

**CALIFORNIA COASTAL COMMISSION**

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**W13c**

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## **STAFF REPORT: REGULAR CALENDAR APPLICATION NUMBER 3-99-011**

**Application number** ..... 3-99-011, Moss Landing Harbor Dredging Project

**Applicant** ..... Moss Landing Harbor District (MLHD)  
c/o James Stilwell, General Manager

**Agent** ..... William J. Keene, Harding Lawson Associates (HLA)

**Project location** ..... Dredging in berthing and channel areas in both the north and south arm of Moss Landing Harbor, Moss Landing, Monterey County. Handling and disposal at up to seven different sites as detailed below.

**Project description** ..... The MLHD proposes to dredge 150,000 cubic yards per year (cy/yr) in 1999, and 50,000 cy/yr during the years 2000 and 2001 for berths and channels in Moss Landing Harbor (MLH). Uncontaminated dredged materials to be disposed of at an offshore unconfined aquatic discharge site in Monterey Bay (SF-12) located near the end of Sandholdt Pier at the head of the Monterey Canyon, and three beach renourishment sites north and south of the harbor entrance. Contaminated dredge materials to be processed using the North Harbor Interim Drying and Rehandling Site (Interim Site) and trucked offsite for confined upland disposal at the Marina Sanitary Landfill and possibly the Dolan Road disposal site, all located in northern Monterey County.

**Approvals Received** ..... Monterey County combined coastal development permit (CDP) and design approval Permit Number 98-0137 for excavation and grading of a temporary decant basin for dredge spoils at the North Harbor Interim Drying and Rehandling site, and CDP #PC94-196 for disposal of 16,400 cubic yards of dredge material at the Dolan Road site. US Army Corps of Engineers (USACOE or Corps) Permit Number 22026S27, dated 7/96 and modified 6/8/98 to dredge 150,000 cy/yr in 1998 and 1999 and 50,000 cy/yr in 2000 and 2001, with dredge disposal as described above. Central Coast Regional Water Quality Control Board (RWQCB) Order 90-21 Waste Discharge



### 3-99-011 Staff Report: Regular Calendar

Moss Landing Harbor Dredging Project 1999-2001

Page 2

Requirements for United States Corps of Engineers, Pacific Gas & Electric, and Moss Landing Harbor District (3/9/90) and RWQCB 401 Water Quality Certification (5/16/96) for discharge of dredge materials at upland confined disposal site and discharge of decant water from decant basin to MLH via a flashboard weir; revised (1/13/98) to indicate the North Harbor Drying and Rehandling Site for decant basin. California Coastal Commission CDP Numbers 3-93-031 (to dredge and dispose of 6,000 cy of sand from entrance haul-out ramp); 3-96-020 (to dredge and dispose of 31,000 cy from South Harbor channel and dock areas); and Emergency Permit Number 3-98-032-G for one-time dredging and disposal of 22,000 cy from South Harbor, with discharge through existing pipeline to SF-12.

**File documents** ..... CCC Coastal Development Permit Application files 05-73-185, 06-74-421 (denied), P-11-75-1580, P-77-0737, 3-81-089, 3-83-186, 3-85-185 and 3-85-185-a1, 3-89-209, 3-93-031, 3-96-020, 3-98-032-G; Monterey County CDP 98-0137; USACOE Permit 22026S27; RWQCB WDR Order 90-21 and 401 Certification. Harding Lawson Associate reports: *Biological Assessment for North Harbor Interim Drying Site* (12/4/97); *Results of Sediment Sampling and Analysis – Gravelle's Dock, Moss Landing Harbor* (2/8/99); *Master Sampling and Analysis Plan for Maintenance Dredging, Moss Landing Harbor* (4/2/99); *Results of Sediment Sampling and Analysis Areas B/C1, C2/A, G, H, I, J and North Harbor Sand Bar, Moss Landing Harbor* (4/7/99); *Operations Plan – Dredge Drying and Rehandling Site, Moss Landing Harbor District* (6/23/99). Moss Landing Harbor Master Plan Final EIR (1987).

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#### Summary of Staff Recommendation:

The staff recommends that the Commission **approve, with conditions**, the proposed dredging and discharge project in Moss Landing Harbor, which would synchronize with the Corps permit that expires in June 30, 2001. 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 research vessels, as well as other coastal dependant and coastal related operations that make use of the Moss Landing Harbor, as called for in Coastal Act Section 30234. The conditions included herein mirror conditions imposed on previous harbor projects and are needed in order to protect water quality and marine resources as required by Coastal Act Sections 30230 and 30231.

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California Coastal Commission

## Staff Report Contents

1. Staff Recommendation on Coastal Development Permit .....	4
2. Conditions of Approval .....	4
A. Standard Conditions .....	4
B. Special Conditions.....	5
3. Recommended Findings and Declarations.....	11
A. General Project Location & Background .....	11
B. Project Description .....	17
C. Previously Approved Project & Related Commission Actions .....	21
D. Standard of Review .....	21
E. Issues Discussion.....	22
1. Coastal Permit Required .....	22
2. Land Use Priorities .....	23
3. Marine Resources .....	24
3a. Biological Resources.....	26
3b. Dredging and Dredge Spoils Disposal.....	28
3c. Water Quality .....	29
4. Upland and Environmentally Sensitive Habitats .....	32
5. Geologic Resources/ Hazards and Air Resources.....	39
6. Visual Resources .....	41
7. Public Access and Recreation .....	42
8. LCP Planning Process.....	44
9. California Environmental Quality Act (CEQA).....	44
4. References.....	46
5. Exhibits.....	47
List of Exhibits	
A. Regional Location Map of Moss Landing Harbor	
B. Project Vicinity Map	
C. Map of Proposed Dredging Areas	
D. Pipeline Placement for Discharge to North Harbor Interim Drying and Rehandling Site	
E. Decant Ponds and Facilities at the North Harbor Interim Drying and Rehandling Site	
F. Plant Communities Prior to Construction at the North Harbor Interim Drying and Rehandling Site	
G. Pipeline Placement for South Harbor Beach Replenishment Site	
H. CEQA Mitigated Negative Declaration for Moss Landing Harbor Maintenance Dredging	
I. CEQA Supplemental Mitigated Negative Declaration for Dolan Road Upland Disposal Site.	



## **1. Staff Recommendation on Coastal Development Permit**

The staff recommends that the Commission, after public hearing, **approve** the proposed project 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 Amendment Number 3-99-011 subject to the conditions below and that the Commission adopt the following resolution:*

***Approval with Conditions.** The Commission hereby grants a permit for the proposed development, as modified by the conditions below, on the grounds that the modified development is consistent with the requirements of Chapter 3 of the California Coastal Act of 1976 (Coastal Act), and will not prejudice the ability of the Monterey County to implement its certified local coastal program in conformance with Chapter 3 of the Coastal Act. The project is located between the sea and the first public road nearest the shoreline, is in conformance with the public access and recreation policies of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act (CEQA).*

A yes vote would result in approval of the project as modified by the conditions below. The motion passes only by affirmative vote of a majority of the Commissioners present.

## **2. Conditions of Approval**

### **A. Standard Conditions**

1. **Notice of Receipt and Acknowledgment.** The permit 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. **Compliance.** All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.



4. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. **Inspections.** The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. **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.
7. **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.

## **B. Special Conditions**

1. **Scope of Permit.** This permit allows dredging and disposal of harbor sediments at the rate of 150,000 cubic yards per year (cy/yr) for 1999, and 50,000 cy/yr during 2000 and 2001, in coordination with the U.S. Army Corps of Engineers (USACOE) Permit Number 22026S27. If the USACOE permit is amended to allow more than 150,000 cy/yr, a corresponding increase is allowed under this permit, consistent with Corps requirements. However, in the event of such amendment, the total amount authorized by this permit shall not exceed 180,000 cy/yr (20% increase).

Sediment disposal sites will be determined prior to each dredging event based on USACOE and Regional Water Quality Control Board (RWQCB) review of sediment sampling test results (which will determine sediment grain size distribution, organics and heavy metal concentrations, in accordance with USACOE and US Environmental Protection Agency (USEPA) sediment sampling guidelines). Uncontaminated dredged materials will be disposed of at an unconfined aquatic discharge site located in Monterey Bay (SF-12) near the end of Sandholdt Pier and, if suitable for beach replenishment, at three beach renourishment sites north and south of the harbor entrance. Contaminated dredge materials are to be processed using the North Harbor Interim Drying and Rehandling Site (Interim site) located on APN number 413-022-009-000. Following processing, these materials will be trucked offsite for confined upland disposal at the Marina Sanitary Landfill, about 8 miles southeast via State Highway One. The Dolan Road site, about 1.5 miles east of Moss Landing, is currently being studied for use as an additional upland disposal site.

Under the County coastal permit, at the conclusion of the project, the North Harbor Interim site will be finished at grade and restored to pre-project conditions with enhancement of native and coastal vegetation as defined in the Biological Assessment and required in the Monterey County CDP 98-0137. Dredging equipment and pipelines shall also be removed at the conclusion of the project and alignment routes restored to pre-project conditions.

2. **Term of Permit.** This permit is designed to synchronize with the USACOE Permit Number 22026S27, issued 7/96, modified 6/8/98, and which expires 6/30/2001. This permit therefore will



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 6

also expire 6/30/2001. If an extension of this permit is requested, it may be submitted in the form of an amendment request. Such a request shall be subject to additional review, and shall consider any new material, correspondence and studies relevant to the project and available to date. It is anticipated that subsequent extensions shall be for 5-year intervals, to coincide with future USACOE permits.

- 3. Final Plans.** Permittee shall submit final plans to the Executive Director for review and approval. Except where otherwise specified below, such plans shall be submitted **PRIOR TO COMMENCEMENT OF EACH DREDGING EPISODE**. Any modifications following Executive Director review and approval must also be submitted to the Executive Director for review and determination of materiality prior to implementation (See Special Condition #12 below).

The final plans shall include:

- a. Dredge Operation Plan.** Plan shall outline and label all areas to be dredged during a particular dredging episode, clearly define the permitted dredge depth and over-dredge depth, note the approximate volume to be dredged in each area, and classify the sediments according to the appropriate type of the discharge site (i.e., unconfined aquatic, beach replenishment, or confined upland discharge based on sediment sampling results).
- b. Final Plans for Other Project Components.** Plans shall detail the location and design of all other project components for each dredging episode, including any pipelines, pumps or other stationary equipment used for dredging, transport, processing, storage and discharge of dredged materials. All disposal sites shall be identified according to the category of materials to be deposited (i.e., sediments suitable for unconfined aquatic disposal, sediments suitable for beach replenishment, and sediments requiring confined upland disposal). In order to facilitate coordination with Monterey County and other governmental agencies, the submitted plans shall also encompass those portions of the project located in areas where coastal permit authority has been delegated to the local government (i.e., Monterey County); however, those portions of the plans concerning areas outside the Commission's original jurisdiction will not be subject to Executive Director review and approval under this permit. Such areas presently include the North Harbor Interim Drying and Rehandling site, and the potential Dolan Road disposal site.
- c. Erosion Control Plans for Interim Drying and Rehandling Site.** With respect to any portion of the facility entirely or partially within the Commission's original (i.e., undelegated) jurisdiction, an Erosion Control Plan identifying all relevant best management practices (BMPs) to be implemented during operations at the North Harbor Interim site, and their location. Silt fences, or equivalent apparatus, shall be installed at the perimeter of the North Harbor Interim site. Erosion control plans shall contain provisions for specifically identifying and protecting all nearby ditches and natural drainage swales (with sandbag barriers, filter fabric fences, straw bale filters, etc.). Erosion control plans shall also include provisions for stockpiling and covering of stored materials, temporary stormwater detention facilities, and restrictions on any grading and earthmoving during the rainy season. The purpose of such plans is to prevent project-related



California Coastal Commission

runoff and sediment from entering these drainages, which ultimately deposit runoff into waters of Moss Landing Harbor, and through tidal exchange, Elkhorn Slough and Monterey Bay.

The Erosion Control Plan should make it clear that: (a) dry cleanup methods are preferred whenever possible and that if water cleanup is necessary, all runoff will be collected to settle out sediments prior to discharge from the site; all de-watering operations must require filtration mechanisms; (b) off-site equipment wash areas are preferred whenever possible; if equipment must be washed on-site, the use of soaps, solvents, degreasers, or steam cleaning equipment should not be allowed; in any event, this wash water should not be allowed to enter storm drains or any natural drainage; (c) concrete rinsates, if any, should be collected and they should not be allowed into storm drains or natural drainage areas; (d) good construction housekeeping should be required (e.g., clean up all leaks, drips, and other spills immediately; refuel vehicles and heavy equipment off-site and/or in one designated location; keep materials covered and out of the rain (including covering exposed piles of materials used in the treatment process and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather); and finally (e) all erosion and sediment controls should be in place prior to the commencement of grading and/or construction as well as at the end of each day.

- d. **Transportation Management Plan for Materials Transported Offsite.** PRIOR TO TRANSPORT OF DREDGE MATERIALS on any highway segment in the Commission's original jurisdiction (i.e., Elkhorn Slough, Moro Cojo Slough, Bennett Slough, Salinas River or Pajaro River), a Traffic Management Plan (TMP) shall be submitted to the Executive Director for review and approval. The TMP shall detail the haul schedule and routes for dredge materials transported to offsite upland disposal sites. The haul schedule should include consideration of all limitations and potential limitations on operations, e.g., hours of hauling, truck size and hauling capacity, restrictions of Air Pollution Control Agency, etc, as well as contingency plans for loss of work time due to weather, etc. The TMP shall include mitigation measures for addressing potential impacts resulting from the project, including potential impacts on public access and public safety. The submitted TMP(s) shall be the same as, or consistent with, the TMP(s) approved by the Monterey County Planning and Building Inspection Department.
- e. **Revegetation or Reuse Plan for North Harbor Interim Site.** For any portion of the facility entirely or partially within the Commission's original (undelegated) jurisdiction, PRIOR TO THE COMMENCEMENT OF RESTORATION, the Permittee shall submit a revegetation/reuse plan for the North Harbor Interim Drying and Rehandling site to the Executive Director for review and approval. This plan shall include provisions for restoring the site in accordance with mitigation measures detailed in the 1997 Mitigated Negative Declaration, the 1997 HLA Biological Assessment and as required by the Monterey County CDP # 98-0137. Restoration will include regrading and revegetating the site using appropriate drought and salt-water resistant, non-invasive plant species native to the Moss Landing/Elkhorn Slough area, and shall include mitigation planting for Monterey spineflower as required by the Monterey County CDP



### **3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 8

98-0137. The plan shall provide for the eradication of invasive, non-native plants and shall clearly identify the type, size, extent and location of all plant materials, any irrigation system and other landscape features proposed for the entire site. The plan should include any temporary drip irrigation system, if needed, to establish the plantings, as well as a schedule for plant installation. All required plantings will be maintained in good growing conditions throughout the life of the project, and whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the revegetation plan. The plans shall include an updated Erosion Control Plan in conformance with Special Condition 3.c above and shall be submitted with evidence of review and approval by the Monterey County Planning and Building Inspection Department.

#### **4. Dredging Operations.** The procedure for dredge operations shall include:

- a. **Sediment Sampling.** PRIOR TO EACH DREDGING EPISODE, the permittee shall submit for verification by the Executive Director, the following:
  1. A Sediment Analysis Plan (SAP), describing sediment sampling locations and testing protocols.
  2. A report of sediment sampling results and analysis of test results; and
  3. Based on sediment sampling test results, classification according to discharge site suitability (see 4.c below)
- b. Dredging is to be conducted using a cutterhead dredge, and is not to exceed actual permitted dredge depth (which includes a one foot over-dredge depth) or actual sampling depth, whichever is less.
- c. Dredged materials shall be segregated according to suitability, as determined by the U.S. Army Corps of Engineers (USACOE), 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 will be disposed of at the offshore unconfined aquatic discharge site in Monterey Bay located near the end of Sandholdt Pier (SF-12); uncontaminated dredged material suitable (based on grainsize distribution) for beach replenishment will be disposed of at three beach renourishment sites north and south of the harbor entrance (Exhibit B). Contaminated dredge materials are to be processed using the North Harbor Interim Drying and Rehandling Site (sited on APN number 413-022-009-000), with ultimate upland disposal at the Marina Sanitary Landfill and possibly the Dolan Road disposal site 1.5 miles east of Moss Landing.
- d. Dredging equipment, including pipelines and booster pumps, shall be maintained and inspected by MLHD on a regular schedule to ensure proper operation and to eliminate any potential waterway or beach access conflicts.
- e. Rehandling facilities, including staging areas, berms, decant basins, and discharge pumps, shall



California Coastal Commission



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 9

be maintained and inspected by MLHD on a regular schedule to ensure that operations are being conducted in compliance with the conditions of this permit and that no leakage is occurring at the decant basins.

