOE, Central Coast RWQCB, USEPA, and MBNMS have reviewed and approved the dredging operations or that no such approval is required. Therefore, as conditioned by Special Conditions 6, 7, 8, 10, and 11, the project will include measures and monitoring protocols to ensure protection of water quality and marine resources in Santa Cruz Small Craft Harbor and so will be in conformance with Sections 30230 through 30233 of the Coastal Act.

3. Visual Resources

Section 30251 of the Coastal Act states that the scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance, and requires in applicable part that permitted development be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, and to be visually compatible with the character of surrounding areas. Furthermore, Section 30240(b) of the Coastal Act states that development in areas adjacent to parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those recreation areas.

Dredge operations present a temporary intrusion into visual resource areas and occur generally within the harbor itself or areas of Port District Harbor Beach or Twin Lakes State Beach. The Harbor is generally visible from five separate public viewing areas. These include Arana Gulch to the south, the Murray Street bridge, Seabright State Beach to the west, Harbor Beach and Twin Lakes State Beach to the east, and the Monterey Bay to the south. In terms of scenic areas of importance, Harbor Beach and Twin Lakes State Beach represent an important public viewshed, from which ocean and beach views are afforded from East Cliff Drive.

The project will affect public views in two ways: (1) the floating dredge itself, along with any floating sections of pipe; and (2) sections of large-diameter pipe placed on the beach to transport sediment for beach replenishment.

However, none of these impacts would result in a significant impairment of scenic resources, for the following reasons: (1) the presence of the dredge will simply blend in with other vessels already visible and should not be counted as an adverse impact, and (2) the surface-lain flexible piping for beach replenishment will be similarly temporary and vary in locale, depending on the particular portion of beach being replenished.

Therefore, given its temporary and transient nature, and the fact that the proposed dredging and disposal activity will not significantly alter scenic public views at Santa Cruz Small Craft Harbor, the Commission finds that this project is consistent with Sections 30251 and 30240(b) of the Coastal Act.

4. Public Recreation and Access

Coastal Act § 30604(c) requires that every coastal development permit issued for new development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and recreation policies of [Coastal Act] Chapter 3." The proposed project is located seaward of the first through public road.

Coastal Act Sections 30210 through 30214 and 30220 through 30224 specifically protect public access and recreation. In particular:

> *§ 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> *§ 30211: Development shall not interfere with the public's right of access to the sea where acquired through use or legislative asuthorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*
>
> *§ 30212 (a): Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects....*
>
> *§ 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*
>
> *§ 30214 (a): The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case....*

> *§ 30221: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*
>
> *§ 30224: Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, [..] providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.*

Likewise, Coastal Act § 30240 (b) also requires that development not interfere with recreational areas and states,

> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Santa Cruz Harbor provides public access and recreational opportunities of regional and Statewide significance. These include boat launching, berthing for commercial vessels and recreational boats, boat repair areas, marine-related retail/commercial businesses, sailing programs, yacht club and boat sales. The proposed dredging project will strongly benefit public access and recreation, in two ways: (1) by restoring and maintaining adequate water depths in the harbor's navigation channels and berthing areas, and (2) by directing suitable sandy dredge spoils onto nearby beach areas for beach replenishment.

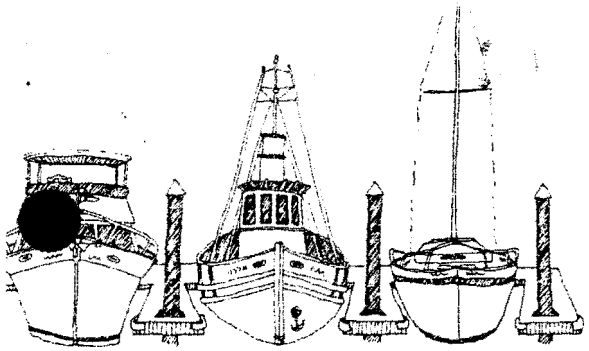
Adverse impacts to public access are possible, but will be of limited duration. First, the flexible above-ground pipelines used to transport suitable dredge spoils to designated beach replenishment sites create, from time to time as they are move about, a modest impediment to pedestrian travel along or to the beach. These pipelines are generally 16 inches in diameter, and may need to be traversed by persons walking across the beach. Placement of these pipelines can be managed so that they do not form an unintentional continuous barrier, particularly with respect to the less-nimble beach visitors.

In conclusion, the dredge program is necessary to protect Coastal Act priority dependent uses. Although the transport of dredge materials to beach replenishment sites may potentially impact public access on Santa Cruz Harbor Beach and Twin Lakes State Beach, the dredge program is essential to allow for commercial and recreational boating access. The permit is conditioned to minimize any possible continuous barrier effects due to pipelines at beach replenishment sites.

The project will protect boating and beach recreational opportunities consistent with Coastal Act Sections 30210, 30213, 30220, 30224, 30234 and 30234.5. Therefore, as conditioned by Special Conditions 1, 3, 6, 7, 8, 9, 11, and 12 which mitigate for potential beach access impacts, the proposed project would preserve public access and recreational opportunities and, a such, is consistent with the above-cited public access and recreational policies of the Coastal Act.

C. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary for Resources as being the functional equivalent of environmental review under CEQA. Accordingly, the Commission finds that as conditioned the proposed project will not have significant adverse effects on the environment within the meaning of CEQA; that there are no feasible alternatives which would significantly reduce any potential adverse effects; and, accordingly, the proposal, as conditioned, is in conformance with CEQA requirements.



SANTA CRUZ HARBOR

Gateway to the Monterey Bay
National Marine Sanctuary

March 8, 2000

Lee Otter
c/o Dan Carl
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060

SUBJECT: Application for Ten-Year Dredging Permit for Santa Cruz Harbor
a) Harbor entrance channel – 300,000 cubic yards of sand per year;
b) Santa Cruz inner-harbor – 10,000 cubic yards of sand, silt, clay per year

REFERENCE: Current Coastal Permit 3-95-67 (expires March 31, 2000)

Dear Lee:

Attached is a standard application for a coastal permit covering the subject dredging programs at Santa Cruz Harbor. Also attached are the following:

1. Graphics representing standard harbor dredging profiles;
2. Historical dredging statistics;
3. The Port District's *Dredging Operations Manual;*
4. A report on dredging operations for the last three years;
5. GeoSea Consulting's *Sediment Transport Analysis (STA)* report on the Santa Cruz Harbor area.

TIMING:

We ask that this permit be processed and issued, if possible, by June 2000. This will allow our planned July / August dredging of 12,000 cubic yards of material in the north harbor to be conducted during calm seas. This project requires that the sediment be transported by sea-going barge to SF-14, twelve miles southeast of the harbor. We need calm seas for this barge disposal operation. This 12,000 CY project is, of course, the subject of a separate Coastal Commission processing which is already on file.

Santa Cruz Port District
135 5th Ave., Santa Cruz, CA 95062 (408) 475-6161 FAX: (408) 475-9558 e-mail: scp

wv

SEDIMENT VOLUMES:

We have asked for 300,000 cubic yards per year as the standard for the entrance channel. Our historical volumes are appended to this application. The totals for the 1998-98 dredging season were 399,000 cubic yards, and in 1998-99 they were 317,000 cubic yards. We expect to reach 300,000 cubic yards of material again this year.

The Coastal permit has been for 250,000 cubic yards of material, but that seems to always need amending. We should not have a smaller amount than what is becoming normal.