5. **Protection of Sensitive Vegetation.** PRIOR TO COMMENCEMENT OF WORK WITHIN OR ADJACENT TO POTENTIALLY SENSITIVE NATIVE DUNE OR SALTMARSH HABITAT, the permittee shall submit to the Executive Director for review and approval, confirmation from the CDF&G (as recommended in the Biotic Assessment) that the following have occurred and that no additional action is required:
  - a. A qualified biologist or botanist shall survey the project construction site including all required pipeline locations and associated staging areas for special status species prior to clearing the area for construction.
  - b. A qualified biologist or revegetation specialist shall mark areas of native vegetation to be protected prior to initiation of work (of primary importance shall be the area of fringing salt marsh vegetation bordering the shoreline of the North Harbor Interim site.) Temporary fencing and flagging shall be installed around the North Harbor Interim site to protect native vegetation.
6. **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 beach. In particular, permittee shall work with the dredge operator to manage 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. For longer periods of time, i.e., more than 180 days, unused pipe segments shall be removed from the beach and stored where they will not interfere with public access or impact natural resources.
7. **CEQA Mitigation Measures.** All mitigation measures cited in the following CEQA documents shall be implemented (see Exhibits H and I, attached):
  - a. Mitigated Negative Declaration dated December 18, 1997 for harbor dredging and discharge, including use of the North Harbor Interim site; and
  - b. Supplemental Mitigated Negative Declaration dated January 29, 1999, which includes the potential for Dolan Road site as an additional upland disposal site.
8. **Conformance with USACOE Requirements.** PRIOR TO COMMENCEMENT OF OPERATIONS UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review a copy of the USACOE Permit, letter of permission, or evidence that no Corps permit is necessary and concurrence by the USEPA for disposal of dredge spoils. Dredging areas, volumes, and discharge are not to exceed or differ from those authorized by the USACOE Permit # 22026S27. Approval of any modifications or revisions to USACOE Permit Number 22026S27 for areas covered by this permit must be submitted to the Executive Director prior to performing activities currently



California Coastal Commission

outside of the scope of this permit, and may result in an amendment to this permit.

- 9. RWQCB and MBNMS Approval.** PRIOR TO COMMENCEMENT OF OPERATIONS UNDER THIS PERMIT, the permittee shall submit to the Executive Director for confirmation: (1) a waste discharge permit, waiver of waste discharge requirements, or other evidence of the review and approval by the Regional Water Quality Control Board (RWQCB) for unconfined aquatic discharge in Monterey Bay and discharge of decant water to Moss Landing Harbor from the North Harbor Interim Drying Site (decant basins); and (2) evidence of the review and approval by the Monterey Bay National Marine Sanctuary (MBNMS) of such discharges into Moss Landing Harbor and the Monterey Bay National Marine Sanctuary. All RWQCB and MBNMS monitoring requirements and/or programs shall be submitted to the Executive Director at the same time they are submitted to the RWQCB and MBNMS. Monitoring shall be conducted in accordance with such programs and as required by the RWQCB Waste Discharge Requirements (WDR) Order 90-21.

To provide for adequate protection of marine resources, permittee shall request the California Department of Fish and Game (CDF&G) to review the monitoring program for discharge waters from the North Harbor Interim site. Evidence of CDF&G review shall be submitted to the Executive director prior to commencement of discharge under this permit.

- 10. Other Jurisdictional Compliance.** PRIOR TO COMMENCEMENT OF OPERATIONS UNDER THIS PERMIT, the permittee shall submit to the Executive Director for review and approval evidence of compliance with the requirements of other agencies having jurisdiction.

a. State Lands:

1. Evidence that no State Lands are involved in the development; or
2. State Lands are involved in the development and all permits, including dredging, required by the State Lands Commission have been obtained, or
3. State Lands are 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.

- b. Monterey County: Evidence that the dredge program has been reviewed and approved by the Monterey County Environmental Health Division, Hazardous Materials Branch.

- c. Monterey Bay Unified Air Pollution Control District: Evidence of compliance with all conditions of the MBUAPCD. Such conditions shall be submitted for the Commission file. Any limitations on hours of the dredge program shall be indicated.



**11. Environmental and Condition Monitor.** PRIOR TO COMMENCEMENT OF OPERATIONS UNDER THIS PERMIT, the permittee shall submit the name, address, telephone number, and qualifications of an environmental and condition monitor to the Executive Director for review and approval, along with a work program which will guide the activities of the monitor. The monitor shall be an independent consultant/contractor shall be funded and provided by the permittee following approval by the Executive Director in consultation with the USACOE, MBNMS and EPA. The monitor shall make monthly site visits to conduct visual inspections of dredging activities/operations within or adjacent to environmentally sensitive habitat areas to ensure that 1) dredging and discharge activities are being performed in compliance with the conditions of this permit; 2) that project activities are not harming wildlife or vegetation; and 3) that mitigation measures remain in place during the life of the project. The environmental and condition monitor shall submit a twice annual report to the Executive Director describing the permittee's conformance with permit requirements, beginning six months after Commission action on this permit and continuing during construction and until completion of the dredge project. The environmental and condition monitor shall be empowered to halt construction, after consultation with the Executive Director, if it is necessary to ensure that the permittee is complying with all conditions of this permit. The Executive Director shall settle any disputes between the monitor and the permittee.

**12. Revisions and Amendments.** The Permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans (including any changes in dredge area locations, boundaries or depths, or changes to the location, configuration or procedures for handling and disposal of dredged materials) shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that the change is immaterial or that no amendment is necessary.

### **3. Recommended Findings and Declarations**

The Commission finds and declares as follows:

#### **A. General Project Location & Background**

Moss Landing is a coastal community within unincorporated northern Monterey County. It is located near the middle of Monterey Bay between the cities of Santa Cruz (approximately 26 miles north) and Monterey (approximately 18 miles south), and between two river systems, the Pajaro River (approximately 1.5 miles north) and the Salinas River (approximately 4 miles south). (See Exhibit A for regional location map and Exhibit B for site vicinity map.) Moss Landing Harbor, one of only six harbors located along the Central Coast area, lies just west of Highway 1 in Moss Landing, at the mouth of Elkhorn Slough and at the head of the Monterey Submarine Canyon.

Moss Landing is adjacent to the Monterey Bay National Marine Sanctuary, which extends south from a



### **3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 12

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 and largest marine sanctuary, protecting marine resources that include the nation's most expansive kelp forests, one of North America's largest underwater canyons, and the closest deep ocean environment to the continental United States (NOAA, 1995).

Moss Landing Harbor was created in 1947 when the US Army Corps of Engineers (USACOE) first dredged the mouth of Elkhorn Slough near the northern extent of the Old Salinas River mouth. The Harbor occupies a portion of the Old Salinas River channel paralleling the coast and separated from the ocean by sand spits and dunes. Permanent jetties placed along the north and south sides of the entrance provide year-round access to the Pacific Ocean. Tide gates along the north and south ends of the Harbor allow for muted tidal activity within Bennett Slough to the north, as well as in the Moro Cojo Slough and the Old Salinas River channel to the south. Inland of the Highway 1 bridge is the Elkhorn Slough National Estuarine Research Reserve whose tidal exchange flows through the Harbor.

Lands to the west of the Harbor are made up of sand flats and sand dunes that have built atop the sand spits of the Old Salinas River. Most of the land along the southern spit and a portion of land along the northern spit were historically mapped as City Lands of Monterey (the northern extent representing the location of the Old Salinas River mouth; see Exhibit B). Today, there is no ownership or legal connection to the rather distant City of Monterey, and the primary mouth of the Salinas River is several miles to the south. Beach strand and dune fields make up the coast north of the Harbor entrance, and include Moss Landing State Beach and Zmudowski State Beach, which extends to the mouth of the Pajaro River. East of the Harbor lie mud flats and tidal marshes of Elkhorn Slough extending inland for nearly seven miles. Low rolling hills make up the upland areas, which in the vicinity of the Harbor reach only 20 feet in elevation.

As a result of the harbor's proximity to both deep-water marine environments immediately offshore and estuarine environments and tidal sloughs inland, it is highly valued for the commercial fishing, recreational boating and educational opportunities that this location provides. Approximately 175 recreational boats and 200 commercial boats are berthed in Moss Landing Harbor, including several of the ocean going research vessels of the Monterey Bay Aquarium Research Institute (MBARI). The Moss Landing community has a population of approximately 520 people (HLA, 1999). Upland areas adjacent to the Harbor include marine research facilities, commercial fishing and recreational boating operations, manufacturing and various visitor-serving uses. Nearby upland areas have historically been used for farming (including both dairy farms and crop farming), power generation and some industrial facilities. The area has also become a day-trip destination for small boating enthusiasts and kayakers, with put-ins both in Moss Landing Harbor and Elkhorn Slough.

The Harbor entrance channel and Elkhorn Slough basically divide the Moss Landing Harbor into two parts, referred to as the North and South Harbor areas, respectively. The North Harbor area occupies a portion of the Old Salinas River near its confluence with Bennett Slough, and the South Harbor area occupies portions of both the Old Salinas River and the mouth of Moro Cojo Slough (Exhibit B).



California Coastal Commission

The North Harbor is currently home to the Elkhorn Yacht Club, a commercial kayaking center, and Skipper's and Maloney's Harbor Inn restaurants. (The rebuild of Skipper's Restaurant, which burned down earlier this year, was recently approved by the Commission as CDP application 3-99-002). Most of the commercial fishing and oceanographic research vessels and related activities are situated in the South Harbor, with onshore facilities built along Sandholdt Road. Additionally, a number of restaurants, antique shops and art galleries are located along Moss Landing Road, between Moro Cojo Slough and the Old Salinas River. Two industrial sites are located along the eastern side of the Harbor south of Elkhorn Slough: (1) The Pacific Gas and Electric Power Plant (purchased by Duke Energy in 1998); and (2) the National Refractories and Minerals Corporation site.

Because of its location, Moss Landing Harbor is a depositional zone for fine-grained sediments, especially following major storms that carry large volumes of sediment from the Salinas Valley watershed into the Old Salinas River and nearby slough systems and ultimately into the Harbor. Similarly, the Elkhorn Slough watershed is also a sediment source. Littoral sands transported by longshore currents also get trapped in the entrance channel forming shoals, and onshore wind transport beach and dune sands into the North Harbor, forming sand bars. Sediment deposition in the Harbor seriously impedes navigation, especially at low tides. Currently, boat traffic must be timed around the tides to enter and maneuver inside the Harbor. Commercial fishing, recreational, and marine research vessels and the activities they support are thus being impacted by the shoaling problem in the Harbor. Therefore, a dredging program is being proposed for both the North and South Harbor areas of Moss Landing Harbor.

Unfortunately, because much of the sediment trapped in the Harbor is nonpoint source runoff from the largely agricultural watersheds, some Harbor sediments are contaminated with DDT, organotins, and heavy metals (such as copper, mercury or chromium) in excess of environmentally safe limits. Therefore it is necessary to analyze sediment samples for these materials prior to dredging. Test results are evaluated by the US Army Corps of Engineers (USACOE), and the Regional Water Quality Control Board (RWQCB), with review from the U.S. Environmental Protection Agency (USEPA), Monterey Bay National Marine Sanctuary (MBNMS) and California Department of Fish and Game (CDF&G) to determine suitable discharge sites. Suitability determinations are used to indicate whether sediments are (1) contaminated and therefore require confined upland disposal; (2) uncontaminated and suitable for beach replenishment; or (3) uncontaminated and suitable for unconfined aquatic disposal.

**Past Dredging History.** The USACOE, 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 Moss Landing Harbor (see Exhibit C). According to the Moss Landing Harbor Master Plan Final EIR, dated 1987, the Corps is responsible for dredging the entrance channel, turning basin and South Harbor Channel to a depth of 15 feet below mean lower low water (MLLW). Channel widths are 200 feet for the entrance channel and turning basin, and 100 feet for the South Harbor Channel. Table 1 shows the dredging volumes removed by the Corps between 1947 and 1984.

**Table 1. U.S. Army Corps of Engineers Dredging Data for Moss Landing Harbor, Monterey,**



**California. (From Moss Landing Harbor Master Plan Final EIR, 1987)**

<b>Year</b>	<b>Dredge Volume (cubic yards)</b>
1947	124,381
1949	170,802
1953-54	132,864
1957	113,500
1960-62	155,156
1964	85,160
1967-68	48,469
1971	81,412
1974	56,000
1978	35,188
1981	68,891
1984	114,936*

\* Includes 30,689 cubic yards dredged from non-federal North Harbor Channel

The Moss Landing Harbor District (MLHD) is responsible for dredging the North Harbor Channel and all berthing areas within the Harbor. The North Harbor Channel is 75 feet wide. The Moss Landing Harbor District has conducted both maintenance dredging and emergency dredging in the past, as approved by the USACOE and California Coastal Commission (CCC). Dredging activities authorized by the CCC in the last five years include CDP 3-96-020 (approved 5/9/96) to dredge and dispose of 31,000 cubic yards (cy) of dredge material from South Harbor channel and dock areas, and CDP 3-98-032-G (approved 4/8/98) to conduct emergency dredging and disposal of approximately 22,000 cy from South Harbor locations. Table 2 shows the history of dredging conducted by the MLHD.



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 15

**Table 2. History of MLHD Maintenance Dredging at Moss Landing Harbor, Monterey, California.**

Date	Permitting Authority	Permit Number	Purpose and Location of Dredging	Approximate Volume (cy)	Discharge Location
File date 6/18/73	CCC – appeal	05-73-185	Maintenance dredging and deposit of spoils	NA	NA
3/8/76	CCC	P-11-75-1580	8-10,000 cy of dredge spoils	8-10,000 cy	NA
8/22/77	CCC	P-77-737	Maintenance dredging of north channel and deposition of spoils onto eroding embankment	NA	Eroding embankment extending approx 200 yards south of north jetty sand spit
11/3/81	CCC	3-81-089	Maintenance dredging west side of main channel	NA	NA
10/12/83	CCC	3-83-186	Maintenance dredging from north channel	40,000 cy	SF-12, local beach restoration area sited immediately north of Sandholdt Pier
10/22/85 2/23/87	CCC CCC	3-85-185 3-85-185-A1	Maintenance dredging	4,000 cy, amended to 20,000 cy	NA
11/15/89	CCC	3-89-209	North Harbor	NA	NA
1993	USACOE	NA	NA	3,992 cy silts and 16,788 cy sand	SF-12, Beach renourishment at south sandspit
5/12/93	CCC	3-93-031 5-year permit expired 5/98	Gravelle's Boat yard	NA	Beach renourishment about 500 feet south of south jetty
5/9/95	CCC	3-96-020	South Harbor channel and dock areas (Gravelle's dock, MBARI dock, "A" dock, Sea Products dock, Areas D and F)	31,000 cy	Offshore, beach renourishment and upland disposal sites (Marina Landfill)



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 16

Date	Permitting Authority	Permit Number	Purpose and Location of Dredging	Approximate Volume (cy)	Discharge Location
1996	USACOE	NA	Entrance channel	26,000 cy	Beach renourishment at south spit
7/96	USACOE	22026S27	Five year dredging permit for North and South Harbor	For year 1999 = 150,000 cy; For years 2000 and 2001 = 50,000 cy	SF-12, beach renourishment and upland disposal sites (Marina Landfill) via North Harbor Interim Drying and Rehandling Site
4/8/98	CCC	3-98-032G Emergency Permit	One-time Emergency dredging from South Harbor (including Areas A, B, D1, F, and Gravelle's dock)	22,000 cy	SF-12

Most recently, the MLHD was granted a five-year dredging and disposal permit from the USACOE (Permit Number 22026S27, dated 7/96) to dredge 50,000 cubic yards per year (cy/yr) from berthing and channel areas in the North and South Harbor areas. This original USACOE dredging permit authorized temporary disposal and rehandling of contaminated dredge spoils at two different sites on MLHD property: the MLHD Boat Yard (APN 133-173-01) and MLHD property south of Sandholdt Road (APN 133-221-09). At the request of the MLHD, the USACOE later modified Permit Number 22026S27 (6/8/98) to increase annual dredge volumes to 150,000 cy/yr for 1998 and 1999 and 50,000 cy/yr for 2000 and 2001, and to authorize a change of location for temporary upland disposal and rehandling, from the MLHD Boat Yard and Sandholdt Road sites to a new location called the North Harbor Interim Drying and Rehandling site (Interim site), located along the northeast side of the Harbor.

Following a combined design approval and authorization of CDP# 98-0137 from the Monterey County Planning and Building Inspection Department (dated 12/16/98), use of the North Harbor Interim site was permitted for temporary disposal and rehandling of dredge materials (described in Finding 3.b, below). According to the applicant, approximately 70,000 cy of sediment has been dredged from the harbor berths and channel areas under the USACOE permit between March 1998 and February 1999. Dredging operations, under the USACOE Permit Number 22026S27, have been ongoing for most of this year. This permit is required to bring the MLHD dredging and disposal operations into compliance with Coastal Act requirements.





**B. Project Description**

The MLHD proposes to dredge 150,000 cubic yards per year (cy/yr) in 1999, and 50,000 cy/yr during the years 2000 and 2001 for berths and channels in Moss Landing Harbor (MLH). Uncontaminated dredged materials are to be disposed of at an offshore unconfined aquatic discharge site in Monterey Bay (SF-12) located near the end of Sandholdt Pier, and at three beach renourishment sites located north and south of the harbor entrance (see Exhibits A and B). Uncontaminated sediments that are primarily sand (80% or more) will be treated as appropriate for beach replenishment; whereas uncontaminated sediments that contain more than 20% fine grained particles will be considered appropriate for offshore unconfined aquatic discharge. Contaminated dredge materials are to be processed at the North Harbor Interim Drying and Rehandling Site and then trucked offsite for confined upland disposal at the Marina Sanitary Landfill. A second offsite location, the Dolan Road site, is being considered as an additional upland disposal site. The Dolan Road site is located about 1.5 miles east of the project area near Elkhorn Slough, within Monterey County's coastal permit jurisdiction.

This proposal is intended to be similar in scope and synchronized with the time frame of the current USACOE permit (Number 22026S27) held by the MLHD.

Exhibit C shows the proposed areas to be dredged, and their location relative to the federal channel. This figure also shows the location of the North Harbor Interim Drying Site, water quality (i.e., turbidity) monitoring locations and the environmentally sensitive habitats mapped within the Harbor. Areas to be dredged within the South Harbor include Areas A, B, C1, C2, G, H1, and the Gravelle's Dock Area (Area E). Areas to be dredged within the North Harbor include Areas I and J. Table 3 shows the approximate surface area, depth and dredge volumes proposed for each area, as well as the proposed discharge site (based on suitability determinations made by USACOE and RWQCB following review of sediment sampling test results that have already been conducted).

**Table 3. Approximate Area, Depth and Sediment Volumes of Proposed Dredging Areas in North and South Harbor, Moss Landing Harbor (adapted from HLA, 3/2/99 Final Project Plan Maps and Tables)**

Dredge Area	Approximate Surface Area (ft <sup>2</sup> )	Proposed Dredge Depth (ft MLLW)	Approximate Dredge Volume (cy)	Suitable Discharge Site
Dredging Area 1				
B	17,500	-11	7,000	AQUATIC
C1	37,500	-13	14,000	AQUATIC
Dredging Area 2				
C2	53,750	-13	15,000	UPLAND
A	6,100	-13	900	UPLAND



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 18

Dredge Area	Approximate Surface Area (ft <sup>2</sup> )	Proposed Dredge Depth (ft MLLW)	Approximate Dredge Volume (cy)	Suitable Discharge Site
Dredging Area A (outside of Area2)	22,500	-13	5,600	TBD
Dredging Area B (outside of Area 1)	60,000	-9 to -11	22,000	TBD
Dredging Area D	93,000	-13	40,000	TBD
Dredging Area E	22,000	-13	25,000	TBD
Dredging Area F	237,000	-9 to -11	55,000	TBD
Dredging Area G	244,000	-9	36,000	G1 = AQUATIC G2 = BEACH
Dredging Area H1	218,000	-9 to -11	24,500	AQUATIC
Dredging Area I	150,000	-9 to -11	30,000	AQUATIC
Dredging Area J	190,000	-9 to -11	30,000	AQUATIC
North Harbor Sand Bar	30,000	-6	11,000	TBD

Dredging volumes are estimates based on bathymetric surveys conducted February 1999

Ft<sup>2</sup> = square feet, MLLW = mean lower low water, cy = cubic yards

AQUATIC = Unconfined Aquatic Discharge Site (SF-12)

BEACH = Beach Replenishment Sites

UPLAND = Confined Upland Discharge Sites (i.e., Marina Sanitary Landfill by way of the North Harbor Interim Drying and Rehandling Site)

TBD = To Be Determined following sediment sampling and analysis.

Dredge volumes listed in Table 3 are estimates based on bathymetric surveys conducted February 1999, and may change over the term of this permit as maintenance dredging continues. The permit allows for dredging up to 150,000 cy in 1999 to remove the large volume of material that has washed into the Harbor following extreme storms of the last few years. It is expected that once these materials are removed, maintenance dredging involving lesser volumes of material (less than 50,000 cy/yr) can resume. Of course, greater volumes can be expected from time to time over the long run, depending on future circumstances, such as major storm events and the amount of soil erosion in the contributing watersheds.

As described in the applicant's project description, the exact amount to be dredged and the appropriate disposal site for dredged sediments from each area will be determined separately for each dredging episode. Additionally, the following will be completed prior to each dredging episode:

- A Sediment Analysis Plan (SAP), describing sediment sampling locations and testing protocols;
- A description of sediment sampling and analysis of test results;
- A determination by USACOE and RWQCB, with consideration of additional comments from



USEPA, MBNMS and CDF&G, of discharge site suitability based on sediment sampling test results;

- (d) A Dredge Operations Plan (DOP), that quantifies the amount to be dredged from each Harbor area, including the location and proposed disposal option (aquatic, beach replenishment, or upland); and
- (e) A dredging and discharge schedule, which includes haul routes and transportation schedule (in compliance with Monterey County CDP 98-0137) for dredged materials being transported to upland disposal sites.

**Sediment Analysis and Dredging Operations.** Dredge disposal depends on the biological, chemical and physical qualities of sediments as determined through sediment sample analysis. Previous test results have shown that some areas of the Harbor contain relatively high levels of DDT and heavy metals (copper, chromium and mercury). Therefore, sediment testing is required prior to dredging to determine the nature and extent of contaminated sediments, and the disposal sites suitable for sediments from each dredging area. Sediment samples will be collected from all of the proposed dredging areas, and sediment testing will be conducted in conformance with the Master Sampling and Analysis Plan (MSAP) prepared by HLA (1999). Sediment samples will be tested using USACOE and USEPA approved methods and guidelines and analyzed for 1) metals; 2) pesticides and PCBs; 4) butylins; 5) organotins; 6) total and water soluble sulfides; 6) total solids/water content; 7) total volatile solids; 8) total organic carbon (TOC); and 9) grain size distribution.

Prior to each dredging episode, a Sediment Analysis Plan (SAP) will be prepared, describing proposed dredge areas, sediment sampling locations and testing protocols. Following review of sediment sampling test results, the USACOE and RWQCB will, after considering comments from USEPA, MBNMS and CDF&G, make a determination of discharge site suitability. Following this determination, a Dredge Operations Plan (DOP) will be submitted. The DOP will include 1) site plans showing the specific area(s) and volume(s) to be dredged, including planned dredge depths and discharge sites, and 2) a dredging and discharge schedule, which includes haul routes and transportation schedule for dredged materials being trucked offsite to the approved upland disposal site(s).

Dredging equipment, pipelines and staging areas are described in detail in the application project description. Dredging will be conducted using a cutterhead hydraulic dredge, which removes and transports dredged material in a liquid slurry through 10 or 12 inch high density polyethylene (HDPE) pipelines, thereby minimizing disturbance and resuspension of sediments at the dredge site. The dredged slurry is then pumped to either the offshore disposal site (SF-12), beach replenishment sites or the North Harbor Interim Drying and Rehandling Site (Interim Site) using centrifugal pumps. Dredged slurry suitable for disposal at SF-12 is sent through a section of HDPE pipeline that extends from the dredge barge underground between the southern end of "A" dock and the northern end of Sandholdt Pier. The pipeline is then submerged for a length of about 500 feet offshore to the SF-12 disposal site. Dredged materials suitable for beach replenishment are discharged above mean tide level (MTL) from HDPE pipelines set along the beach. Dredge materials that must be transported to the North Harbor Interim Site are sent through a 2,500-foot section of HDPE pipeline that lies submerged along the western side of the South Harbor, between the southern end of "A" dock and the north side of Gravelle's dock (see



Exhibit D). The north end of the pipeline is connected to two booster pumps located on Gravelle's boatyard and an additional 4,500-foot long section of pipeline floats between Gravelle's boatyard and the south jetty, before being submerged under the Harbor channel. The pipeline surfaces along the west shore of the North Harbor along the mudline, then crosses to the east side of the Harbor and emerges near the North Harbor Interim site. The pipeline then crosses a short section of fringing salt marsh before discharging into the first of three settling ponds at the North Harbor Interim site (see Exhibit E).

**North Harbor Interim Drying and Rehandling Site.** According to the operations plan for the North Harbor Drying and Rehandling Site (HLA, 6/23/99), dredging operations will occur at a maximum rate of 4,500 gallons per minute (gpm), 10 hours per day, with dredging ongoing for 16 consecutive days, followed by a 16-day settling period.

The North Harbor Interim Drying and Rehandling site (Interim Site) is designed to use a series of three settling ponds, which are divided from each other by 12-foot high berms, with overflow between the ponds controlled by weirs set into the berms (Exhibit E). Design of the interim drying site required a 6 foot excavation at the site, with some of the excavated fill used to build the berms, and 20,000 cy of excess fill used for construction of a parking lot in the North Harbor area, as approved by Monterey County CDP number 98-0137. The settling basins have been designed with a holding capacity of about 36,640 cy, requiring that dredged materials be processed in batches. Approximately 3,700 cy of dredged sediments are processed in each batch of dredge materials

According to the applicant, 60% of the total solids by volume are expected to settle in the primary settling basin, with overflow going into the secondary settling basin, where 20% of the total solids are expected to settle. Additional flocculents and coagulants will be added to the decant water in the second settling pond to aid in settling of the last 20% of solids. The remaining decant water collects in the third settling pond.

Decant water from the third basin that meets water quality standards established by the RWQCB Order 90-21 (developed with guidance from the USEPA and MBNMS), can be discharged either directly into the North Harbor or to SF-12. The turbidity of the water in pond 3 and the North Harbor is to be monitored as an indication of potentially contaminated suspended sediment, and releases to the Harbor can occur only when turbidity levels in the pond are within acceptable limits. Decant water discharged directly into the North Harbor is performed via a 4-foot flashboard weir set into the north west side of the basin and a 36" discharge pipe (half CMP culvert) that extends below MLW. Decant water discharged at SF-12 requires two submersible pumps that are set in pond 3 and HDPE pipes that follow a similar route back to the dredge barge and out to SF-12.

To accelerate the drying process, dredge materials in settling pond 1 are combined with a cement mixture using heavy equipment. The dredged sediments are then allowed to dry for two weeks before being loaded onto trucks for transport offsite.

**Transport of Sediments Offsite.** The current offsite disposal location is the Marina Sanitary Landfill, approximately 8 miles southeast of the project site. According to the applicant, 231 truckloads are



required for each batch of dredged materials (assuming each truckload has a capacity of 20 cy). An estimated 80 truckloads per day would be used to transport the contaminated dredged materials to the Marina Sanitary Landfill. As described in the Mitigation Monitoring Plan prepared by MLHD, these trucks will only operate between the hours of 9 am and 3 pm to avoid peak morning and afternoon commute hours, and will be covered to minimize the possibility of sediment loss during transport. Traffic mitigation measures may also include limited nighttime operations to minimize traffic congestion, if requested by the County. A traffic management plan has been prepared by the MLHD, in compliance with the Monterey County CDP #PLN98-0137, which addresses additional traffic impacts that may result from the project.

**Future Disposal Sites.** To plan for future maintenance dredging required subsequent to the term of this permit, the MLHD should pursue studies for other temporary drying and rehandling sites before decommissioning the North Harbor Interim site. Such studies may require environmental review and impact analysis, which should include but not be limited to discussion of impacts to biologic and geologic resources, air quality and traffic/circulation and public access. Additionally, a long-term plan should be developed to seek out and evaluate other potential sites for future dredge materials that will require confined upland disposal.

### **C. Previously Approved Project & Related Commission Actions**

Previous permit and amendment descriptions including CDP numbers and dates are listed in Table 2, above. The Commission has extensively conditioned previous permits and amendments in order to protect water quality and marine resources. These previous conditions have been, wherever applicable to this consolidated permit, updated and incorporated. Other than conditions specifically altered by this permit, all of the previous conditions of approval remain in effect.

### **D. Standard of Review**

The proposed dredging would take place within the Commission's original permit jurisdiction in Moss Landing Harbor. In general, original Commission jurisdiction is over existing and former (now filled) tidelands. Lands above mean high tide have been deferred to the Monterey County jurisdiction. Other project components, such as the North Harbor Interim site for materials drying and rehandling, and the potential upland disposal site at Dolan Road, are located partially or entirely within areas where the coastal permit authority has been delegated to Monterey County. This area of delegated jurisdiction comprises that portion of the Monterey County coastal zone landward of the existing and historic mean high tide line.

The standard of review for new development in the Commission's original jurisdiction area is the Coastal Act. The standard of review for new development located within Monterey County's coastal permit jurisdiction is the certified Local Coastal Program (LCP), and with respect to public access and recreation, the applicable Chapter 3 policies of the Coastal Act. Monterey County's Certified LCP



includes the North County Land Use Plan (LUP) with specific requirements for the Moss Landing Area. The county has determined that the project components within its jurisdiction are consistent with the requirements of the certified LCP. This permit encompasses the balance of the project, located in the Commission's original jurisdiction. Because portions of the project, such as the decant water outflow, span the jurisdictional boundary, and because in numerous respects coastal resource issues demand that the project be understood in their entirety, regardless of jurisdictional boundaries, the following findings, where necessary, discuss portions of the project located beyond the original jurisdiction area.

## **E. Issues Discussion**

### **1. Coastal Permit Required**

Section 30106 of the Coastal Act defines "Development" for purposes of requiring coastal development permits to include "discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials." Section 30610(c) offers a statutory exception for certain maintenance dredging of existing navigation channels.

As detailed in a letter sent from the Coastal Commission to MLHD in September 4, 1998, the Harbor's dredging project is considered development as that term is defined in the Coastal Act (Public Resources Code 30106) and does not qualify for the exemption offered by Public Resources Code 30610 (c). This statutory exemption applies only to dredging governed by a U.S. Army Corps of Engineers (USACOE) permit within navigational channels. These channels are defined by federal and state law and are depicted on charts of harbors. Dredging in these channels, even where statutorily exempt from the requirement to obtain a coastal development permit, remains subject to Commission review pursuant to the federal consistency process established by the Coastal Zone Management Act of 1972. In this case, according to the District's plans, a large portion of the proposed dredging will take place in berthing areas outside of the navigational channel, and is therefore not exempt.

The dredging project is also not excludable under the regulatory exemption for routine maintenance dredging found in Section 13252 (a)(2)(A)(B)(C) of Title 14 of the California Code of Regulations, because it does not meet the specific criteria outlined in the regulation:

#### *13252. Repair and Maintenance Activities Requiring a Permit.*

*(a) For purposes of Public Resources Code Section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:*

*(1)....*

*(2) Any method of routine maintenance dredging that involves:*

*(A) The dredging of 100,000 cubic yards or more within a twelve (12) month period;*



- (B) The placement of dredged spoils of any quantity within an environmentally sensitive habitat area, on any sand area, within 50 feet of the edge of a coastal bluff or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams; or*
- (C) The removal, sale, or disposal of dredge spoils of any quantity that would be suitable for beach nourishment in an area the commission has declared by resolution to have a critically short sand supply that must be maintained for protection of structures, coastal access or public recreational use.*

The project involves deposition of the dredge spoils in the ocean, on the beach (within 20 feet of coastal waters) or in a decanting facility. In addition, more than 100,000 cubic yards of dredging is proposed. According to the USACOE's Letter of Modification (June 8, 1998) the Moss Landing Harbor District is now permitted to dredge 150,000 cubic yards annually for 1998 and 1999 and 50,000 cubic yards for 2000 and 2001. It is also arguable whether most of the proposed work is "routine" maintenance because the dredging has not been undertaken on a regular basis over the years. For these reasons, the MLHD is required to obtain a Coastal Development Permit for the proposed dredging described herein.

## **2. 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:

*Section 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.*

*Section 30101.3. "Coastal-related development" means any use that is dependent on a coastal-dependent development or use.*

Section 30001.5 states in part:

*Section 30001.5. 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 Section 30234 and 30255 also provides:

*Section 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.*

*Section 30234.5. The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

*Section 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 Moss Landing Harbor is one of only six harbors located along the Central Coast, and is the primary commercial fishing port in Monterey Bay area. The MLHD maintains a total of 488 berths within the Harbor which are used by commercial fishing, recreational and research vessels. Approximately 175 recreational boats and 200 commercial boats are berthed in the Harbor. The Harbor is also home to the largest number of research vessels berthed within the Central Coast area, supporting the Monterey Bay Aquarium Research Institute, the California State University Moss Landing Marine Lab, and the Elkhorn Slough National Estuarine Research Reserve.

Section 30234 of the Coastal Act provides that facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Sections 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-dependant 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.

The proposed dredging and discharge activities not only support coastal-dependant uses, but are integral to such uses and therefore have a priority under the Coastal Act. Accordingly, the Commission finds that the proposed development is a high priority coastal use that is consistent with the land use priorities of Coastal Act Sections 30001.5, 30222, 30222.5 and 30255.

### **3. Marine Resources**

Coastal Act Sections 30230 and 30231 require that:





*Section 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.*

*Section 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.*

Coastal Act Section 30233 provides in part that:

**Section 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:*

*(1)...*

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

*(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. ...*

*(e) Erosion control and flood control facilities constructed on water courses can impede the movement of sediment and nutrients which would otherwise be carried by storm runoff into coastal waters. To facilitate the continued delivery of these sediments to the littoral zone, whenever feasible, the material removed from these facilities may be placed at appropriate points on the shoreline in accordance with other applicable provisions of this division, where feasible mitigation measures have been provided to minimize adverse environmental effects. Aspects that shall be considered before issuing a coastal development permit for such purposes are the method of placement, time of year of placement, and sensitivity of the placement area.*



With regards to water quality, Coastal Act Section 30412 (b) states that

**Section 30412.**

*(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality. ... The commission shall assure that proposed development and local coastal programs shall not frustrate this section. The commission shall not ... modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality or the administration of water rights.*

*Except as provided in this section, nothing herein shall be interpreted in any way either as prohibiting or limiting the commission, local government, or port governing body from exercising the regulatory controls over development pursuant to this division in a manner necessary to carry out this division.*

**3a. Biological Resources**

The Elkhorn Slough complex and Monterey Bay National Marine Sanctuary encompass many of the most valuable marine resources found within the Central Coast area. These two areas are closely linked through the Moss Landing Harbor. The Monterey Bay National Marine Sanctuary 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 world's most diverse invertebrate populations (NOAA Citizen's Guide to Clean Water).