The inner-harbor has been proposed at 10,000 cubic yards of material each year. Frankly, the cycle of Arana Gulch is so recent to us that no one really knows the average, but over the past five years, 10,000 cubic yards per year is a better estimate than 5,000. The material will, of course, have to be tested each episode, so the volume stated in the permit is not a permissive number at all. It just precludes having to amend the permit for say 6,000 or 7,000 cubic yards of material.

SEDIMENT TESTING:

We have proposed to the Corps of Engineers the following justification for new testing criteria:

Entrance Sediment – 300,000 CY of Sediment per Year

The material that fills the harbor entrance is overwhelmingly sand. Physical and chemical testing of this material commenced in the early '70's. The sediment has never tested at less than 95% sand[1], with the remainder being comprised of silts, clays and organics.

The receiving beach has always tested at 100% sand.[2]

Past testing protocols have required that the sediment samples not be taken until the harbor entrance shoals up with the material. This procedure causes dangerous conditions to exist for the period it takes to:

---

[1] Less than .125 mm grain size component from yearly samples.

[2] 1978 COE Santa Cruz Harbor Entrance Study by Moffatt and Nichol Engineers. Harbor te
1998, 1999.

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3-00-034
California Coastal Commission

A. Conduct sampling;
B. Complete the lab tests;
C. Publish results;
D. Analyze results (by all regulatory agencies);
E. Reach a consensus;
F. Authorize dredging to commence.

This procedure can take as long as six weeks – meanwhile, the navigation channel can be unpassable and hazardous.

This is a needless imposition. Harbor entrance material has always tested as sand and has never shown any chemical hits. We therefore propose that harbor entrance testing be conducted as follows:

November 1: Entrance dredging can commence. During first week of actual dredging operation, samples are taken directly from the disposal pipe on three separate days. Sediment samples to be aggregated and tested for:

Tier I: Grain size.

If samples are less than 92% sand, then samples will be tested for a full panel of chemicals, as per 99-3 and DMMO Guidelines or any superseding guidance.

Additional Testing: Port District would comply with any additional testing requirements during the dredging season.

This procedure prevents the harbor entrance from needlessly becoming hazardous. Although testing will not occur prior to the start of dredging, there is no historical evidence that the harbor entrance contains anything but clean sand. The proposed testing regime would, of course, continue to confirm this.

Inner Harbor Sediment – 10,000 Cubic Yards of Sediment per Year:

The inner-harbor receives sediment from two basic sources:

A. Material that has migrated northward from the entrance, being pushed in by wave and tide action. This material settles in the south harbor.

B. Sedimentary material from the 3 square mile Arana Gulch watershed which lies north of the harbor. Eroded material enters the harbor through four, six-foot culverts at the "X" and "J" docks area.

This material primarily settles out in the "X" and "J" docks area, but lighter weight silts and clays migrate farther down the harbor to the south.

Over the past twenty years, inner-harbor sediment has varied in character from 98% sand, to 10% sand, with the remainder being comprised of silts and clays.

Fine-grained material is tested physically, chemically and biologically. Fine-grained material, even when tested as clean (no harmful characteristics) has had to be removed to a landfill. EPA grain size restrictions prevent predominantly fine-grained material from nearshore or beach disposal. Fine-grained harbor material has had to be taken to an upland disposal site.

At this writing, the Port District has a 404 permit[3] pending with the Corps of Engineers to dispose of fine-grained material (35% sand, 65% silts and clays) by barge to SF-14. SF-14 is a Corps of Engineers' managed disposal site 12 nautical miles southeast of the harbor.

Occasionally, fine-grained material has tested positive for some metals. Such chemical hits have not been severe, and the material has still qualified for upland disposal.

Under the proposed ten-year permit, the Port District will conduct testing as per agency guidance, as well as published documents COE 99-3, and DMMO Guidelines. Disposal options will, of course, be determined on a case by case basis.

Demonstration Project:

Recently, the Port District has sponsored a Sediment Transport Analysis (STA) by GeoSea Consulting of British Columbia, Canada. The study is complete and concludes that clean, lightweight material will not stay in the nearshore area if deposited there. Accordingly, the Port District will propose, during the course of this permit, that lightweight material (less than 80% sand) be hydraulically dredged and

[3] Corps letter of November 24, 1998. An operational plan for disposal methodology still needs to be filed with the Corps of Engineers.

discharged in the nearshore area. Material must, of course, pass all chemical and biological criteria.

SUMMARY:

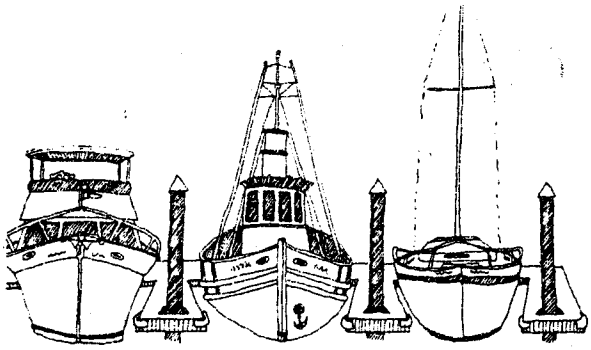
We believe that the entrance dredging program is at a refined state and meets its objectives. A report on various aspects of the program is attached. The only problem is that sediment testing protocols need to be streamlined so that needless navigational safety problems are avoided.

The inner-harbor dredging program is in a very raw state in which the harbor cannot manage its navigation depths in a timely manner. Long lead times and restrictive agency regulations limit options and at times, waste valuable beach sand. More flexibility based on a scientific experimentation should be allowed in the future.

Sincerely,

Brian E. Foss
Port Director

BEF:mo
Attachments: Application
Graphics
Dredging Statistics
Dredging Operations Manual
Dredging Report
GeoSea Consulting *Sediment Transport Analysis*



SANTA CRUZ HARBOR

Gateway to the Monterey Bay
National Marine Sanctuary

June 6, 2000

Kevin Colin
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060

SUBJECT: Amendment to Port District Permit Application of March 8, 2000, for 10-Year Dredging Permit

Dear Kevin:

I am in receipt of your letter of April 14, 2000. I realize we are approaching the sixty-day limit. I will make every attempt to get all of the required material submitted to you by June 14. If I do not accomplish this, I will ask for a short extension, but it will not be for long. We are placing our full efforts into this application now that our dredging is complete for the year. It has been quite an eventful dredging season, with so many unexpected twists and turns. Thank you for your help in this last segment of north harbor dredging.

As a matter of course, I would like to amend our March 2000 permit application from 300,000 CY of entrance material per year, to 350,000 CY of entrance material per year. I have submitted the same application amendment to the Corps of Engineers. This is necessary because our experience over the last three years has been as follows:

1997-98 season	399,000 CY
1998-99 season	318,000 CY
1999-00 season	333,000 CY

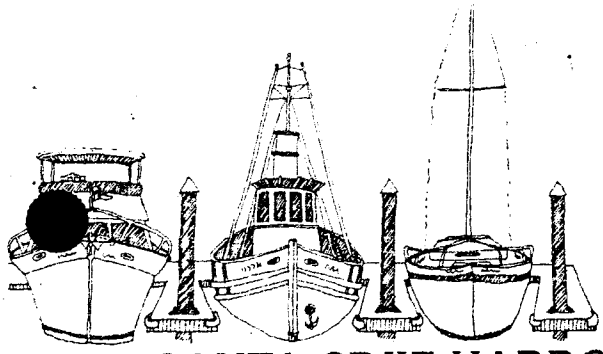
The reason for this is that we have simply received a greater volume of sand over the last three years. We do not fully understand why these volumes are increasing; however, during the El Niño storms of February 1998, a great volume of sand was discharged from the San Lorenzo river. We may now be experiencing the residual effects of that big year by it having created a larger volume of sand available in the offshore area which can then be pushed into the harbor. In any case, to prevent ongoing requests to modify our permit, we ask that our application for dredging volumes be increased from 300,000 CY per year, to 350,000 CY per year.

Sincerely,

Brian E. Foss
Port Director

BEF:mo
kevincolin.doc

Santa Cruz Port District
135 5th Ave., Santa Cruz, CA 95062 (408) 475-6161 FAX: (408) 475-9558 e-mail: scp w



SANTA CRUZ HARBOR

Gateway to the Monterey Bay
National Marine Sanctuary

June 22, 2000

Kevin Colin
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060

SUBJECT:
1. Port District Application for Ten-Year Dredging Permit (in response to your letter of April 14, 2000);
2. Request for Amendment to April 14, 2000, Permit Application to Include Permission to Continue Use of Offshore Disposal Pipe for Dredging Operation

REFERENCE:
A. Port District Letter of April 14, 2000;
B. Port District Letter of June 6, 2000 (Request for 350,000 CY Amendment)

Dear Kevin:

I will answer each of your queries in order. The numbers are commensurate with your letter of April 14.

1. CEQA:
Maintenance dredging is categorically exempt when disposal is per state and federal regulatory oversight. We have therefore filed a Notice of Exemption (filed with Santa Cruz County Clerk on June 15, 2000).

In regard to the use of barges for disposal of inner-harbor material destined for offshore site SF-14, this was a method that we have investigated for the material leftover from the El Niño storms (12,000 CY of material). We are not pursuing this method at this time. Instead, we are reinstating our request to dispose of this 12,000 CY of material under a demonstration project to be completed in December, January, February 2000-01. So at this time, we are not submitting any data for the barging operation. Should that course of action be one that we must go to in the future (we prefer not to), then we will submit separately. Such

Santa Cruz Port District
135 5th Ave., Santa Cruz, CA 95062 (408) 475-6161 FAX: (408) 475-9558 e-mail: sc

an operation would have to occur in the summertime when ocean and entrance conditions allow such an option.

Let me know if there is anything else we need to address on this particular matter.

The disposal of fine grained material has been the subject of a large body of work, including:

A. Sediment transport analysis study of the Santa Cruz disposal Area (GeoSea Consulting; January 2000);

B. Santa Cruz Port District proposed dredging demonstration project (Winter 2000-01; attached);

C. "The Impact of Santa Cruz Harbor Dredging Disposal Sediment on Adjacent Kelp Forest at Twin Lakes Beach" (June 1997; attached).

We have made application to the Coastal Commission for disposal of the same fine grained material (August 31, 1999), on a demonstration basis. All testing of this material has been completed. The material is suitable for "unconfined aquatic disposal." This request was withdrawn in November 1999, because the Corps of Engineers could not process the application in time for the 1999-00 winter disposal window.

2. City of Santa Cruz Comment:
We have asked Julianna Rebagiliati, the Environmental Coordinator for the City of Santa Cruz, to comment directly to you on the City's interest. This should follow shortly.

3. Other Agency Comments:

City of Santa Cruz – pending;

Army Corps of Engineers – a Section 404 Clean Water Act dredging permit has been applied for and is in COE process;

California Regional Water Quality Control Board – The CRWQCB has previously rescinded its permit and no longer wants to be a routine commenter on our dredging operation. Copy of Board action attached;

U.S. Coast Guard – The Coast Guard has been notified directly of our permit application and will comment directly to you if it has any comments;

Posting – Posting has been completed (see attached);

Mailings – Envelopes are enclosed;

Other Issues – Monterey Bay National Marine Sanctuary has been contacted directly; however they will be commenting formally during the Corps circulation period.

4. Offshore Disposal Pipe:
The offshore disposal pipe was developed in the 1997-98 season, specifically to mitigate effects of hydrogen sulfide which can occur when seaweed gets entrained into the sand in the harbor entrance during storm activity. (A separate document is attached.)

Sincerely,

Brian E. Foss
Port Director

BEF:mo
corres/colinresponse.doc

EXHIBIT NO. A
APPLICATION NO.
3-00-034

OPERATIONS MANUAL

SANTA CRUZ HARBOR DREDGING SYSTEM

Prepared by:

Brian Foss, Port Director
July 1995
Revised October 1, 1998
Revised March 6, 2000

Santa Cruz Port District, 135 Fifth Avenue, Santa Cruz, CA 95062 (831) 475-6161

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EXHIBITS

EXHIBIT NO. B
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OPERATIONS MANUAL

SANTA CRUZ PORT DISTRICT DREDGING SYSTEM

SECTION I - HISTORY

Santa Cruz Harbor was constructed in 1963 as a joint venture between the Santa Cruz Port District and the United States Corps of Engineers. The Port District funded all of the improvements for Santa Cruz Harbor and 35% of the jetty and initial dredging improvements. The Corps of Engineers provided 65% of the jetty and original dredging improvements. Since its construction, the harbor has experienced extensive shoaling of the harbor entrance. The Corps of Engineers, from 1965 through 1986, maintained the harbor channel by contract dredging services. Commencing November, 1986, the Port District assumed operational dredging responsibility for Santa Cruz Harbor. The Port District now owns and operates its own dredging system. This manual outlines the methods and procedures which are employed in its operation.

SECTION II - OPERATIONAL STRUCTURE

A. GENERAL

The dredging operation is a separate Port District department. The dredging supervisor is the department head and will be responsible for the operation of the dredge; personnel; equipment; maintenance; budget control; and safety programs. A job description is attached.

B. EQUIPMENT / RESPONSIBILITIES

1. Operations

The dredge system is comprised of the following equipment:

- Dredge "Seabright" -- 220 ton, 16" hydraulic suction dredge
- 18-ton Lorain crane
- 15,000 lb Liftall forklift
- Case dozer
- Workboat (46' "Dauntless")
- 1-ton flatbed truck
- Dredge
- All ancillary dredging equipment -- pipe, floats, joints, anchors, skiff

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2. Shared Equipment

The resources of the dredging operation are available to the marine maintenance department during the off-season, or when they can be spared during the dredging season.

The dredge supervisor has principal responsibility for equipment assigned to the dredge operation. During the off-dredging season, the maintenance supervisor will insure that all dredge equipment is serviced and maintained.

3. Dredging Expediter

The dredging expediter is the dredging supervisor's assistant. His/her duties are to procure equipment, materials, fuel, and lubricants necessary to keep the dredge operation running.

S/he is also the expediter for the marine maintenance department. He/she will split the time according to the needs of the day. Since there is no dredging in the summer, his/her time will be predominately for marine maintenance; however, there are summertime, long-lead dredge maintenance items which need attention.

The expediter's job is to keep a smooth interface between the two departments, especially when shared resources are involved.

C. CREW MAKE-UP

1 ea. Supervisor / Leverman
1 ea. Boatman
1 ea. Deckmate
1 ea. Watch Engineer
1 ea. Deckhand
1 ea. Security (non-union)

SECTION III - DREDGING SCHEDULE

The normal operating schedule for the Santa Cruz Harbor dredge will be November 1, through April 30. The following one-shift-per-day operation is predicated on a normally high rate of shoaling for the year. It accounts for the preponderance of dredging to take place in the harbor entrance; however, during December, January and February, if entrance shoaling is not in evidence, then the dredge will be used for inner-harbor dredging.