Elkhorn Slough is one of the few relatively undisturbed coastal wetlands remaining in California and contains the first National Estuarine Research Reserve (the Elkhorn Slough NERR), and the Moss Landing Wildlife area, both managed by the California Department of Fish and Game. The main channel of the slough winds inland nearly seven miles and encompasses over 2,500 acres of marsh and tidal flats. Over 400 species of invertebrates, 80 species of fish, and 200 species of birds have been identified in Elkhorn Slough. The channels and tidal creeks of the slough are nurseries for many fish, including seven commercially important species. Harbor seals and sea otters also make their way through the Harbor to established haulouts in Elkhorn Slough. Additionally, the slough is on the Pacific Flyway, providing an important feeding and resting ground for many kinds of migrating waterfowl and shorebirds. At least six rare, threatened or endangered species utilize the slough and environs, including peregrine falcons, Santa Cruz long-toed salamander, clapper rails, brown pelicans, least terns and sea otters (NOAA, CDF&G).

The Moss Landing Harbor lies at the nexus of these two sites, providing the vital link between the tidal waters of Monterey Bay and Elkhorn Slough. Marine mammals, fish and seabirds make use of both the aquatic and terrestrial environments provided within the Harbor. Sea otters have been observed by



### 3-99-011 Staff Report: Regular Calendar

Moss Landing Harbor Dredging Project 1999-2001

Page 27

CDF&G staff (Deborah Johnston, CDF&G, 2/25/99) hauling out on the North Harbor sand bar. Pelicans have also been observed resting on the sand bar. Shorebirds rest and forage in the tidal marsh and mudflats that fringe the North Harbor. Some of the more consolidated mudflats in the North Harbor support remnant eelgrass beds (ABA Consultants, 1998). Mitigation measures described in the attached CEQA Mitigated Negative Declaration for Moss Landing Harbor Maintenance Dredging Project (Exhibit H) will be undertaken to protect marine mammals and shorebirds during dredging operations.

Eelgrass (*Zostera marina*) is a rooted, flowering aquatic plant that forms densely vegetated beds in estuarine and marine environments. Eelgrass beds support the fishing industry by providing important habitat for a variety of fish and other aquatic species (HLA, 2/4/99). Prior to opening of the harbor mouth in 1947, Elkhorn Slough was a shallow water embayment with extensive intertidal mudflats and eelgrass beds (HLA 2/4/99, ABA Consultants, 1989). Increased current velocities, tidal erosion and subsequent turbidities have greatly reduced the amount of eelgrass remaining in the area.

A 1998 survey by ABA Consultants and Moss Landing Marine Lab faculty and staff (ABA Consultants, 1998) observed a remnant eelgrass bed near the junction of Elkhorn Slough and the North Harbor. This eelgrass bed is approximately 100 feet east of the nearest extent of proposed dredging (see Exhibit C).

Harding Lawson Associates (HLA 2/4/99) conducted an analysis of the effects of turbidity due to dredging activities in order to evaluate whether the existing eelgrass bed may be potentially impacted by proposed dredging activities in the North Harbor. According to the report, eelgrass populations "...have specific requirements and may be limited by environmental factors such as temperature, salinity, current velocity, sediment type, oxygen, and solar radiation." The report noted that suspended sediment grain size, dissolved oxygen, and solar radiation "...are likely to change in the vicinity of dredging processes."

Weekly turbidity samples were taken at numerous locations in the Harbor (see Exhibit C), including locations near the eel grass beds, for comparison against background levels. The analysis, conducted before and during dredging activities, found that 1) turbidity increases from dredging tend to be localized to the immediate area unless other environmental factors (such as wind or rain) cause greater dispersion of suspended sediment; and 2) the local eelgrass bed appears to be subject to a range of turbidity levels under existing conditions that are comparable to turbidity levels measured during dredging. The report concludes that the eelgrass bed mapped in the North Harbor is not expected to be subject to substantial increases in turbidity during dredging.

The USACOE reviewed MLHD requests for enlarging dredge areas covered under Permit 22026S27, in coordination with CDF&G staff to ensure that the proposed dredging plan includes protection of environmentally sensitive areas such as the North Harbor Sand Bar and the few remaining areas within the Harbor that still support eelgrass beds. Maps depicting the dredging areas within the North Harbor have been revised to reflect protection of the remaining eelgrass bed and allow only limited dredging of the North Harbor sand bar. These protections to the marine environment will, with respect to these particular biologic resources, provide conformance with Coastal Act Sections 30230 and 30231.

The USEPA (in correspondence to the USACOE dated 3/31/99) states that the Monterey Bay National



California Coastal Commission

Marine Sanctuary is a "special aquatic site" under the 404(b)(1) guidelines and has also "determined that the Monterey Bay National Marine Sanctuary, specifically including the Monterey Canyon and the area in the vicinity of the designated dredged material disposal sites SF-12 and SF-14, is an Aquatic Resource of National Importance (ARNI)." These special status determinations require upland disposal for any "...unsuitable material currently present in the federal channel (as well as the adjacent berths)..." As proposed, contaminated dredge materials will be transported to a confined upland disposal site following decant and drying operations at the North Harbor Interim site. Upland disposal sites are required to protect the marine resources in the Harbor and Monterey Bay from the potential bioaccumulation of potentially toxic contaminants (e.g., DDT, mercury, etc). Therefore, as conditioned to insure the proper classification and disposal of dredged sediments, the project will protect marine habitats in compliance with Coastal Act Sections 30230 through 30233.

### ***3b. 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 specified 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 has severely reduced depths in and around navigational channels and berthing areas (see Exhibit C). Currently, some of the deeper draft commercial and research vessels are required to time their maneuvers in and out of the Harbor with the tides. Maneuvering within the Harbor is also difficult during low tides when many vessels rest on the muddy bottom sediments. Further sediment inflows can be anticipated, resulting 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.

The MLHD's Master Sediment Analysis Plan and Dredging Operations Plans provide for sediment sampling prior to any dredging episodes, and use of the North Harbor Drying site and upland disposal sites for any contaminated dredge materials. As proposed, dredging will be conducted using a cutterhead 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.

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. Appropriate disposal sites have been established for both offshore aquatic discharge and for beach replenishment. Contaminated dredge discharge is limited to confined upland disposal following drying and rehandling at the North Harbor Interim site. The USACOE, RWQCB, MBNMS and USEPA have approved each of 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 will be provided 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 in Special Condition 1) is consistent with Coastal Act Sections 30230 through 30233 described above.

### **3c. Water Quality**

Major concerns have been raised throughout the years regarding pesticides, heavy metal, and other toxic materials that may be present in the sediments of the Salinas River and network of sloughs in the Elkhorn Slough complex. DDT, toxaphene, dieldrin, endrin, aldrin, and endosulfan are major persistent pesticides that have historically been used for agricultural operations throughout the Salinas Valley. With the exception of endosulfan these chemicals have now been banned for use in California. They are insoluble in water but highly soluble in lipids or animal fatty tissue where they tend to concentrate.

Studies undertaken to examine water quality (AMBAG 1992) suggests that though previously banned, these persistent organochlorine pesticides are still present in agricultural fields and are absorbed to fine grained sediments leaving the fields, thereby finding their way as suspended sediments in surface water bodies. These contaminated sediments enter the Salinas River system by runoff, percolation, and wind transport where they are passed through the food chain via bioaccumulation.

Every storm or any project involving disturbance of sediments in the drainage area of the Old Salinas River Channel and its main tributary, Tembladero Slough, is a contributor of contaminants to Moss Landing Harbor and ultimately to the Monterey Bay National Marine Sanctuary.

Agricultural runoff and the by-products of boating and industrial uses have also more directly affected water quality in the Harbor. Federal channel sediments were initially found to be contaminated in 1993 and most of the inner harbor dredging was postponed till appropriate upland facilities could be developed. The MBNMS noted concerns (in a letter to the USACOE dated 3/19/99) about high concentrations of total organotin compounds, total PCBs, and copper after reviewing sediment analyses for samples collected from the Gravelle's dock area. More recently, the USEPA (5/31/99) reviewed sediment testing data provided by the USACOE (including a two volume report titled *Chemical Analysis, Toxicity Evaluation and Bioaccumulation Exposure of Sediments from Moss Landing Harbor for Fiscal Year 1998 Maintenance Dredging*, dated February 1999, by ToxScan, Inc). The USEPA determined that none of the Inner Harbor Federal Channel dredged material was suitable for unconfined aquatic disposal ...

“...due to a combination of significant acute toxicity to sensitive marine organisms... and significant bioaccumulation of DDT compounds in tissues of marine organisms exposed to sediments from all of the [federal channel] areas. (Consequently, the USEPA supports the use of an upland rehandling and disposal site for disposing of any unsuitable materials dredged in the Harbor.)”

Additional sediment sampling conducted to date has found contaminated sediments in the G1 portion of the Gravelle's Dock Area, and portions of Dredging Areas A and C.



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 30

As discussed above, the Commission has jurisdiction over the disposal of dredge spoils in the marine environment. In addition, the State Water Resources Control Board (SWRCB) and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality as described in Coastal Act Section 30412, above. The Monterey Bay National Marine Sanctuary also has review authority over discharges to the Sanctuary.

The Regional Water Quality Control Board (RWQCB) Waste Discharge Requirement (WDR) Order 90-21 (dated 3/9/90) details waste discharge requirements for USACOE, PG&E, and MLHD dredging operations in Moss Landing Harbor. Order No. 90-21 permitted "dredge materials composed of essentially of clean coarse sand ([with] no more than 20% passing [through a] No. 200 sieve)" to be discharged at one of three beach replenishment sites, and "disposal of unpolluted inner harbor dredge spoils with more than 20% passing through a No. 200 sieve" to be discharged to SF-14, a site in 100 fathoms of water, approximately 1.3 nautical miles from shore. Another marine disposal site, identified as SF-12, is located close to shore at the end of Sandholdt Pier. Order 90-21 additionally stated that "to use SF-12, test results must show that the material will not adversely affect marine communities in the disposal area or in Elkhorn Slough." This permit limited dredging and disposal activities to the period September 1 to June 1 to ensure that currents would allow dispersal of discharged sediment.

After analyses showed that elevated pollutant levels were found in some of the dredge areas, MLHD proposed building retention structures equipped with flashboard weirs to decant clarified water from settled spoils at the MLHD boat yard and Sandholdt Road temporary disposal sites. After review of the proposed project, the Central Coast RWQCB issued MLHD a conditioned 401 Water Quality Certification (dated May 16, 1996) for "...*Dredge Spoil Disposal In Confined Upland Areas at Moss Landing Harbor, Monterey County.*" Conditions of this permit were designed to mitigate for "...potential impacts to water quality and beneficial uses posed by decanting and potential side wall failure" and required that:

1. Discharge of decant water from retention structures shall not result in an increase in turbidity water quality objectives listed in the Water Quality Control Plan Central Coast Region (Basin Plan)
2. The District shall comply with monitoring proposed by the Executive Officer of the Regional Board,
3. Retention structures and decant conveyance systems shall avoid all areas delineated as wetlands and/or other waters of the U.S.,
4. Retention structure side wall freeboard shall be no less than two feet; and
5. Retention structures shall be designed to minimize potential release resulting from failure of side walls due to hydraulic and geotechnical conditions.

Revision of this permit to use the North Harbor Interim Drying and Rehandling site (instead of the previously proposed boat yard and Sandholdt Road sites) was authorized by the RWQCB in January 13,



California Coastal Commission

**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 31

1998. The RWQCB "Revised Water Quality Certification, North Harbor Sediment Drying Site, Monterey County" notes that authorization was granted to use the North Harbor drying site because "decanting and drying activities are essentially the same as previously proposed," with clarified decant water being allowed to enter Moss Landing Harbor following a period of time in which suspended sediments are allowed to settle out of the water column.

However, because the equipment being used by the dredging contractors (hired by MLHD) can dredge at a much faster rate, dredging operations are being limited by the amount of time it takes for the decant water to leave the settling basins. Therefore, the MLHD requested an additional revision (dated 4/16/99) to the Authorization of Discharge under Order No. 90-21, to use SF-12 as an additional decant water discharge site.

Authorization for discharge of decant water to SF-12 was granted by the RWQCB 4/26/99. However, the USACOE issued a cease and desist order for discharging dredge material at SF-12 (dated 5/21/99), stating that "...the use of SF-12 as a disposal site for decant water has not previously appeared in any project descriptions nor has a certification been issued by the MBNMS for use of SF-12 for this purpose. The quality of decant water and any material it might contain is not known at this time. ... The directive will remain in effect until such time as a certification is issued by the MBNMS approving of the discharge of the decant water and the MLHD can provide information with the WQ Certification and the conditions of the Corps permit 22026S27."

The Corps is currently working with the MLHD to resolve these problems and rescind the cease and desist order. In order to rescind the order, the Corps requires:

- 1) A certification from the MBNMS that the activity is consistent with the purpose of Title III of the Marine Protection, Research and Sanctuaries Act;
- 2) A Section 401 Water Quality Certification or waiver thereof from the RWQCB; and
- 3) A determination from the CCC that the activity is consistent with the purposes of the CZMA.

Such certifications are being considered by the MBNMS, RWQCB and CCC, to ensure that water quality and the marine resources it provides for within the Harbor, Elkhorn Slough and the Monterey Bay National Marine Sanctuary are protected. The Corp's 5/21/99 cease and desist order noted that it did not preclude dredging and disposal of material found suitable for unconfined aquatic disposal from other areas authorized by USACOE Permit 22026S27.

Additionally, authorization was granted on 5/27/99 by the Central Coast RWQCB for offshore disposal of suitable dredge materials from Dredge Areas B/C1, G and H only during the period from 6am Monday through 5pm Friday each week during the period from June 1, 1999 to September 1999. The RWQCB stated that "this measure limits beneficial use impacts to periods of low use" and so extended the time period established initially in RWQCB Order 90-21 (of Sept 1 to June 1) for dredge disposal as described (and June 1 to Sept 1 for areas B/C1, G and H only).



**Water Quality Monitoring.** Currently, seven stations (Stations A through G shown in Exhibit C) are monitored monthly for turbidity. Turbidity in this case is used as an indicator to prevent discharge of water that may have elevated levels of contaminants adhered to suspended sediments. Turbidity is measured at surface and mid-depth at each station using a hand-held turbidometer.

During dredging operations, turbidity of decant water is measured in settling pond 3 and in the North Harbor (for an unaffected background measure), prior to discharge. During discharge, the in-pond and background measurements are made about every two hours to ensure that turbidity levels in the decant basins don't exceed turbidity levels in the North Harbor by more than 5 nephelometric turbidity units (NTUs), as established by RWQCB Basin Plan. MLHD has proposed using California State Water Resources Control Board (SWRCB) Ocean Plan turbidity limits (for proposed SF-12 discharge of decant water), when higher flow rate dredges are used. The Ocean Plan turbidity limits are: 75 NTU for monthly (30-day) average turbidity readings; 100 NTU for weekly (7-day) average readings; and 225 NTU for maximum instantaneous turbidity readings.

Monthly decant water samples are also collected during dredging operations, and are analyzed for total suspended solids and chemistry, using the same analytical methods and detection limits detailed in the Disposal Operation Plan for the North Harbor Interim Drying and Rehandling Site (HLA, 1999).

To ensure that the proposed method of dredge spoil disposal, especially the decanting operation, is consistent with Federal, State, and local regulations regarding the protection of water quality, Special Condition 3 requires that the submission of specific dredge plans, for each dredging episode to be undertaken during the term of this permit, be accompanied with written evidence that the USACOE, Central Coast RWQCB, USEPA, CDF&G, and MBNMS have reviewed and approved the dredging operations or that no such approval is required. In addition, Special Condition 9 requires the applicant to obtain waste discharge permits (or a waiver thereof) from the RWQCB and evidence of review and approval from the MBNMS for aquatic discharges into waters of the Harbor and Monterey Bay. Therefore, as conditioned, the project will include measures and monitoring protocols to ensure protection of water quality and marine resources in Moss Landing Harbor and so will be in conformance with Sections 30230 through 30233 of the Coastal Act.

#### **4. Upland and Environmentally Sensitive Habitats**

Coastal Act Section 30240 and 30255 require that:

*Section 30240(a). Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

*Section 30240(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.*





### 3-99-011 Staff Report: Regular Calendar

Moss Landing Harbor Dredging Project 1999-2001

Page 33

*Section 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 ....*

Environmentally sensitive habitats are areas in which plant or animal life or their habitats are rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments (Coastal Act Section 30107.5; and Monterey County LCP, 1982). Environmentally sensitive habitats existing within the project area include the waters of the Monterey Bay and Elkhorn Slough, and the tidal flats, tidal wetlands, seasonal wetlands, eel grass beds, and beach and dune areas in and adjacent to the Harbor. As proposed, the project includes dredging within the North and South Harbor areas, using a floating barge, cutterhead suction dredge and a series of floating and submerged pipelines that take dredge slurry either out to SF-12, to a beach renourishment area, or to the North Harbor Interim site. These pipelines may lie atop the Harbor bottom, tidal mud flats, fringing tidal marsh, and dune and beach habitats during dredging and beach renourishment operations. Therefore, pursuant to Coastal Act Section 30240(a) and 30240(b), the location of these pipelines shall be designed to minimize impacts to these environments (while minimizing their potential obstruction to navigation within the Harbor).

The south harbor area has been heavily used by commercial and recreational boaters since the opening of the harbor in the mid 1940's and as such has very little fringing salt marsh or environmentally sensitive habitat other than the degraded benthic invertebrate communities that may exist and beach and dune environments along the Monterey Bay shoreline (which are described below).