Schedule for the current year is located in Appendix A.

A. HOURS OF OPERATION

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Normal work week is four, ten-hour days, Monday through Thursday.

The Port District will authorize longer days and/or additional days per week when operational navigational safety needs require such.

SECTION IV - ENTRANCE DREDGING

The objective of entrance dredging is to maintain the navigability and safety of the federal channel.

Entrance dredging will take place from station 10+00 to station 24+00 (see station depiction, Exhibit 2).

The basic channel depth is twenty feet MLLW from station 24+00 northward to station 14+00. Station 14+00 to station 10+00 is a fifteen foot section. The entrance channel ends at station 10+00. The "wing" areas adjacent to the jetties are maintained on a slope from twenty feet to five feet, so as not to undermine the jetty structures.

Harbor dredge may leave certain sections of the harbor at less than intended (optimum) depths due to weather and wave conditions, or because shoal is not considered to be a hazard. However, in most cases during dredging, season depths will be maintained as close to optimum as possible in order to lessen the chance of breaking waves and to create as much capacity as possible for anticipated storms.

Exhibit 2 depicts optimum dredge depths.

SECTION V - DREDGED MATERIAL

A. DISPOSAL OBJECTIVES

1. Maximum sand replenishment of downcoast beaches.

2. Minimum environmental impact on beach users and neighbors.

3. Maximum efficiency of dredge pumping system.

At times, these objectives are in conflict. The following disposal options are intended to deconflict the objectives as much as possible. The negative impacts of disposal include:

Odor: Entrance material often contains seaweed, sea grass and other organic materials. This naturally decomposes while in situ in the entrance. The process produces hydrogen sulfide gas in very low quantities. The gas escapes at the disposal end of the pipe and can cause a "rotten egg" smell.

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Debris on the Beach:

1. Organic material;

2. Flotsam and jetsam (man made).

Aesthetics and Impact on Beach:

A delta-type run-off area is formed when disposal is above the surf-line. Beach walkers and swimmers must avoid this area.

Force of Discharge:

There is a physical impact of 8,000 to 10,000 gallons/minute of sand / water slurry at the discharge. Beach users must avoid this zone.

These impacts are mitigates as follows:

Disposal Options:

Two disposal pipes are employed for dredge discharge. The Port can switch from one to the other within thirty minutes.

1) Moveable Plastic Pipeline at Surf-Line: This pipeline (Exhibit 1) is stored at the base of the beach, beneath the East Cliff Drive roadway. It can be moved into place at the water's edge by bulldozer.

   This pipeline provides maximum sand replenishment of the immediate beach. This is important in protecting the adjacent road and utilities which are threatened when winter waves take sand from the beach. This disposal option also maximizes the recreational value of the Twin Lakes State Beach.

   The Port District uses this option when non-organic sand is to be dredged, and no negative impacts are being experienced.

2. Underwater Pipe: In order to eliminate odor nuisance to the adjacent neighbors. The Port District has developed a second pipeline which manifolds off from the east and extends through the surf-line to a point off 6th Avenue at about the ten foot to fifteen foot MLLW area.

   This discharge eliminates hydrogen sulfide (H_2S) odor. It is used whenever:

   a. Organics are present in disposed material;

   b. Onshore winds create a nuisance odor condition.

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The pipeline has been utilized since January 1998. After short start-up difficulties, the pipeline has provided a nearly 100% solution for odor problems.

The beach replenishment is still accomplished under this method since sand is still disposed of in the littoral cell. However, the immediate beach (within the first 200-400 yards east of the disipsal) probably receives a reduced amount of replenishment in this method.

B. OTHER DISPOSAL PROTOCOLS:

1. Because of the ocean environment, the harbor entrance often traps seaweed and other organic materials. Once dredged and pumped on the beach, these materials can produce offensive odors. This can occur approximately 12 to 15 days per season. This condition will be limited by attention to item 1) above (pumping directly into the surf line). This will assure that a minimum of the organic material will end up on the beach, where natural aeration can exacerbate the odor problem.

2. The beach will be graded and groomed whenever unnatural contours occur near the disposal end of the dredge pipe. Beach drop-offs under the disposal pipe of more than 4' will not be allowed. Large pools underneath the disposal end of the pipe will also be minimized. In general, the Port District will attempt to minimize the impact of the dredging disposal on the highly-used public beach. The most effective management practice is to hold the discharge pipe at the surf line (see section IV.A.1.). This minimizes beach contour problems.

3. An identifiable security guard will be on duty at the disposal end of the pipe whenever dredging operations are in progress.

4. Each year, no dredging will take place from 5:00 pm on the Friday preceding Good Friday, to the Monday morning following the Monday after Easter Sunday.

5. The yearly dredge schedule is designed to avoid high-use recreational days by eliminating weekends, holidays, and by termination of all dredging by April 30, of each year.

6. The permanent pipeline on the beach shall be covered by at least three feet of sand at all times.

7. Broken pipelines shall receive immediate repair. The Port District has experienced very little, if any, beach pipeline failure, but should such an incident occur, it will be repaired immediately.

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8. Noise will be kept to the minimum required to complete the job. All equipment will be kept in top condition. Engine, machinery, and equipment will be repaired immediately if a malfunction occurs.

9. Equipment on the beach shall be kept to a minimum and shall consist only of two spare pipes, 1 Case bulldozer.

10. Proper signage for public safety and information will be provided. An informational brochure will be available from the security guard.

11. Complaints from the public about the environmental impact of our dredging operation shall be referred to the Harbormaster / Port Director for immediate resolution.

12. If odor problems persist, despite all mitigation efforts, the Harbormaster / Port Director will consider cessation of dredging until conditions for disposal improve. This can occur on hot days at low tide conditions.

13. Pipe Management: Flexible 18" high-density polyethylene pipe is used at the disposal end. This pipe will be moved into the surf zone each day by bulldozer. At the end of the day, the pipe will be moved back against the bluff where high surf action cannot get to it and cause it to move and become a hazard. The end of the pipe will be covered with sand each night so that it doesn't become an "attractive nuisance" for children and animals.

C. INNER-HARBOR DREDGING DISPOSAL

1. Santa Cruz Harbor lies at the terminus of the Arana Gulch watershed, a three square mile area which extends to the steep mountainous terrain north of Highway 1. Winter run-off brings sand, silt, and clays down the gulch. These travel through the four, 6' culverts at the north end of the upper harbor, and settle out in the fairways and berthing areas of the harbor. The accumulation of these materials eventually makes the berthing and channel areas unusable. Dredging must take place.

   The nature of this sedimentation differs from the entrance. Sand content ranges from 20% to 98%, with clays and silts filling the difference. The material can contain organics from the gulch areas, but not the sea grasses and seaweeds of the entrance. This material thus does not have the same negative odor problems associated with organic material of the entrance sand.

   The Port District has, in the past, received yearly renewable permits to dredge this material and dispose it into the surf line at the same location as the entrance material. However, permits are subject to regulatory agency review for each episode. Permission is dependent on grain size, chemical, and sometimes biological testing

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Because it has more lightweight material, this effluent does not settle out as quickly as pure sand. The resulting discoloration of the disposal water area is more pronounced than entrance dredging. The Port District has responded to this condition by limiting its dredging of the inner-harbor materials to December, January, and February. Dredging operations are further limited to 4:00 pm to 10:00 pm daily, in order to have the least impact on beach users and surfers.

The Port's permit is for 5,000 yards of inner-harbor material per year during these three winter months.

The disposal is from the same discharge pipe options.

SECTION VI - SEDIMENT SAMPLING

All sediment sampling will be in compliance with U.S. Army Corps of Engineers Circular 93-2[1], and according to the May 1998 publication "DMMO Guidance for Preparing Sediment Sampling and Analysis Plans for Dredging Projects in San Francisco Bay."

Actual physical, chemical and biological testing requirements will be determined by coordinating with regulatory agencies for each permittable dredging episode.

SECTION VII - REPORTS

Dredge supervisor will turn in a graphic report and a narrative report at the end of each dredging week. Supervisor can delegate record responsibilities to expediter.

Graphic depiction shall show geographical progress and depths attained.

Narrative shall relate:

Daily:

- Yards pumped
- Down time - maintenance, pump cleaning, breakdown
- Dredging time
- Explanatory remarks

Weekly:

- Detailed maintenance performed
  - -parts needed
  - -Any contract labor required
- Fuel ordered
- Lube oil used

[1] To be superseded by COE Circular 99-3.

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- Materials

SECTION VIII - WATER POLLUTION

Crewmen will report to the dredge supervisor immediately any foreign substance spilled in the waters of the harbor or Monterey Bay. Dredge supervisor will report immediately to the Harbormaster or Port Director who will, in turn, report to the Coast Guard and any other appropriate agency.

In the absence of the Harbormaster and Port Director, the dredge supervisor will report the spill to the Coast Guard.

SECTION IX - LIMITS OF PROJECT

The dredging operation at Santa Cruz Harbor is limited by permits from:

- U.S. Army Corps of Engineers; Permit #21056S64
- California Coastal Commission; Permit #3-86-175, 3-95-067
- Monterey Bay Air Pollution Control Board; Permit #3815, July 10, 1986

All reports required by such will be provided. Dredging operations which are not specifically permitted, and which required a permit, shall not take place until such a permit amendment is obtained.

SECTION X - "SEABRIGHT" MAIN ENGINE RPM LIMITATIONS

The Caterpillar, model 3512, shall never exceed 1500 RPM. Any deviation above 1500 RPM will be reported to the Port Director with all available information surrounding such incident.

This restriction is placed on the dredge operation by the Monterey Bay Unified Air Pollution Control District permit #3815.

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3-00-034

DREDGING SUPERVISOR

Job Description

GENERAL RESPONSIBILITIES:

- Daily operational control of dredge effort.
- Safety of operation.
- Overall system performance and yardage production.
- Organization, hiring, training, supervision, wage and cost control of labor.
- Phase and breakdown maintenance of system. Parts inventory control. Overhaul schedule. Storage systems.
- Overall cost containment.
- Act at leverman.

OTHER JOB ELEMENTS:

Dredging supervisor will work directly for the Port Director and will work with him to determine timing and agressiveness of the dredging effort. Supervisor must be flexible and cognizant of the general Port District operation including boating activities and general harbor maintenance activities.

Conflicts will arise and must be resolved for the overall good of the Port District.

PRIMARY OBJECTIVE:

The primary objective of the supervisor's job will be to cost-effectively keep the harbor open to navigation.

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3-00-034

APPENDIX A

Dredging Schedule

1999-00

Week:	Dates:	Operation:	Notes:
	October 18 - November 24	Mobilization / Maintenance	
1	November 22-24	Dredging	
2	November 29- December 2	Dredging	
3	December 6-9	Dredging	Fridays are OT days
4	December 13-16	Dredging	
5	December 20-23	Dredging	
6	December 27-30	Christmas Break	Off
7	January 3-6	Dredging	
8	January 10-13	Dredging	
9	January 17-20	Dredging	
10	January 24-27	Dredging	
11	February 7-10	Dredging	
12	February 14-17	Dredging	
13	February 21-24	Dredging	
14	February 28- March 2	Dredging	
15	March 6-9	Dredging	
16	March 13-16	Dredging	
17	March 20-23	Dredging	
18	March 27-30	Dredging	
19	April 3-6	Dredging	
20	April 10-13	Dredging	
21	April 17-20	Easter Break*	Off
22	April 24-27	Easter Break*	Off
23	May 1-4	Demobilization	
24	May 8-11	Demobilization	
25	May 15-18	Maintenance	
26	May 22-25	Maintenance	
27	May 29 - June 1	Maintenance	
28	June 5-8	Maintenance	

* A 16-day moratorium for Easter break is required from Good Friday at 5:00 pm (1 week before Easter Sunday) to Monday at 7:00 am, 1 week after Easter Sunday.

EXHIBIT NO. B
APPLICATION NO.
3-00-034

APPENDIX B

SAFETY

SANTA CRUZ PORT DISTRICT DREDGING SYSTEM

GENERAL:

The safety of all dredging operations is a paramount objective of the Port District.

The ongoing dredging project utilizes very heavy equipment and is inherently dangerous to personnel if strict safety procedures are not followed.

Personal injury is by far the greatest concern. Secondarily, cost of operations is adversely affected by poor safety records.

In addition, the Port District is a highly visible public entity and can tolerate no departure from safe operation.

Therefore, the following safety guidelines and obligations are set forth.

a) Standard accepted safety procedures for operating all equipment shall be followed.

b) Manufacturer's recommendations on equipment and products shall be followed.

c) Malfunctioning and/or unsafe equipment shall be reported to the dredge supervisor for correction. Dredge supervisor will report to, and consult with, Port Director in correcting safety hazards.

d) ***Life jackets*** shall be worn at all times when crewmen are on board dredge or workboat.
EXCEPTION: Inside engine room when wearing of life jacket in cramped quarters interferes with work.

e) ***Hard hats*** shall be worn at all times on the job.
EXCEPTION: Inside lever room;
Inside engine room (except when crane is in use overhead).

Employees ignoring safety requirements will be subject to disciplinary action. Continued disregard for safety will result in termination.

Incident Number Within Six Months	Action
1	Verbal warning
2	Written warning
3	Termination

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APPLICATION NO.
3-00-034

ACKNOWLEDGEMENT

I have read the Dredge Operations Manual and I understand the objectives of the program and my responsibilities to it. In particular, I understand the safety requirements.