**North Harbor Sensitive Habitats.** The North Harbor area has had relatively less development than the South Harbor and has thereby retained at least some of the natural habitats that presumably existed prior to opening of the Harbor. The most significant habitat values of the North Harbor involve large areas of tidal mud and sand flats (Onuf et al, 1978, Oliver 1997), which are remnants of tide flats that were present before the Harbor opened. Historically, these flats extended from the old mouth of the Salinas River (near west Bennett Slough) to the present mouth of Elkhorn Slough (Oliver, 1997; see Exhibit B). These tide flats, formed by sand, muddy sand or sandy mud, house a dense and diverse community of benthic invertebrates and are important feeding and roosting habitats for shorebirds and seabirds. Ramer (1989) conducted bird surveys in the North Harbor as part of the EIR for the North Harbor Expansion, and found three species nesting in the North Harbor: Snowy Plovers, Killdeer and Western Gulls. She also noted that the North Harbor is used by several endangered or sensitive species including the snowy plover (*Charadrius alexandrinus nivosus*), California brown pelican (*Pelecanus occidentalis californicus*), California clapper rail (*Rallus longirostris obsoletus*) and California least tern (*Sterna antillarum browni*). Oliver (1997) notes that while the salt ponds in the nearby Moss Landing Wildlife Area are the major resting habitat for Brown Pelicans in central California, the sand flats on the southwest side of the North Harbor serve as a secondary resting area when human activities disturb bird use in the salt ponds. Ramer (1989) surveyed about 50 individual Brown Pelicans resting on the sand flats of the North Harbor on one day during a survey in April 1989. Hundreds of individuals rest on the sand flats during the late summer and fall, when they are most abundant in the area (Jaques and



Anderson, 1988, Oliver 1997).

Marine mammals that have been found in the Harbor include the California sea lion (*Zalophus californianus*), Pacific harbor seals (*Phoco vitulina*) and the threatened California sea otter (*Enhydra lutris*). Oliver, 1997, states that Harbor seals are common throughout the mouth of Elkhorn Slough, and reports seeing as many as 10 harbor seals swimming in the North Harbor area. Sea otters have been found in the Elkhorn Slough area since the mid 1970's (Kvitek and Oliver 1987), and feed on clams, fat innkeeper worms and other larger invertebrates throughout the mouth of Elkhorn Slough (Kvitek et al, 1988). As described previously, sea otters have been seen hauled out on the North Harbor sand bar.

Dredge areas I and J (Exhibit C) extend into the North Harbor area, and have been defined so as to avoid these environmentally sensitive habitats, while providing adequate depths for the berths and navigation channels that serve the North Harbor area. The MLHD has noted that the North Harbor sand bar has shifted its position north and east over the past few years and has decreased depths along the outer portions of the Elkhorn Yacht Club docks (Jim Stilwell MLHD, in conversation, 9/9/99; see Exhibit C). The MLHD berths vessels along the outer portions of the docks (as well as the inner portions) and so is currently seeking a revision of the Corps 22026S27 permit extending the distance around the North Harbor marina on the north and west sides (HLA, 9/7/99; see Exhibit C). The intent of this revision is to dredge the minimum area necessary to ensure that vessels berthed in the marina can maneuver in and around this area, while protecting wildlife (e.g., sea otters and brown pelicans) and other resources in the area.

The HLA 9/7/99 request notes that while regular dredging of this area will be required to maintain navigation channels in the North Harbor, MLHD will minimize dredging of this area to the extent possible and will not dredge this area while sea otters are present. Oliver (1997) notes that while periodic dredging of the channel may limit the persistence of the larger clams and other otter prey, Kvitek et al. (1988) have shown that the major feeding grounds for the California sea otter are found in other parts of the Elkhorn Slough. As described in Finding 3a above, the USACOE review process has ensured that any remnant eelgrass beds are protected by locating dredging areas away from eelgrass beds.

In general, development activities which are not resource dependent or which would result in significant disruption of habitat values would not be allowed in environmentally sensitive habitat areas (Coastal Act Section 30240). Further guidance is provided by Coastal Act Section 30255, which specifies that even coastal-dependent development shall not be sited in a wetland except as provided elsewhere in the Coastal Act. The applicable exception is found in Coastal Act Section 30233, which specifies the particular types of uses and circumstances where diking, filling or dredging of coastal waters and wetlands can be permitted. As elaborated in Finding 3b above, the proposed dredging qualifies as an allowable use consistent with Section 30233. As designed to avoid impacts to the fringing saltmarsh wetlands and to minimize disturbance of resident wildlife no significant disruption of environmentally sensitive habitat will result. Therefore, with respect to the dredging activities in Harbor waters, the project is in compliance with Coastal Act Section 30240 and 30255.



**North Harbor Interim Drying and Rehandling Facility.** The North Harbor Interim site lies within the coastal zone, in an area subject to Monterey County's coastal permit jurisdiction. As such the Monterey County has permitted the discharge and decant basins and ongoing activities within the site under CDP 98-0137. However, a small portion of this facility extends into the Commission's original jurisdiction, specifically, the discharge of decant water from the last of three decant basins (pond 3) into the North Harbor via a flashboard weir and half-culvert that extends out across the fringing tidal marsh and ends below mean low water (MLW). The MLHD is currently seeking a modification of the Corps Permit 22026S27 and an amendment to Order No. 90-21 to allow the discharge of decant water to SF-12. The modification and waste discharge amendment requests authorization for the discharge of decant water to SF-12, provided water quality monitoring shows that turbidity levels (as an indicator of potentially contaminated suspended sediment) in the decant water are below strict water quality limits set by the RWQCB (see Finding 3c above). The locations of decant water discharge sites (in the North Harbor and at SF-12), and thus the activities therein, are within the original jurisdiction of the Commission.

Harding Lawson Associates conducted a biological assessment for the North Harbor Interim site (dated December 4, 1997, amended March 1998), and characterized the 8-acre site, as consisting of "rolling topography covered by wetland/sand dune vegetation". The report notes that the site contained a mixture of vegetation types established prior to 1951, when the site was used for spoils disposal from earlier dredging of the North Harbor. Plant communities onsite prior to construction of the drying and decant facilities included non-native grassland, coastal scrub, coastal salt marsh, seasonal wetland, and landscaping (i.e., Monterey Cypress trees; see Exhibit F). While the tidal and seasonal wetlands remain, the upland habitats were removed during excavation and grading of the ponds. As conditioned by the Monterey County CDP 98-0137, re-grading and restoration of the upland areas will be conducted after use of the site is complete. The County's CDP also requires mitigation measures "...to reduce any potential significant impacts below a level of significance, including site restoration and the replanting of trees."

The HLA 1997 biological assessment listed the Monterey spineflower (*Chorizanthe pungens*) and the black legless lizard (*Anniella pulchra nigra*) as the only special status species found on the North Harbor Interim site. (The black legless lizard has since been determined a subspecies of the silver legless lizard and has therefore been removed as a candidate species on the Federal listing.) The Monterey spineflower is a federally listed threatened species (USFWS, 1994). A member of the *Chorizanthe* genus in the buckwheat family (*Polygonaceae*), the Monterey spineflower comprises a species of wiry annual herbs that inhabit dry sandy soils along the coast and inland. It is found scattered on sandy soils within coastal dune, coastal scrub, grassland, maritime chaparral and oak woodland communities along and adjacent to the coast of southern Santa Cruz County and northern Monterey County, and inland to the coastal plain of Salinas Valley (HLA, 1997; USFWS, 1994). In this case, the Monterey spineflower was found in an area that prior to 1947 would have been emergent wetland, but now is covered with sandy dredge spoils.

This circumstance can be distinguished from natural dune habitats that support the spineflower species, and where impact avoidance would have been the appropriate strategy where feasible. In this case, the



spineflower plants were removed under the terms of the County's coastal permit, subject to a mitigation plan for spineflower habitat restoration. Accordingly, a mitigation plan has been developed by HLA for "restoring habitat containing or providing habitat suitable for Monterey spineflower" at the North Harbor Interim site after project completion. Mitigation measures, described in detail in the biological assessment (HLA, 1997), involve: 1) collecting dormant seeds present in the top 2 inches of soil, 2) transporting the soil to a local nursery or university for propagation and seed magnification, 3) planting the propagated seedlings and/or magnified seed in appropriate locations on the site, and 4) creating a buffer zone around the planting areas. Monitoring of the mitigation project will be conducted for a minimum of 3 years or until the mitigation sites are able to provide habitat for the Monterey spineflower at population sizes and densities that approximate pre-existing conditions.

A narrow strip of tidal salt marsh is located along the western margin of the site, occupying an intermediate position between the tidal mudflats and upland grassland. This fringing salt marsh is dominated by pickleweed (*Salicornia virginica*), saltgrass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and gum plant (*Grindelia sp.*). This strip of fringing tidal marsh is nearly all the coastal salt marsh that remains in that portion of the North Harbor area, located south of Jetty Road. Pickleweed habitat was also found in a ditch that extends around the northern and eastern edge of the site, adjacent to Jetty Road and Highway One. Seasonal wetlands, composed of a large mono-specific patch of Santa Barbara sedge (*Carex barbarae*), were found in the southwestern corner of the North Harbor Interim site.

Development of the North Harbor Interim site may impact a portion of the fringing wetland by installation of pipelines (both into and out of the site) and placement of the culvert for decant water discharge from pond 3. However, according to the Monterey County CDP 98-0137, it is expected that self-recruitment will quickly occur following completion of the work. In any event, restoration of pipeline routes will be required. As conditioned by the Monterey County CDP 98-0137, restoration plans for the site will be submitted to the Director of Planning and Building Inspection at least three weeks prior to the conclusion of the permit and shall "... demonstrate that the net effect of the plan will be an increase and enhancement of native vegetation over previously existing conditions, and that wetland areas will be enhanced." Because of the limited amount of coastal salt marsh in the North Harbor, enhancement of these wetlands should be given special attention. Therefore, this permit is conditioned to require that a copy of this County-required "restoration/reclamation/revegetation plan" shall also be submitted for Executive Director review and approval prior to undertaking restoration of the site.

**Wetland Buffer.** The staging areas and settling ponds at the North Harbor Interim site are located nearly adjacent to the seasonal wetland mapped southwest of the site, and within approximately 20 to 100 feet from the fringing tidal wetlands that line the North Harbor shoreline. Since this layout provides only a very narrow wetland buffer between rehandling activities and environmentally sensitive wetland environments, special care should be used to minimize accidental spills or overflows when conducting dredging operations into and within the North Harbor Interim site (as provided by Special Condition 3c, above).



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 37

The Monterey County North County Land Use Plan/Certified Local Coastal Program (1982) calls for a 100-foot buffer from the landward edge of vegetation of all coastal wetlands. This is the buffer width most commonly used for wetlands and environmentally sensitive habitats by CDFG and is the recommended minimum buffer width as defined in the *Coastal Commission Procedural Guidance for Review of Wetland Projects (June 1994)*. Wetland buffers are important because they contribute to the health and vitality of functioning wetland systems by minimizing disturbance to the wetland from adjacent development. Wetland buffers function as transition zones between wetlands and upland areas, often exhibiting characteristics of both habitats. Buffer areas adjacent to wetlands act to protect the wetland from the direct effects of nearby disturbance and provide necessary habitat for organisms that spend only a portion of their life in the wetland such as amphibians, reptiles, birds, and mammals.

In order to comply with Coastal Act Section 30240(b), any future redesign or re-grading of the North Harbor site (e.g., between dredging events) should consider increasing the wetland buffer width to the recommended 100-foot buffer width. If this is not possible due to volume constraints of the ponds, additional best management practices (BMPs) should be used to ensure that the remaining salt marsh in the area is adequately protected. Appropriate BMP measures include but are not limited to placement of hay bales and/or silt fencing along the outboard edge of the rehandling site and directing surface runoff into the ponds. At the conclusion of the project, and as part of the restoration and regrading of the site, the settling and decant ponds should be filled in using non-contaminated dried dredge materials, soils obtained from the 12-foot berms and materials imported from offsite as needed, followed by revegetation of the site as described above.

While the exact extent of the Commission's jurisdiction within this potential buffer area is not easily determinable, there is no question that any future alterations or expansion of the decant facility pursuant to the County's coastal permit authority would potentially be subject to the Commission's appeal jurisdiction. Therefore, in order to assure that there are no gaps between the Commission's portion and to facilitate future County-Coastal Commission permit coordination, this permit is conditioned to require that a qualified biologist or botanist survey the site for special status species and mark areas of native vegetation to be protected prior to initiation of work.

**Upland Disposal Sites.** The Marina Sanitary Landfill has the ability to accept the full range of potential upland disposal materials from the Moss Landing Harbor dredging project. The Marina Sanitary Landfill is located on Del Monte Boulevard, approximately 2 miles north of the City of Marina, and approximately 8 miles south of the project area (Exhibit C). The Marina landfill is managed as part of the Monterey Regional Waste Management District. Waste discharge at the site is permitted by Monterey County Health Department Environmental Health Division, with oversight by the State Integrated Waste Management Agency. The Dolan Road disposal site, located 1.5 miles east of Moss Landing Harbor, has also been cited as a potential upland disposal site. Monterey County has issued CDP #PC94-196 for 16,400 cy of fill at the Dolan Road site, and the MLHD is currently in negotiations with the County for use of this site. As currently proposed, if an agreement can not be reached between MLHD and the County regarding use of the Dolan Road site, the MLHD plans to take all upland dredge



California Coastal Commission

materials to the Marina Sanitary Landfill.

If any other temporary rehandling or upland disposal sites are required during the term of this permit, MLHD will obtain all permits required for facilities owned or leased by the District that will receive dredge material from the harbor. MLHD will be responsible to conduct an environmental review and impact analysis for any proposed sites, which should include but not be limited to discussion of biological and geological resources, air quality, and traffic/circulation impacts.

**Dune Habitats.** Dune and beach habitats exist along the Monterey Bay shoreline north and south of the Moss Landing Harbor entrance. South of the Harbor entrance, private parcels of land extend out to MHT between the south jetty and Sandholdt Pier. The Salinas River State Beach lies south of Sandholdt Pier, outside of the project area. Moss Landing State Beach and Zmudowski State Beach are located north of the Harbor entrance. Three beach replenishment sites (Exhibit C) are proposed for this current permit application: 1) between Sandholdt Pier and the south entrance jetty; 2) an area directly north of the north entrance jetty; and 3) an area between the Jetty Road tide gate and Zmudowski State Beach. The USACOE Permit 22026S27 approves use of these sites for disposal of uncontaminated dredge material that contains at least 80% sand sized material.

Past Harbor dredging projects (e.g., CDP P-77-0737 and 3-83-186) have included beach restoration near the north and south jetties to reduce the impacts of shoreline erosion in those areas. Shoreline erosion has also occurred between the south jetty and Sandholdt Pier due to the blocking of littoral sediments by the harbor entrance jetties, and the high wave energies that attack the shore. Beach renourishment in these areas is a beneficial and appropriate use of suitable dredge material, because it allows the continued delivery of these sediments into the littoral zone, consistent with Coastal Act Section 30233(b). Beach renourishment also provides additional material to the beach, and greater protection for dune habitats (and other possible structures) in the back beach area.

Currently, a narrow, discontinuous zone of sand dune habitat exists in front of buildings south of the harbor entrance. In contrast, north of the Harbor entrance, a well established dune field is located along Moss Landing State Beach seaward of Jetty Road. Dredging pipelines within the project area may lie across these sensitive dune and beach areas during dredging and beach renourishment operations (Exhibit G). The Monterey County North County Land Use Plan/ Certified LCP (1982) has established specific policies for environmentally sensitive dune habitats. Section 2.3.3A-6 of the Land Use Plan (LUP) notes that coastal dune habitats within the Moss Landing area should be limited to "essential utility pipelines where no feasible alternative exists." Pipelines are a very efficient way to discharge sand sized material to beach renourishment sites, and as such can be considered essential utility pipelines. These pipelines are expected to be a temporary feature on the beach, to be used only during dredging and beach renourishment operations, and can be arranged so that they minimize damage to the dunes and sensitive plant species. As required in Section LUP 2.3.3A-7, "... disturbance or destruction of dune vegetation shall be prohibited, unless no feasible alternative exists, and then only if re-vegetation with similar species is made a condition of project approval. Any resulting dune disturbance shall be restored to the natural condition." While the LUP policies must be viewed as recommendations rather than the standard of review for those portions of the project within the commission's original jurisdiction



(i.e., within the scope of this permit), they nonetheless represent an appropriate response to the requirements of Coastal Act Section 30240.

The proposed pipeline routes may or may not cross areas of sensitive dune vegetation within the commission's original jurisdiction, depending on the historic position of tidelands and daily operational needs, during beach replenishment operations. Accordingly, because it is possible that some of the pipeline routes will be subject to the Commission's permit jurisdiction, this permit is conditioned to protect natural dune vegetation habitat areas by locating pipelines to the extent possible away from dune habitats and by restoring pipeline alignment routes, as described in the CEQA Mitigated Negative Declaration developed for the MLH maintenance dredging project, dated December 18, 1997 (Exhibit H). Therefore, as conditioned, the project is consistent with Section 30240 of the Coastal Act (as well as the LUP policies) and would ensure protection of these environmentally sensitive habitats.

**Conclusion.** Dredging and discharge pipelines, and decant and rehandling facilities are an essential part of the dredging project required to maintain navigation in the Harbor. As conditioned to require protection of sensitive habitat and species, the Commission finds that: (1) the proposed project is a type of development that is permissible in wetland and open coastal waters, consistent with Coastal Act Section 30233; (2) there is no feasible less environmentally damaging alternative; (3) feasible mitigation measures have been provided to minimize adverse environmental effects; and (4) no significant disruption of environmentally sensitive habitats will result. As such, the project is consistent with Coastal Act Sections 30240, 30255, and 30233 with respect to environmentally sensitive habitat areas.