_____

Signature

_____

Date

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03/07/00
misc\dredge10.doc

EXHIBIT NO. B
APPLICATION NO.
3-00-034

Exhibit 1

Santa Cruz Harbor

Disposal Pipelines

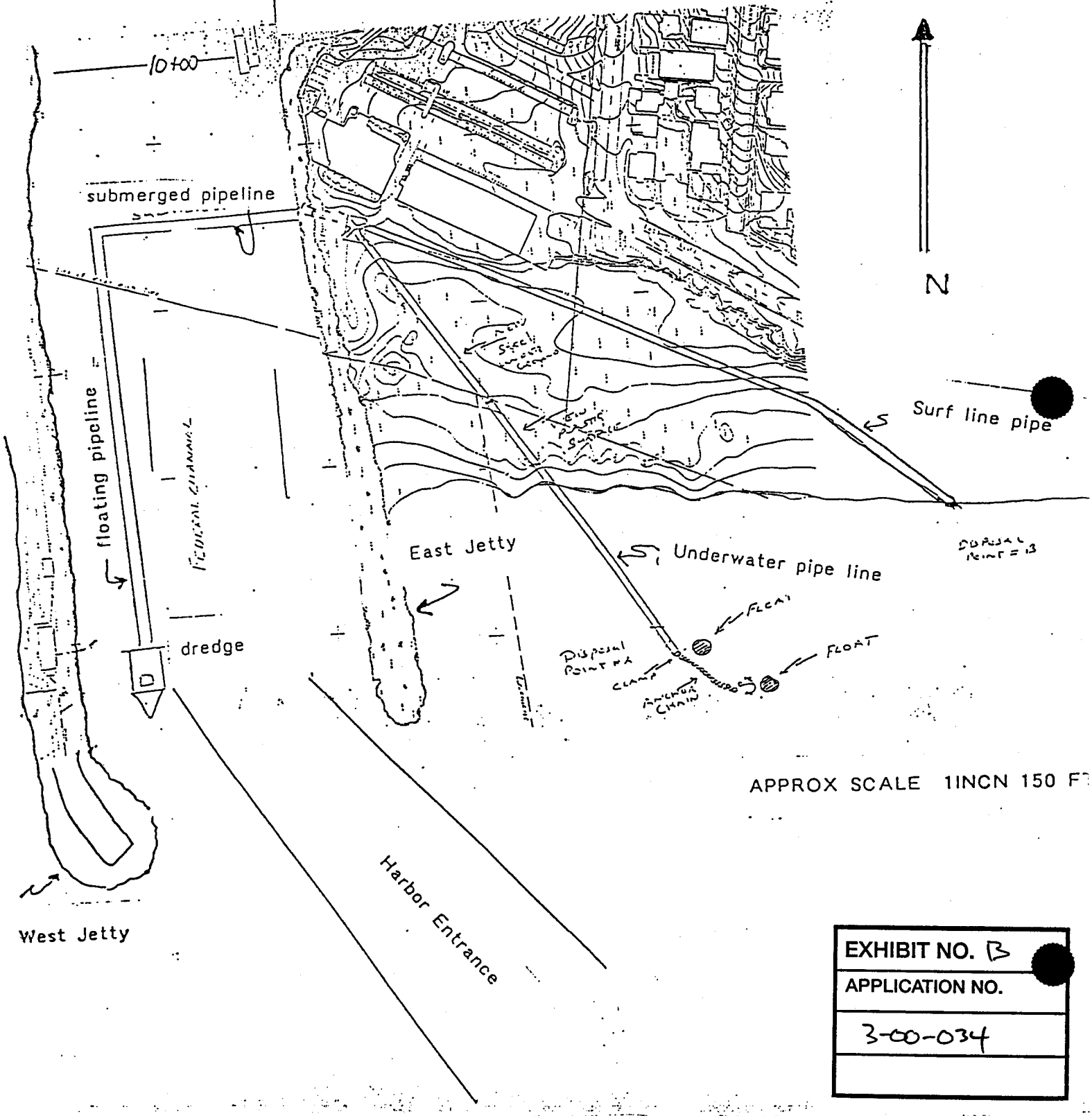

EXHIBIT NO. B
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3-00-034

Exhibit 2

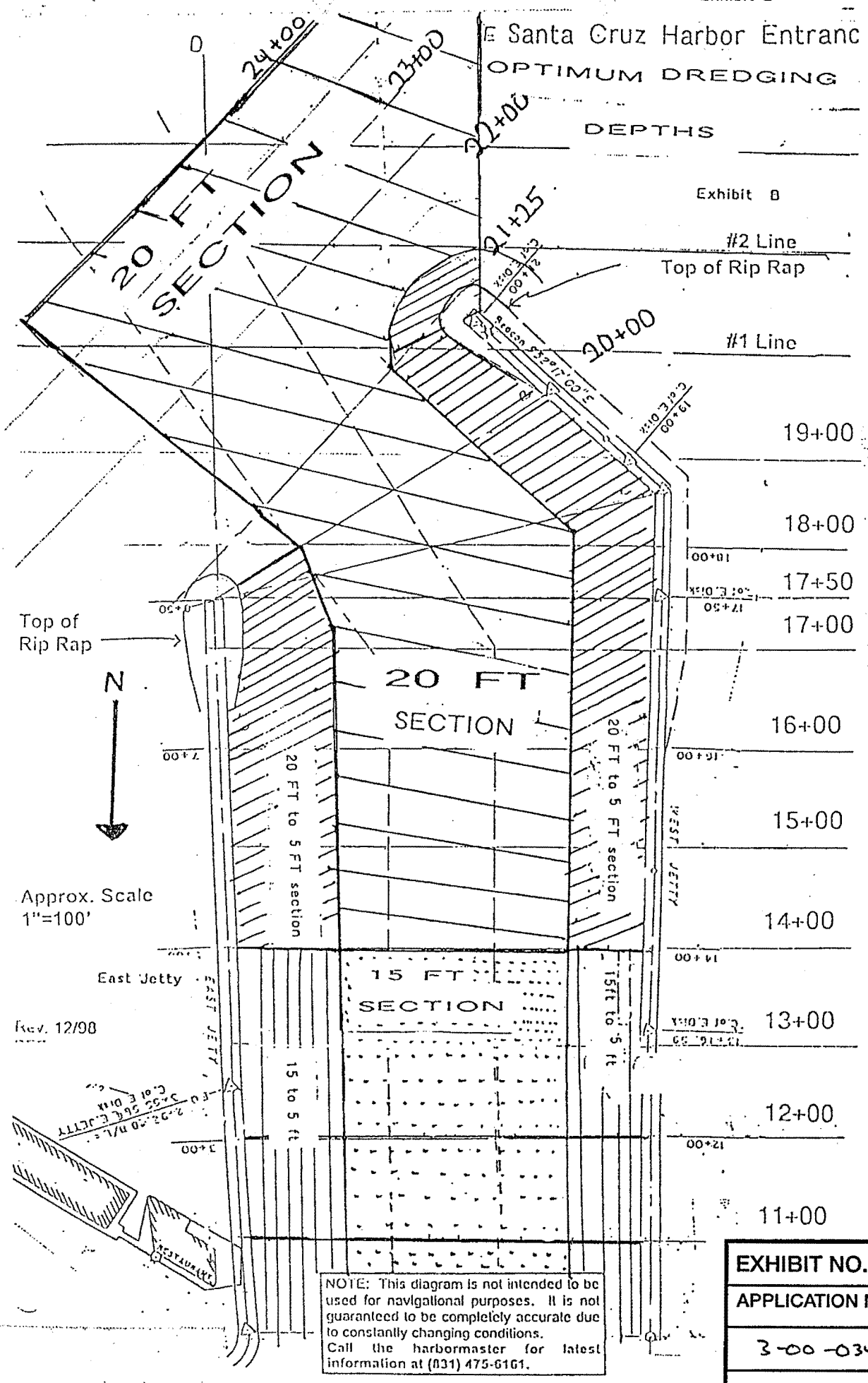

EXHIBIT NO. B
APPLICATION NO.
3-00-034

Exhibit 3a

Santa Cruz Harbor

DAILY DREDGE LOG VERIFICATION

U.S. Army Corps of Engineers Permit #21056S64

DAY	DATE	NUMBER OF HOURS	AREA DREDGED QUADRANT (See Code)	ESTIMATED VOLUME	DISPOSAL AREA 1. Surfline 2. Below Surfline Offshore Pipe

BEF:MO 12/10/98
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EXHIBIT NO. B

APPLICATION NO.