## 5. Geologic Resources/ Hazards and Air Resources

### *Section 30253. New development shall:*

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*
- (3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development. ...*

The geologic setting of the Moss Landing Harbor and North Harbor Interim site is described in the final EIR for the Moss Landing Harbor Master Plan (1987), as well as reports by LSA Associates (1995), and Fisher (1990). Surficial geology in the Moss Landing Harbor area consists of sands, silts, and clays with interbedded gravels deposited in marine/estuarine, fluvial, and dune environments. Sediment accumulations in the Harbor are from four sources: littoral transport, watershed runoff, aeolian (wind-transported) sands, and erosion of the shoreline inside the Harbor. Past dredging in the Harbor has found that bottom sediments are generally composed of sands in the entrance channel and harbor areas closer



to the channel, with silts and clays closer to the north and south ends of the Harbor.

The soil investigation by Fisher (1990) includes soil borings taken on the North Harbor Interim site, which had previously been owned by the Western Salt Company. Data from two borings drilled at the site indicate that the area is covered by about 5 to 10 feet of old, sandy dredge spoils, which overlie natural fluvial marine deposits of silty clays and lenses of silty sand. The contact between the old sandy dredge spoils and the fluvial marine deposits is slightly above mean sea level (MSL). Ground water levels were not measured in the soil borings but it is expected that the water table also lies slightly above MSL.

As detailed in the LSA report, a summary of the geologic and seismic hazards that may affect the proposed project include the following:

1. The risk of surface rupture due to fault displacement is low because no known active faults cross the site.
2. A large potential for strong ground shaking since the site is located within 20 miles of several active fault zones, including the San Andreas. Strong shaking could cause instability of overly steep ground slopes at the site, such as steep shoreline banks.
3. Ground shaking during a large earthquake could cause liquefaction of saturated sandy soils and erratic ground settlement.

Only a small portion of the North Harbor Interim site falls within the Commission's original jurisdiction. Nonetheless, the containment berms are adjacent to the Harbor, as permitted by the County and any failure of this berm would likely result in direct impacts to the fringing salt marsh wetland and harbor waters. Therefore, to the extent of the Commission's jurisdiction, consideration of such hazards is warranted.

A geotechnical evaluation of the North Harbor Interim site, conducted by Harding Lawson Associates (1997), recommended that proper project design could reduce the hazards described above for the relatively short-term use of the site. Recommendations included impermeable liners for the ponds, "over-designing" the height of the berms to allow for settlement due to compaction without loss of freeboard, compaction of foundation soils beneath the berms, constructing berm slopes no steeper than 2 (horizontal) to 1 (vertical), maintaining a sufficient construction setback from the shoreline, and avoiding excavations below +3 ft MLLW to reduce the risk of encountering the groundwater table.

With the implementation of these possible mitigation actions, impacts to geological resources are anticipated to be less than significant. Therefore, the permit has been conditioned to require compliance with the mitigation measures of the geotechnical investigation, as described in the CEQA Mitigated Negative Declaration for the Moss Landing Harbor Maintenance Dredging Project (Exhibit H), and as required in the County's Permit 98-0137. Therefore, as conditioned, the stability and structural integrity of the decant ponds at the North Harbor Drying and Rehandling site should be assured consistent with Section 30253 of the Coastal Act.





The Monterey Bay Unified Air Pollution Control District under its permit #4133 has conditioned the project to provide ongoing review of fuel usage and emissions. The District may also limit the hours of dredge operation. The permit has been conditioned to require submittal of and compliance with all MBUAPCD requirements. Therefore, as conditioned the proposed development is consistent with Coastal Act Section 30253(3) as it pertains to air pollution.

## **6. Visual Resources**

Coastal Act Section 30251 requires that:

*Section 30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Moss Landing Harbor is located on the scenic shoreline of Monterey Bay, behind sandy peninsulas (sand spits) on both sides of the harbor entrance. The northern spit includes the low-lying dunes within Moss Landing State Beach. The southern spit is densely developed with commercial fishing facilities, boatyards, marine research support facilities, a fish market and restaurant, tavern, warehouses, and a few residential structures. On the east side of Highway 1 are the massive industrial buildings of the Duke Energy power plant and other industrial structures. The visual resource that appears to attract the most public attention in the Moss Landing Harbor area is the developed "harborscape" itself, with its great variety of pilings, piers, docks, weathered wooden buildings, and its many different vessels of all descriptions.

Except for the inland disposal sites, the entire project area lies seaward of Highway 1. From the point where it bridges the entrance to Elkhorn Slough, Highway 1 provides an excellent vantage point into both the north and south arms of the harbor—as well as a quick view of the open waters of Monterey Bay through the harbor entrance channel. In addition to public views from the highway, scenic harbor vistas are enjoyed from water level by a substantial number of recreational visitors. This user group would include visitors at the State Beach, those onboard both Elkhorn Slough and deepwater tour boats, sailboats, power boats, kayaks and other recreational boaters using the harbor waterway.

The project will affect public views in three ways: 1) the floating dredge itself, along with any floating sections of pipe; 2) sections of large-diameter pipe placed on the beach and other land areas to transport sediment for beach replenishment; and, 3) the drying and rehandling operations adjacent to Highway 1.

However, none of these impacts would result in a significant impairment of public visual resources within the scope of this permit, for the following reasons. First, the presence of the dredge will simply add to the colorful variety of vessels already visible in the "harborscape" and should not be counted as



an adverse impact. The surface-lain flexible piping for beach replenishment will be similarly temporary and vary in locale, depending on which of several replenishment sites is currently being utilized. Finally, the North Harbor Interim site, while highly visible alongside the highway, is already permitted under a County-issued coastal permit and in any event does not block ocean views previously available.

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 Moss Landing Harbor, the Commission finds that this project is consistent with Section 30251 of the Coastal Act.

## **7. Public Access and Recreation**

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea includes a specific finding that the development is in conformance with the public access and recreation policies of Chapter 3 of the Coastal Act. The proposed project is located seaward of the first public through road, State Highway Route 1.

Coastal Act Sections 30210 through 30213, 30220 and 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.*

*Section 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. ...*

*Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.*

*Section 30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, 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.*

Additional Coastal Act policies that provide for maximizing public access and recreational opportunities include Section 30251 regarding the protection of scenic views (see Visual Resources finding above) and those policies which address recreational boating access. Specifically, 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. Thus, commercial and



recreational boating and fishing are Coastal Act priority uses.

Moss Landing Harbor provides public access and recreational opportunities of regional and Statewide significance. Boat launching and berthing facilities, two kayak rental companies, Elkhorn Slough and Monterey Bay tours are all available here. Fishing, harbor-side dining, nature observation and similar pursuits are available at the harbor, while beachcombing, shopping and camping are available at adjacent areas. Entry to the south spit beach is free, and many other opportunities such as boat launching and dining are definitely in the affordable end of the range. 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.

Impacts to public access are possible as well, 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 moved about, a modest impediment to pedestrian travel along or to the beach. These pipelines are generally 10 to 12 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.

Secondly, sediments unsuitable for beach replenishment or offshore disposal require numerous truck trips for hauling to the designated disposal sites. Trucking dredge materials to upland disposal sites requires travel on Highway 1, either for a short distance across the Elkhorn Slough bridge (to the Dolan Road site) or for a longer distance south on Route 1 (to the Marina Landfill about 8 miles south). Highway 1 is the principal artery for both commerce and recreational access in this region. The two lane portion of the highway between Moss Landing and Castroville is already at full capacity (Level of Service D or worse) during peak periods (Caltrans, pers.comm.). However, there is still substantial capacity at off-peak times, i.e., at night, and non-commute hours on weekdays.

Unless properly managed, truck traffic generated by the project could further impair the recreational capacity of Highway 1. As proposed, an estimated maximum of 80 truck trips per day could be required to transport dredge material to upland disposal sites. To address such potential impacts, the conditions of the County's permit CDP 98-0137 limited the hours of hauling to 9 am to 3 pm, Monday through Friday. Additionally, a traffic mitigation plan has been prepared for the project in order to minimize traffic congestion as needed, including possibly redistributing truck trips to limited night time hours.

The actual impacts on the capacity of Highway 1 will depend not only on the upland disposal destination, but also on the unknown variable of how much material will require upland disposal. By scheduling truck traffic during the off-peak periods, the operational capacity of Highway 1 for regional public access can be protected.

In conclusion, the dredge program is necessary to protect Coastal Act priority coastal dependent uses. Although the transport of dredge materials to upland disposal and beach replenishment sites may potentially impact public access on Highway 1 and local beaches, the initiation of the dredge program is



essential to allow for commercial and recreational boating access. The permit has been conditioned to minimize any possible continuous barrier effects due to pipelines at beach replenishment sites; and, to require submittal of a traffic management plan that: 1) describes transport schedules and routes; 2) contains mitigation measures to minimize potential traffic congestion; and 3) provides for the safety of vehicles and pedestrians.

The project will protect both free and affordable boating and beach recreational opportunities consistent with Coastal Act Sections 30210, 30213, 30220, 30224, 30234 and 30234.5. Therefore, as conditioned to mitigate for potential beach access and highway traffic impacts, the proposed project would preserve public access and recreational opportunities and, as such, is consistent with the above-cited public access and recreation policies of the Coastal Act.

### **8. LCP Planning Process**

The Moss Landing Harbor lies within the North County segment of the Monterey County Local Coastal Program (LCP). The LCP includes the North County Land Use Plan (LUP), which incorporates the Moss Landing Community Plan, and the Coastal Implementation Plan sections that apply to this area. This permit covers only those portions of the project within the Commission's original jurisdiction, i.e., the dredging, the beach and marine disposal sites, and limited sections of the pipeline and truck haul routes. Within the Commission's original jurisdiction, the policies of the Coastal Act rather than the LCP are the standard of review for development projects. Nonetheless, the LCP remains useful in an advisory capacity, to provide appropriate context for land use decisions, and to provide consistency between original and delegated areas of coastal zone jurisdiction.

A review of the applicable policies does not reveal any conflicts between the proposed project and the LCP. The LCP policies reflect Coastal Act protection of coastal dependent commercial and recreational boating and allow for dredging to maintain navigational channels. The LCP recognizes the problem of erosion and sedimentation and the need for best management practices at upland sites.

Given that the channel will continue to receive sediment inflow from the slough systems and the Old Salinas River Channel, maintenance dredging of an unknown duration will be required. This need has been acknowledged by the Moss Landing Harbor District, which has been searching for additional upland sites for dredge disposal. The search so far has yielded the Dolan Road site, already permitted by the County, and the more distant Marina Landfill. Additional sites may be identified in the future, but are not within the scope of this permit. Any such sites, if located in the coastal zone, will require separate coastal development permits from the County.

In summary, the proposed project, as conditioned, will conform with Chapter 3 of the California Coastal Act and will not prejudice the ability of the local government to implement a Local Coastal Program that conforms to Chapter 3 of the Coastal Act.

### **9. California Environmental Quality Act (CEQA)**

Section 13096 of the California Code of Regulations requires that a specific finding be made in



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 45

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 effects which the activity may have on the environment.

Moss Landing Harbor District addressed the CEQA requirement by filing a Mitigated Negative Declaration dated December 18, 1997 for harbor dredging and discharge, including use of the North Harbor Interim site. This determination was augmented by a Supplemental Mitigated Negative Declaration dated January 29, 1999 to include use of the Dolan Road site as a potential upland disposal site. Potential significant environmental effects were identified in the 1997 Mitigated Negative Declaration for air quality, biological resources and transportation/ circulation, as discussed above. Mitigation measures provided in both of these documents were found to reduce or eliminate potential impacts to less than significant levels.

Beyond this, the Secretary of Resources has certified the Coastal Commission's review and analysis of land use proposals as being the functional equivalent of environmental review under CEQA.

In the course of application review, several potential environmental impacts were identified and are discussed in this staff report. These included, but are not limited to, potential water quality impacts, possible impairment of beach access by above-ground pipelines, and potential congestion impacts on Highway 1 resulting from hauling of sediments which can not be disposed of on the beach or in the marine environment. Appropriate measures have been identified to avoid or mitigate such impacts, and are incorporated in the conditions attached to this permit. Accordingly, the Commission finds that only as modified and conditioned by this permit will the proposed project not have any significant adverse effects on the environment within the meaning of CEQA.



#### **4. References**

ABA Consultants, 1998. Final Report, marine habitats and bathymetry around Skippers Restaurant and the North Harbor visitor serving area. Prepared for the Moss Landing Harbor District. September.

ABA Consultants, 1989. Elkhorn Slough Wetland Management Plan. Prepared for California State Coastal Conservancy and Monterey County Planning Department. December.

Harding Lawson Associates, 2/4/99. Letter report: Moss Landing dredging project – impacts to eelgrass bed. Prepared for California Coastal Commission.

Kvitek, R.G., A.K. Fukuyama, B.S. Anderson and B.K. Grimm, 1988. Sea otter foraging on deep-burrowing bivalves in a California coastal lagoon. *Marine Biology* 98: 157-167.

Oliver, John, 1997. Biological assessment, Elkhorn Yacht Club wharf project. Unpublished report prepared for Elkhorn Yacht Club.

Onuf, C.P., M.L. Quammen, G.O. Schaffer, C.H. Peterson, J. Cermak, and R.W. Holmes, 1978. An analysis of the values of central and southern California wetlands. Pages 189-199 in P.W. Greeson, J.R. Clark and J.E. Clark eds. *Wetlands functions and values: the state of our understanding*. Am. Water Res. Assoc., Minneapolis, Minn.

Ramer, B.A., 1989. Biological assessment of the north Moss Landing Harbor. Appendix to Final Environmental Impact Report: North Harbor Marina Expansion. Prepared for Moss Landing Harbor District.



# Exhibits



## **List of Exhibits**

Exhibit A. Regional Location Map, Moss Landing Harbor

Exhibit B: Project Vicinity Map, Moss Landing Harbor

Exhibit C: Map of Proposed Dredging Areas, Moss Landing Harbor

Exhibit D. Pipeline Placement for Discharge to North Harbor Interim Drying and Rehandling Site, Moss Landing Harbor

Exhibit E. Decant Ponds and Facilities at the North Harbor Interim Drying and Rehandling Site, Moss Landing Harbor

Exhibit F. Plant communities prior to construction of the North Harbor Interim Drying and Rehandling Site, Moss Landing Harbor

Exhibit G. Pipeline Placement for South Harbor Beach Replenishment Site, Moss Landing Harbor

Exhibit H. CEQA Mitigated Negative Declaration, Moss Landing Maintenance Dredging Project

Exhibit I. CEQA Supplemental Mitigated Negative Declaration, for Dolan Road Upland Disposal Site





**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 49

**Exhibit A. Regional Location Map showing Project Site.**



**California Coastal Commission**

**Exhibit B: Project Vicinity Map, Moss Landing Harbor**



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 51

**Exhibit C: Map of Proposed Dredging Areas, Moss Landing Harbor.**



California Coastal Commission

**Exhibit D. Pipeline Placement for Discharge to North Harbor Interim  
Drying and Rehandling Site.**



**Exhibit E. Decant Ponds and Facilities at the North Harbor Interim  
Drying and Rehandling Site, Moss Landing Harbor.**



**Exhibit F. Plant communities prior to construction of the North Harbor Interim  
Drying and Rehandling Site, Moss Landing Harbor.**



**3-99-011 Staff Report: Regular Calendar**

Moss Landing Harbor Dredging Project 1999-2001

Page 55

**Exhibit G. Pipeline Placement for South Harbor Beach Replenishment Site,  
Moss Landing Harbor.**



California Coastal Commission

**Exhibit H. CEQA Mitigated Negative Declaration,  
Moss Landing Maintenance Dredging Project.**

(This document contains only relevant pages – the complete text can be found in permit files)





**Exhibit I. CEQA Supplemental Mitigated Negative Declaration,  
Moss Landing Maintenance Dredging Project.**

(includes Dolan Road Upland Disposal Site)

(This document contains only relevant pages – the complete text can be found in permit files)



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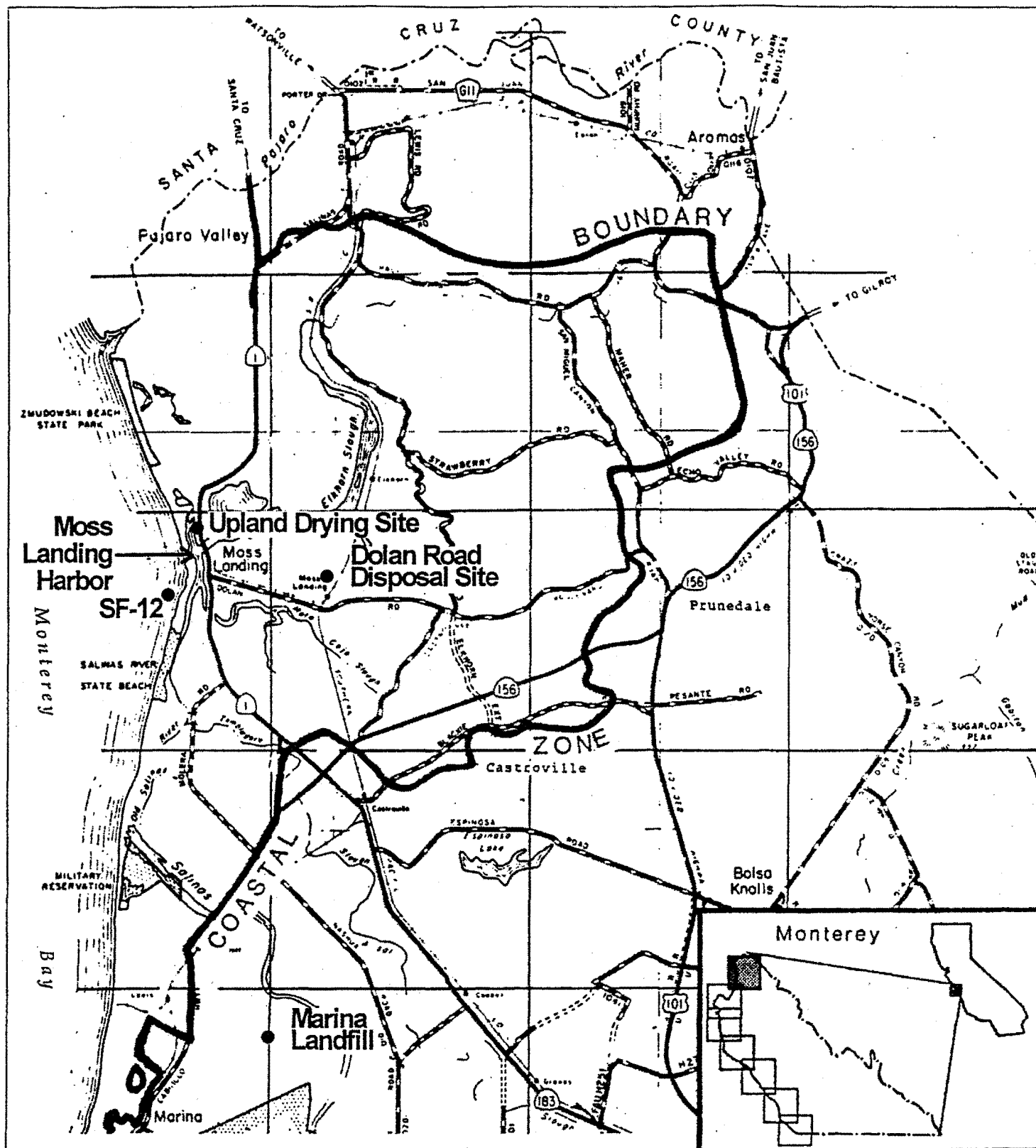
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California Coastal Commission

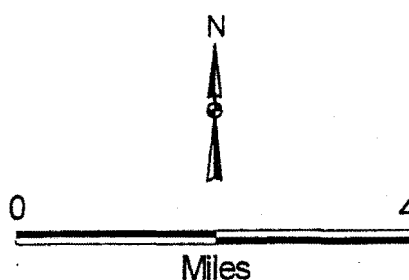
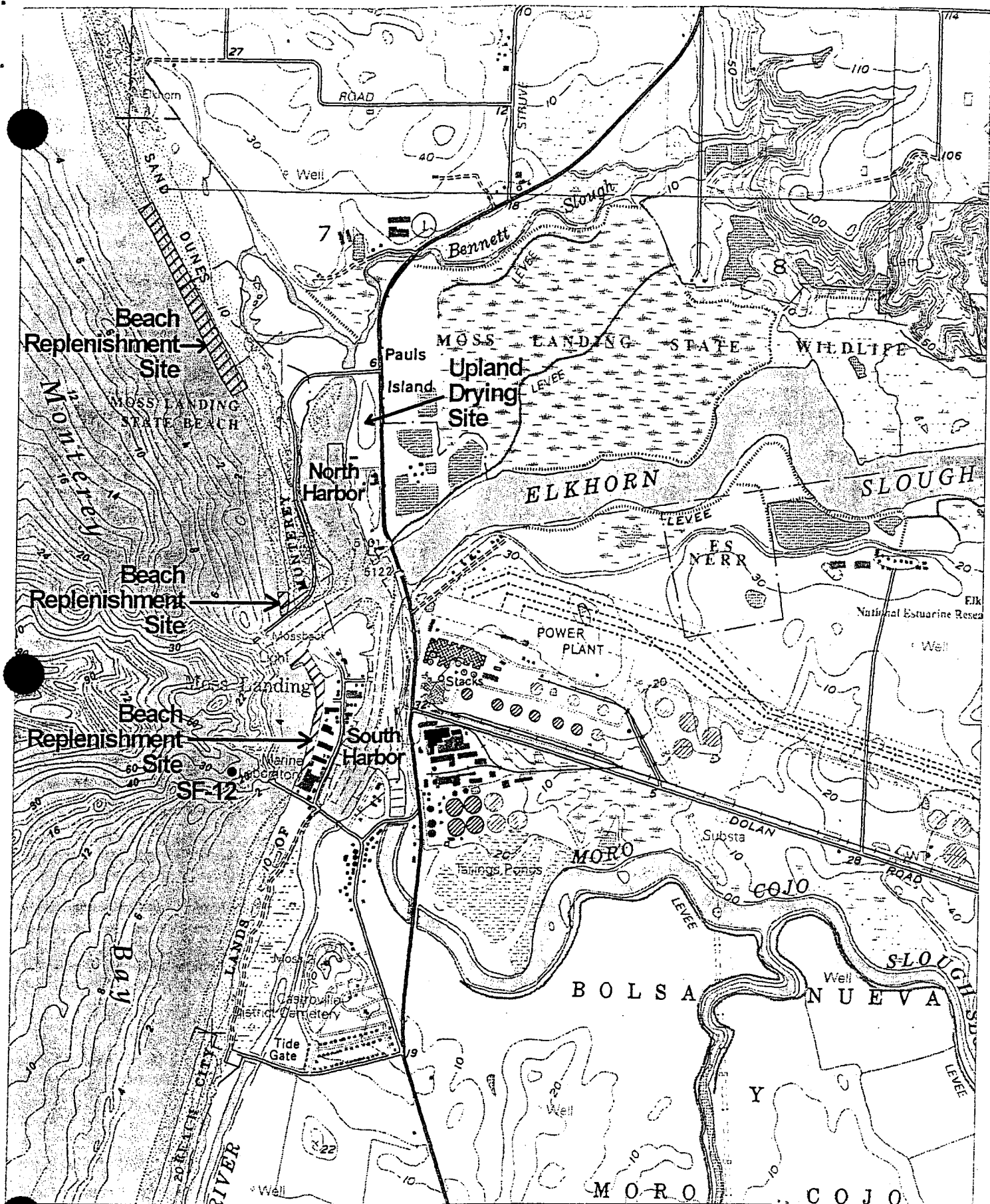


Exhibit A  
Regional Location Map  
Moss Landing Harbor  
Moss Landing, California  
(CDP 3-99-011)



California Coastal Commission

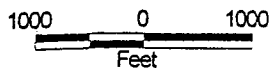
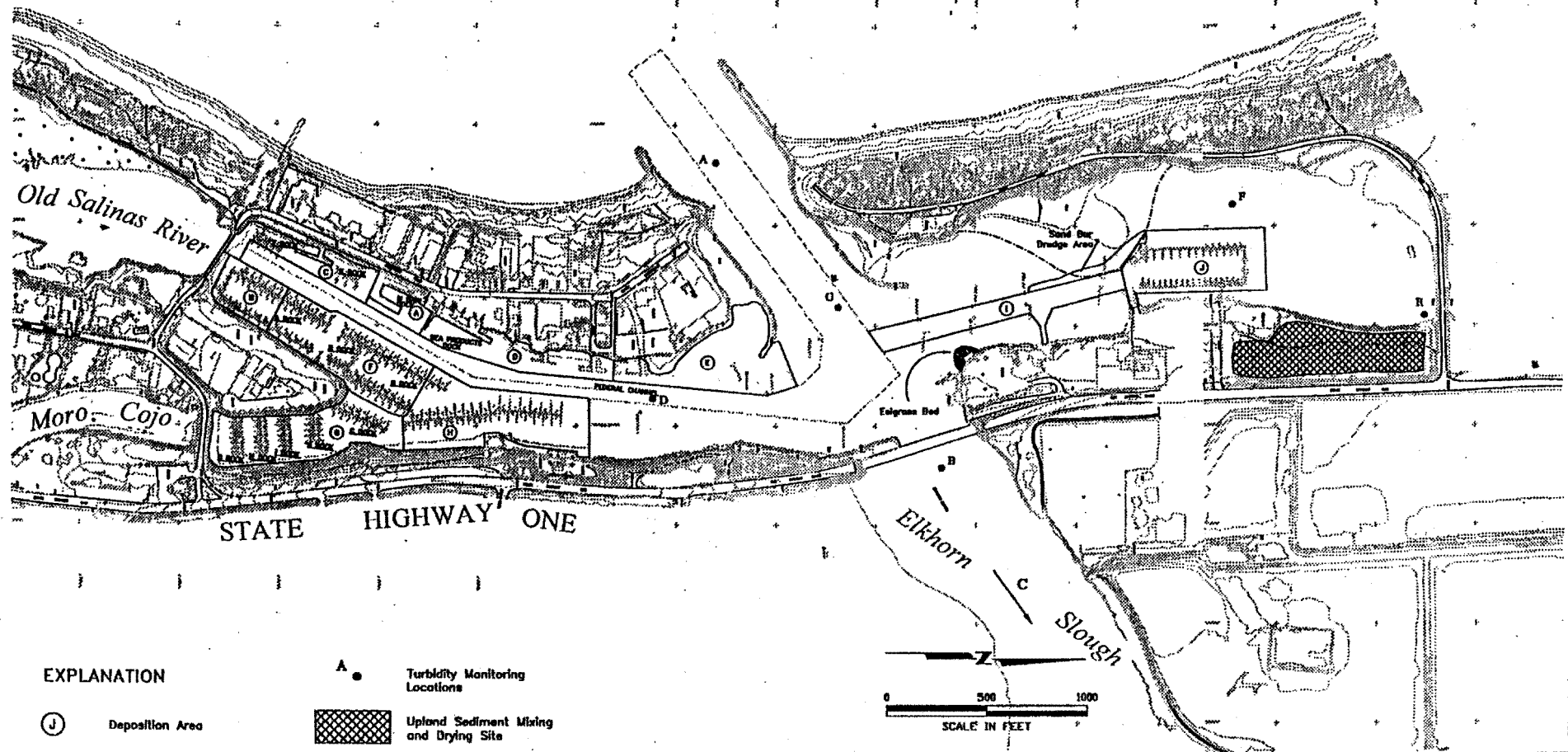


Exhibit B  
Project Vicinity Map.  
Moss Landing Harbor,  
Moss Landing, California  
(CDP 3-99-011)

MONTEREY

BAY



EXPLANATION



Deposition Area



Turbidity Monitoring Locations



Upland Sediment Mixing and Drying Site



Approximate Extent of Eelgrass Bed

Approximate Sand Bar Boundaries



**Harding Lawson Associates**  
Engineering and  
Environmental Services

DRAWN  
PCB

JOB NUMBER  
40753 7

**Dredging Areas**  
Moss Landing Harbor District  
Moss Landing  
Monterey County, California

APPROVED

DATE  
8/99

REVISED DATE

PLATE

**1**

Exhibit C  
Map of Proposed Dredging Areas.  
Moss Landing Harbor,  
Moss Landing, California  
(CPR 3-99-011)



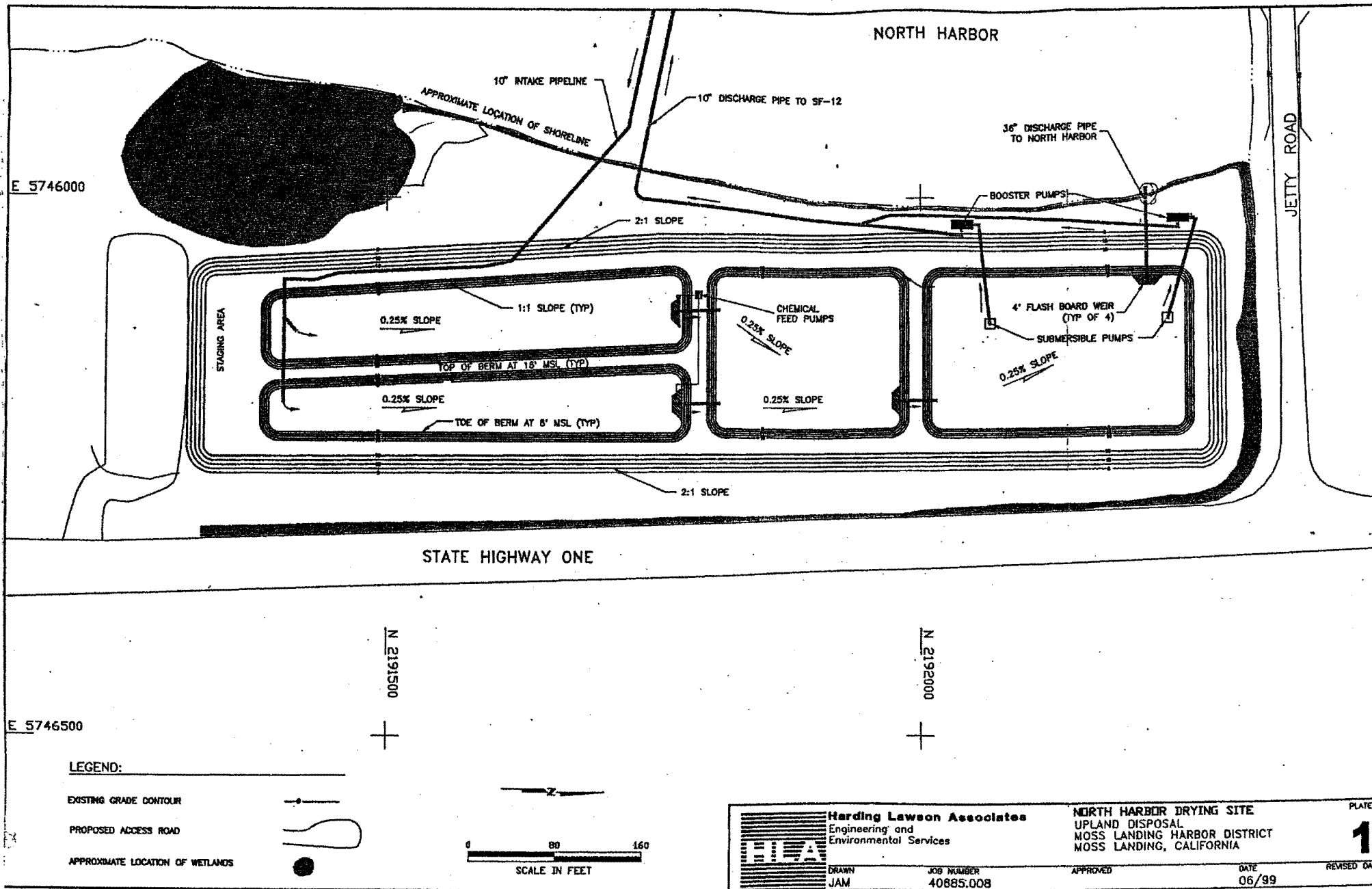


Exhibit E  
Decant Ponds and Facilities at the  
North Harbor Interim Drying and Rehandling Site  
Moss Landing Harbor, Moss Landing, California  
(3-99-011)



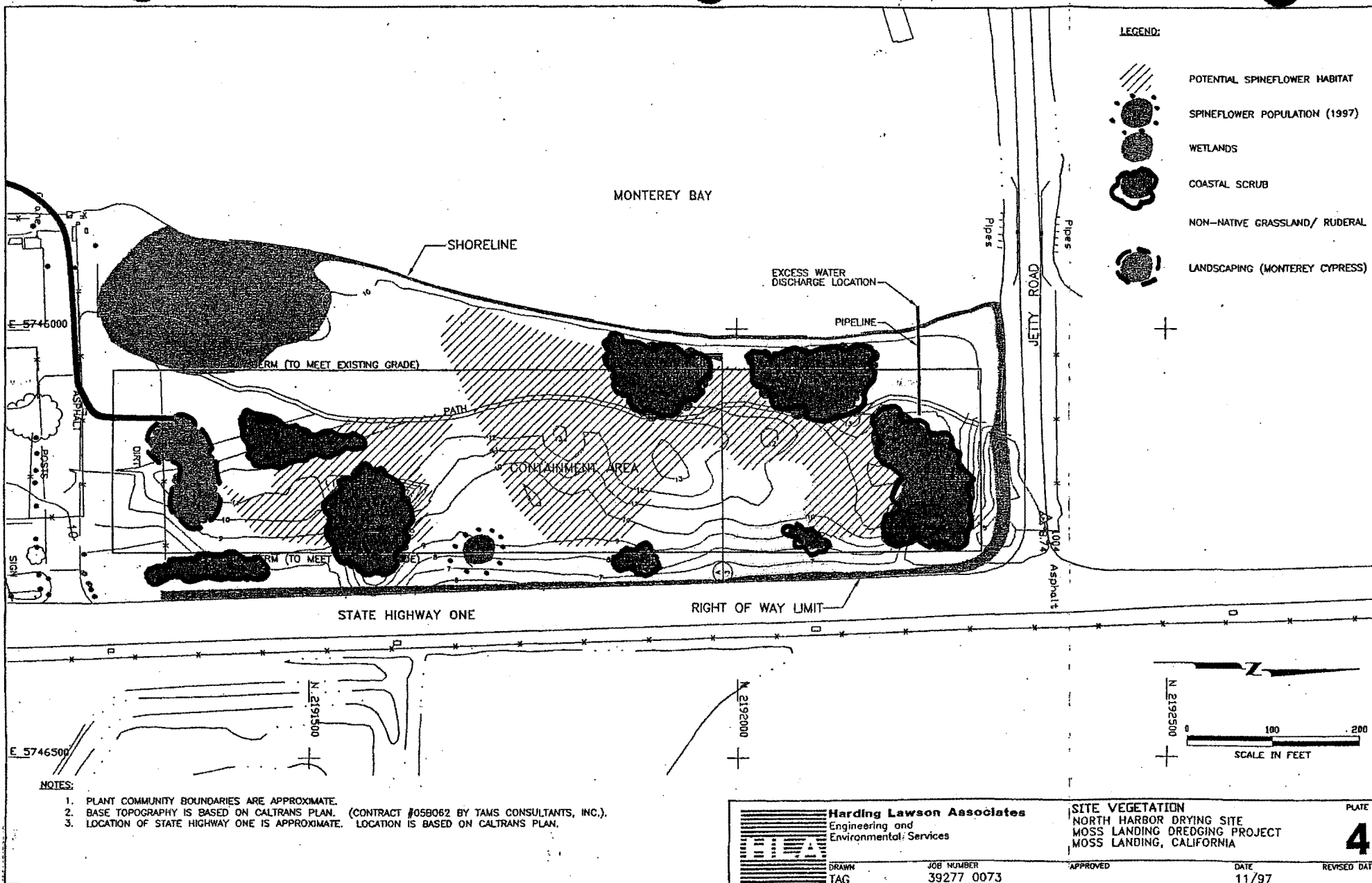


Exhibit F  
Plant Communities Prior to Construction at the  
North Harbor Interim Drying and Rehandling Site  
Moss Landing Harbor, Moss Landing, California  
(CDP 3-99-011)