3-00-034

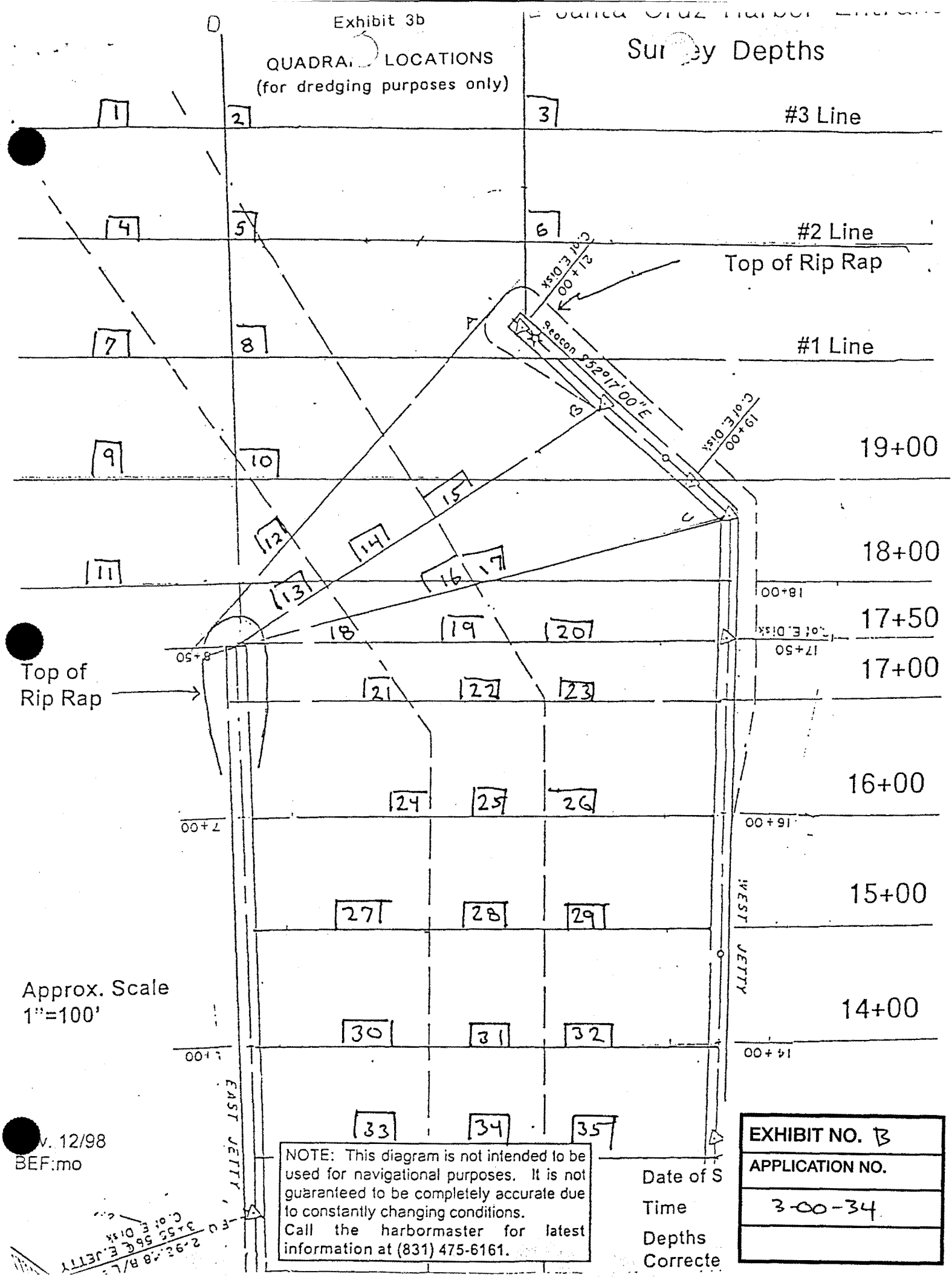
Exhibit 3b
QUADRANT LOCATIONS
(for dredging purposes only)
Survey Depths
#3 Line
#2 Line
Top of Rip Rap
#1 Line
19+00
18+00
17+50
17+00
16+00
15+00
14+00
Top of Rip Rap
Approx. Scale 1"=100'
EAST JETTY
WEST JETTY
NOTE: This diagram is not intended to be used for navigational purposes. It is not guaranteed to be completely accurate due to constantly changing conditions. Call the harbormaster for latest information at (831) 475-6161.
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EXHIBIT NO. B
APPLICATION NO.
3-00-34
v. 12/98
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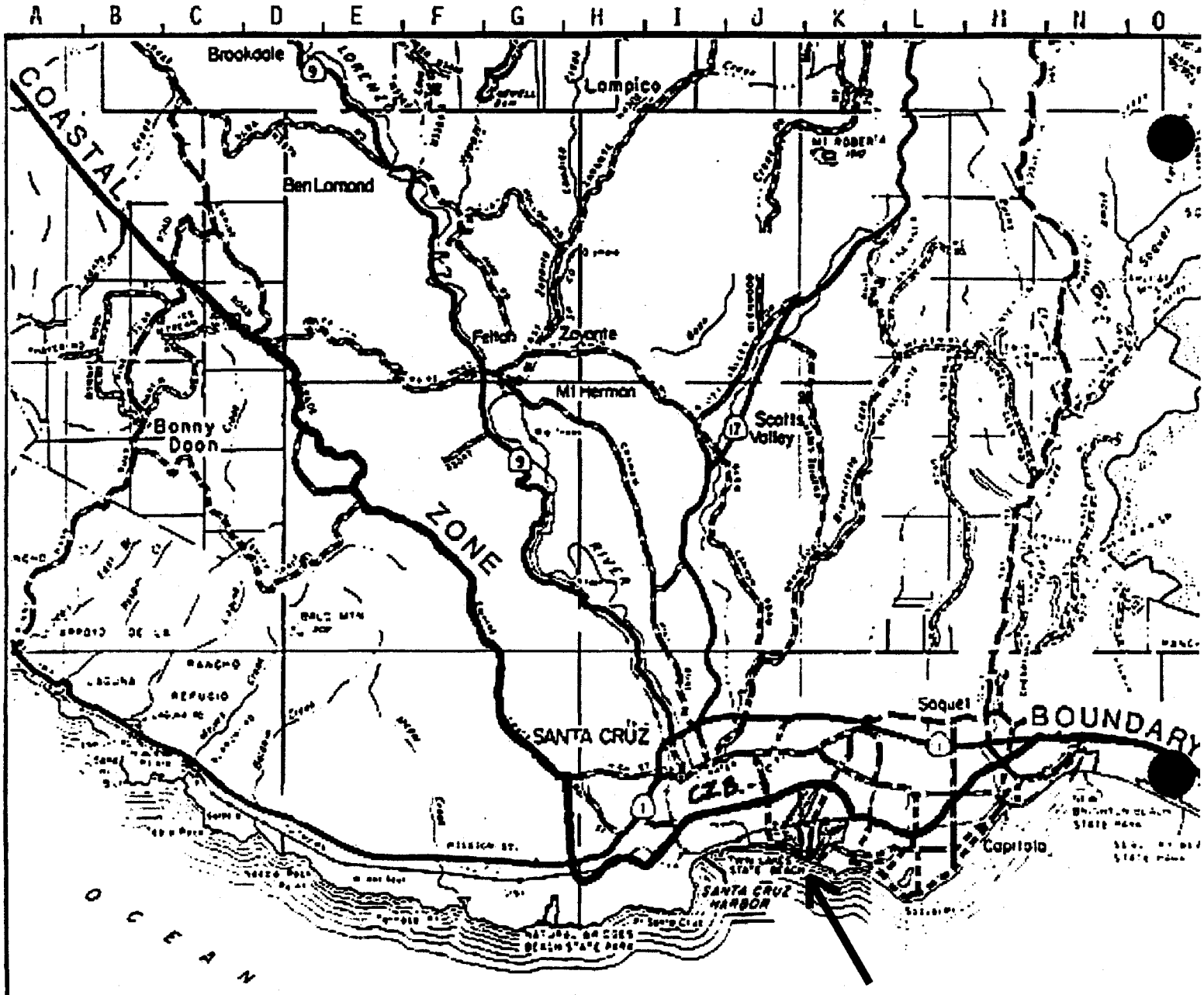

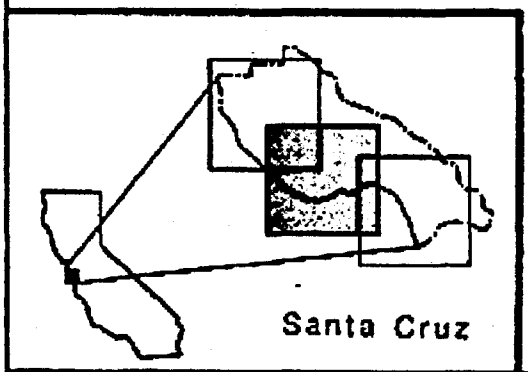

California Coastal Commission

LOCATION MAP

1 0 1 2
miles

N

County of Santa Cruz

EXHIBIT NO. C

APPLICATION NO.

3-00-034

STAFF RECOMMENDATION

The Staff recommends that the Commission adopt the following Resolution:

Approval

The Commission hereby grants a permit for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

RECOMMENDED CONDITIONS

Standard Conditions

See Exhibit A.

Special Conditions

1. PRIOR TO TRANSMITTAL OF THE PERMIT, the Port District shall submit for Executive Director review and approval final construction plans and specifications, consistent with Exhibit 1. The permanent pipeline shall be buried in a minimum three feet of sand. This permit does not authorize any rip rap or other protective measures (except at the existing jetties) and does not authorize storage or dumping in the undeveloped upper harbor area outside of the location shown in Exhibit 1c.

   Pursuant to Condition #8 of Coastal Permit 3-84-147 and the subject application request, this permit authorizes use of the permanent pipeline for disposal of authorized inner harbor dredge spoils; provided, however, that such material meets RWQCB's beach disposal standards (see Exhibit 2).

2. The Port District shall be responsible for complying with all provisions of Regional Water Quality Control Board Order (RWQCB) #85-06, including those assigned to U.S. Army Corps of Engineers until a new order is issued (see Exhibit 2). Compliance with RWQCB orders as they relate to aesthetics and recreational compatibility shall be considered a condition of this Coastal Permit as well. The Port District shall submit to the Coastal Commission a copy of its new order when issued. If the Executive Director determines that the Order provides for a significantly lesser degree of aesthetic and reacreational protection, then an amendment to this permit will be necessary.

EXHIBIT NO. D
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3-00-034

3. All materials suitable for beach nourishment shall be deposited on the beach. Location for disposal of unpolluted dredge material other than as proposed on the Port District beach or immediately adjacent into the surf zone must be approved by the Executive Director. Requests for such alternative disposal sites must be accompanied by landowner approval and local agency approval, if necessary.

4. PRIOR TO TRANSMITTAL OF THE PERMIT, the Port District shall submit a binding operational and maintenance manual for Executive Director review and approval, which accomplishes the following:

   - maximizes sand nourishment of the beach
   - minimizes disruption of recreational use

   Manual specifications should include, but not be limited to the following:

   - limits of project approval, procedures for amendments for activities not authorized by this permit, and responsibility for report submittals, pursuant to these conditions of approval
   - the removal of any organic material from the beach
   - daily grading of the beach to eliminate material accumulation of over two feet in height
   - minimization of the depth of craters
   - prevention of the buildup of a dropoff at the foreshore berm of greater than four feet
   - placing the end of the discharge pipe at the high tide wave runup line
   - compliance with EPA criteria for Ocean Dumping
   - security guard when dredge is in operation
   - minimizing disposal during high recreational use periods; no disposal during non-winter holidays and summer weekends
   - maintenance of sand cover over pipeline
   - immediate repair of broken pipeline
   - equipment staging and storage areas(s); including beach area
   - noise controls
   - information program for public

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- procedures for addressing complaints and correcting any violations of the procedures

The manual shall be followed by all personnel involved in the dredging/disposal operation. Failure to comply with its provisions will be considered a violation of this permit subject to the penalties specified in the Coastal Act.

5. The Port District shall submit for Executive Direcotr review and approval at least once every three years a report outlining compliance with the operational manual provisions, success of beach nourishment, and any necessary corrective measures.

6. Port District shall continue to provide access improvements pursuant to the certified LCP and Harbor Development Plan in as close adherence as possible to the approved schedule (see Exhibit 4).

7. PRIOR TO TRANSMITTAL OF THE PERMIT, the applicant shall submit to the Executive Director a written determination from the State Lands Commission that:

   a. No State lands are involved in the development; or

   b. State Lands are involved in the development and all permits required by the State Lands Commission have been obtained; or

   c. State lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the project to proceed without prejudice to that determination.

8. As part of any permit application for dry boat storage in the upper harbor, an alternative location for dredge related equipment storage shall be requested.

9. In accepting this permit, the Port District acknowledges that the project may be subject to extraordinary hazard from wave and related hazards and that the Port District assumes the liability from such hazards and that the Port District unconditionally waives any claim of liability on the part of the Commission and agrees to idemnify and hold harmless the Commisssion and its advisers relative to the Commission's approval of the project for any damage due to natural hazards.

RECOMMENDED FINDINGS AND DECLARATIONS

1. Background and Project Description

For years the Port has experienced a problem with harbor shoaling. It has received a series of coastal permits (m recently 3-81-140 for 1981-1983; 3-84-13 for 1984-1986) a consistency determinations (CD-12-81, CD-46-83, CD-59-84,

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MAIL TO Stephanie Strelow.

STATE OF CALIFORNIA—THE RESOURCES AGEL PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
70 LOWER RAGSDALE DRIVE, SUITE 100
MONTEREY, CA 93940
(408) 649-2870

March 12, 1993

Mr. Brian E. Foss, Port Director
Santa Cruz Port District
135 5th Avenue
Santa Cruz, CA 95062

Mr. Foss:

In your March 5, 1993 letter you requested our assistance in your effort to determine if the tidewater goby is present in the Santa Cruz Harbor. The nearest documented occurrence of the goby is in Schwan Lagoon per the references you noted. To our knowledge, the tidewater goby has not been collected nor observed in the Santa Cruz Harbor/Wood's Lagoon.

In our opinion, the goby probably is not present in the predominantly saltwater, developed harbor area. There is the potential for tidewater goby occurring in the far upstream portion of Wood's Lagoon in the brackish water/freshwater zone at the mouth of Arana Creek. A sampling survey would be necessary to definitively determine if the tidewater goby is or is not present in this restricted habitat. Such a sampling survey would be required if there was a proposal to develop or alter this site because the tidewater goby is a Category 1 Candidate for federal listing as an endangered species and also a designated California Species of Special Concern. I hope this response will be of assistance. If you have questions, please telephone me at (408) 649-2870.

Sincerely,

Keith R. Anderson

Keith R. Anderson
Senior Fisheries Biologist
Region 3, South District

cc: Mr. Dean Marston
Ms. Susan Ellis

KRA:ts