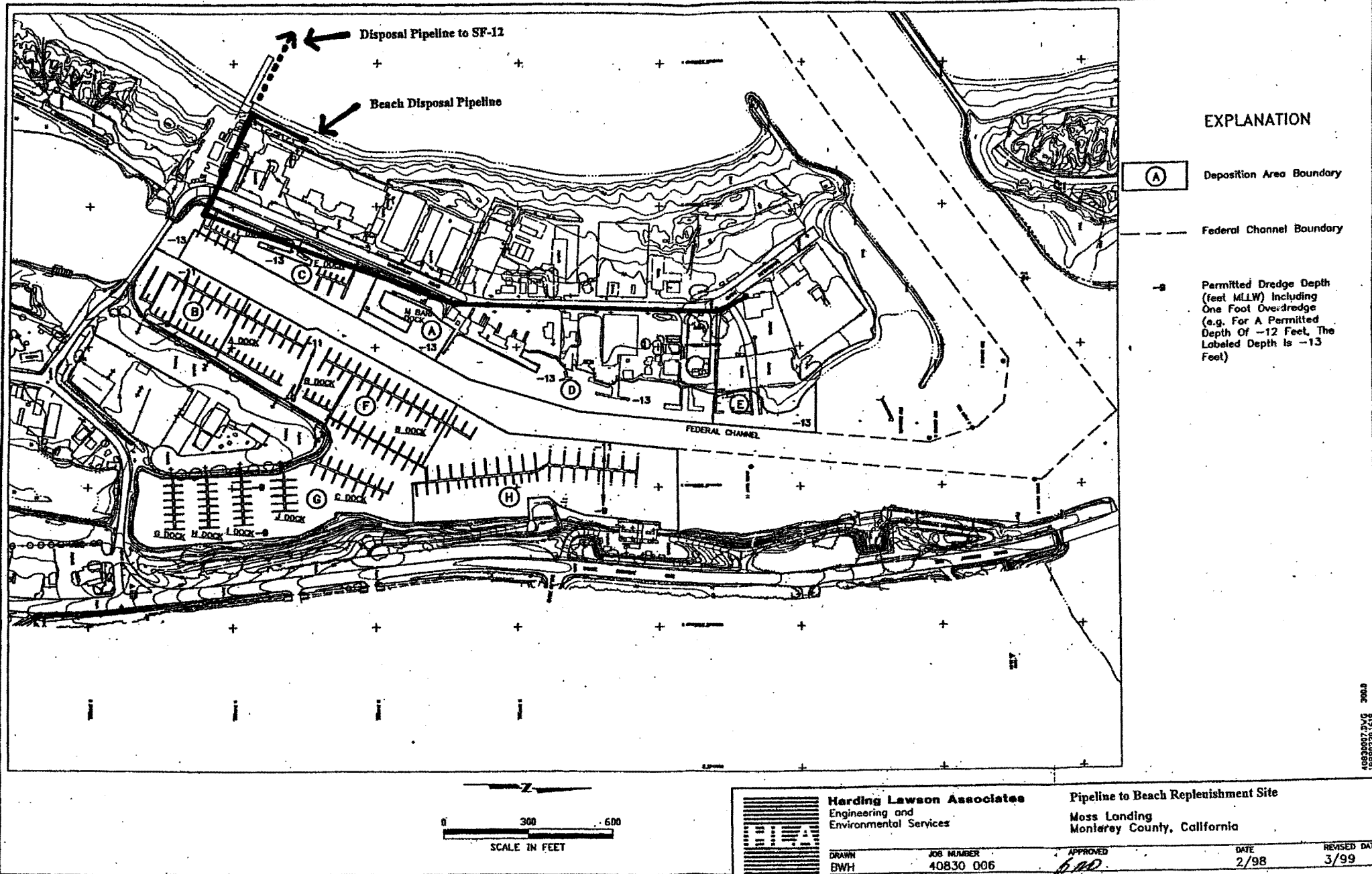


Exhibit G  
Pipeline Placement for  
South Harbor Beach Replenishment Site.  
Moss Landing Harbor, Moss Landing, California  
(P 3-99-011)

Exhibit A  
Regional Location Map  
Moss Landing Harbor  
Moss Landing, California  
(CDP 3-99-011)

Exhibit B  
Project Vicinity Map.  
Moss Landing Harbor,  
Moss Landing, California  
(CDP 3-99-011)

Exhibit C  
Map of Proposed Dredging Areas.  
Moss Landing Harbor,  
Moss Landing, California  
(CDP 3-99-011)

Exhibit D  
Pipeline Placement for Discharge to  
North Harbor Interim Drying and Rehandling Site.  
Moss Landing Harbor, Moss Landing, California  
(CDP 3-99-011)

Exhibit E  
Decant Ponds and Facilities at the  
North Harbor Interim Drying and Rehandling Site  
Moss Landing Harbor, Moss Landing, California  
(CDP 3-99-011)

Exhibit F  
Plant Communities Prior to Construction at the  
North Harbor Interim Drying and Rehandling Site  
Moss Landing Harbor, Moss Landing, California  
(CDP 3-99-011)

Exhibit G  
Pipeline Placement for  
South Harbor Beach Replenishment Site.  
Moss Landing Harbor, Moss Landing, California  
(CDP 3-99-011)

**3-99-011 Staff Report: Regular Calendar**  
Moss Landing Harbor Dredging Project 1999-2001

**Exhibit H. CEQA Mitigated Negative Declaration, Moss Landing Maintenance Dredging Project.**

(This document contains only relevant pages – the complete text can be found in permit files)



California Coastal Commission

## SECTION IV

### NEGATIVE DECLARATION

PURSUANT TO TITLE 14, CHAPTER 3, SECTIONS 15000, et seq.

### CALIFORNIA CODE OF REGULATION

SUBJECT: CEQA MITIGATED NEGATIVE DECLARATION, MOSS LANDING MAINTENANCE DREDGING PROJECT

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970" as amended to date, a Draft Mitigated Negative Declaration is hereby attached for the project listed below:

*The applicant, Moss Landing Harbor District, proposes to conduct a maintenance dredging project, including interim drying of dredge materials at the North Harbor Site, and disposal at a permitted offsite location.*

In compliance with CEQA, an initial study has been prepared for the project (see Attachment A). Based on the Initial Study, a determination has been made that a Mitigated Negative Declaration is required for the project. The justification for preparing a Mitigated Negative Declaration is based on the results of the Initial Study, which determined that no potential significant effects to the environment could result from the proposed project. A discussion of the Initial Study Checklist is included as Attachment B. Documents used in preparation of the Initial Study and Mitigated Negative Declaration can be reviewed at the Moss Landing Harbor District Office located in Moss Landing, California.

### FINDINGS

An Initial Study was conducted for Moss Landing Harbor Dredging Project. Potential significant environmental effects were identified during the Initial Study process for air quality, biological resources, and transportation/circulation. Less than significant impacts were identified for geologic problems, water, hazards, noise, and aesthetics. No impacts were identified for land use and planning, population and housing, energy and mineral resources, public services, utilities and service systems, cultural resources, or recreation. A discussion of each topic, primary of the initial study, is contained below. The discussion is presented in the same order as the Initial Study for consistency. Where appropriate, mitigation measures have been identified to reduce or eliminate potential significant adverse impacts. In all cases, the implementation of required mitigation would reduce the potential impacts to less than significant levels. In summary, impacts will be mitigated as follows:

#### Geological Problems

With the incorporation and implementation of the mitigation measures listed below, no significant impacts are expected to occur.

- A geotechnical investigation shall be completed by the construction firm responsible for project implementation to address geotechnical concerns. Mitigations identified in the geotechnical investigation will be incorporated into the project design.
- Onsite sands shall be used for general construction of the containment area berms. Natural clay soils shall be avoided except for low permeability elements of the design (such as pond lining) because of probable excavation, handling and compaction difficulties.

MITIGATED NEGATIVE DE VARIATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

- Excavations that approach about 3 feet MLLW shall be avoided to reduce the risk of encountering groundwater and weak soils below berms and containment areas that would be difficult to compact.
- Foundation and berm soil compaction shall be at least 90 percent of "Modified Proctor" (ASTM D1557).
- Berm slopes shall be no steeper than 2 (horizontal) to 1 (vertical). Flatter slopes would require less repair following a strong earthquake. Also, lining of slopes (membrane or clay) would be less difficult for flatter slopes.
- Contingency plans shall be in place to ensure repair of berms damaged during a strong earthquake.

Water Quality

With the incorporation and implementation of the mitigation measures listed below, no significant impacts to water quality are expected to occur.

- Turbidity of decant water will be monitored and will not be released unless at or below acceptable levels.
- Turbidity of surrounding receiving waters (ML Harbor) will be monitored after releasing overlying water from the project site through the weir structure. If turbidity is measured above required levels, decant water will be retained until turbidity reaches acceptable levels.
- The release of decant water will be monitored to ensure that excess sediment and debris are not released.
- If debris is encountered during the release of decant water back into Moss Landing Harbor, the operation will be halted and the debris will be removed and properly disposed of prior to recommencing operations.

Air Quality

With the incorporation and implementation of the mitigation measures listed below, no significant impacts to air quality are expected to occur.

- To reduce worker-related auto emissions, employees working at the site shall be encouraged to carpool to the project site.
- Water trucks shall be used to water the proposed project site as well as all roads leading into the construction site to control fugitive dust during excavation of the sediment mixing and drying site, as needed.
- Speed of construction vehicles shall be limited to 10 miles per hour in order to reduce the generation of dust onsite.

Transportation/Circulation

With the incorporation and implementation of the mitigation measures listed below, no significant impacts to transportation/circulation are expected to occur.

- Prior to project implementation, a traffic management plan will be developed for the project. The TMP will include traffic control elements including routing of traffic entering/exiting the site, signage, and detours as needed.
- Truck traffic shall be limited to operation between 9 a.m. and 3 p.m. weekdays to avoid exacerbating LOS levels during peak hours.

Biological Resources

With the incorporation and implementation of the mitigation measures listed below, no significant impacts to biological resources are expected to occur.

MITIGATED NEGATIVE DE GRATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

- To avoid or reduce impacts to listed or proposed-listed species and protect wetland habitat during project implementation, an onsite biological monitor will be present during excavation of the proposed sediment drying and mixing site.
- If avoidance of Monterey spineflower is not feasible, all individuals of Monterey spineflower that would be affected will be translocated to suitable habitat in the immediate vicinity of the project site.
- If necessary, suitable spineflower habitat would be constructed onsite upon project completion.
- Areas on the proposed project site identified as Monterey spineflower habitat during past surveys will be scraped to 2 inches below-ground-surface to remove dormant seeds present in the soil. Soil underlying the known population of Monterey spineflower identified by HLA occurring within the proposed project footprint will be collected separately in order to ensure a concentrated collection of spineflower seed. Optimally, seed and soil should be collected from June through October. Outside this time period, soils may be collected with approval of and in consultation with USFWS.
- Soil will be transported to a local responsible party (e.g., nursery or university) for propagation and seed magnification.
- Upon completion of the project, propagated seedlings and/or seed will be used to restore Monterey spineflower populations in appropriate habitat areas on the proposed project site.
- Mitigation sites shall be surveyed by a qualified biologist immediately following implementation of the mitigation plan to ensure compliance with the plan. Any modifications to the plan will be recorded to provide a baseline of information from which to evaluate progress at the sites. Ongoing monitoring of the mitigation sites would be conducted to track the progress of the mitigation plan. Data would be gathered on standardized data forms to ensure consistency and allow for comparison of results.
- Annual reports will be prepared to describe methods and results of the monitoring surveys, summarize the overall progress of the mitigation plan, and make recommendations for remedial actions.
- A biological monitor will be present during initial grading and project excavation to identify, remove, and relocate legless lizards uncovered during excavation activities.
- Legless lizards found during excavation activities will be collected and placed in a 5-gallon bucket half-filled with local soil and immediately relocated into suitable adjacent unoccupied habitat. Documentation of each relocated legless lizard will include location of where the specimen was collected and pictures of the individual and collection location.
- Proposed project will be designed with appropriate buffer zones in order to avoid and protect wetland habitat. Wetland areas will be fenced to ensure that construction does not impact wetland areas. Construction zones will be established to avoid wetland areas and provide adequate buffers between wetland areas and the construction site.

Noise

With the incorporation and implementation of the mitigation measures listed below, no significant impacts to noise are expected to occur.

- Equipment operation onsite should be limited to the hours of 7 a.m. to 7 p.m.
- All equipment should be equipped with mufflers that are in good condition.
- No more than five pieces of equipment (such as a scraper, loader, water truck, etc.) should be operating at the same time at the closest point to any receptor.

Aesthetics

With the incorporation and implementation of the following design features as part of the project, no significant impacts to aesthetics are expected to occur.

- Construction of the settling basin/drying site will consist of soil berms reaching approximately 12 feet above MSL on all sides. The project site currently ranges from 6 feet MSL to approximately 18 feet MSL. The 12-foot berms, therefore, have been designed to fit into the existing topography range.

MITIGATED NEGATIVE DECLARATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

- Excavation for the sediment mixing and drying site will occur over a two week period. Once completed, the berms will shield Highway 1 from any visual impacts that may occur during project implementation.
- Material used to construct the berms will be taken from materials onsite, thus continuing the existing visual character of the site.
- Upon project completion, the sediment mixing and drying site will be finished at grade and restored to the existing conditions, thus preserving the existing visual character of the site.

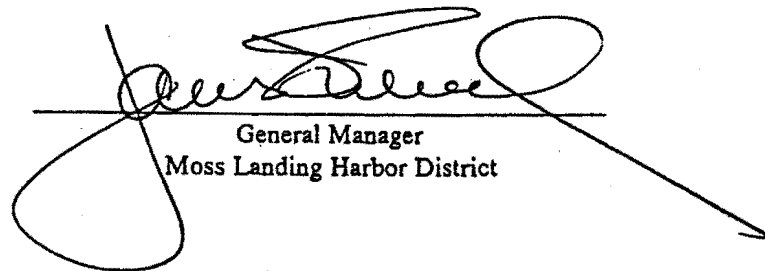
Cultural Resources

With the incorporation and implementation of the following mitigation measure, no significant impacts to cultural resources are expected to occur.

- If cultural resources are discovered during construction, construction shall be stopped until an archeological survey is completed and appropriate measures are taken to protect those resources.

The project involves no potential for any significant adverse effect, either individually or cumulatively, on all resources that cannot be mitigated. Copies of the Mitigated Negative Declaration and the Initial Environmental Study can be obtained by request to the Moss Landing Harbor District, which is the Lead Agency. Requests should be addressed to:

Moss Landing Harbor District  
Mr. James Stilwell  
PO Box 10  
Moss Landing, California 95039  
(408) 633-2461

  
General Manager  
Moss Landing Harbor District

12.18.97  
Date



**MOSS LANDING HARBOR DISTRICT  
MOSS LANDING HARBOR DREDGING PROJECT  
INITIAL STUDY**

This Initial Study has been required and prepared by Moss Landing Harbor District (MLHD), P.O. Box 10 Moss Landing, California 95039 (408) 633-2461, pursuant to CEQA Guidelines, Section 15063.

**APPLICANT AND PROPERTY OWNER NAME AND ADDRESS**

Project Name:	Moss Landing Dredging Project
Project Location:	Moss Landing, California
Applicant Name:	Moss Landing Harbor District
Address:	P.O. Box 10, Moss Landing, CA 95039

**PROJECT BACKGROUND AND DESCRIPTION**

The following approvals are requested by the MLHD:

- Approval for a coastal development permit for the temporary storage of dredged material at the North Harbor Sediment Mixing and Drying Site
- Approval for transporting dewatered material to an offsite location for reuse and/or disposal.

**Regional and Local Setting**

Moss Landing is an unincorporated community in Monterey County, California. It is located on Monterey Bay at the mouth of Elkhorn Slough, approximately halfway between the cities of Monterey and Santa Cruz. Highway 1 is the main thoroughfare through Moss Landing. The community lies between two rivers, the Pajaro, approximately 1.5 miles north of Moss Landing, and the Salinas, approximately 4 miles south. San Francisco is located about 100 miles north of Moss Landing. Approximately 520 people live in Moss Landing. The project site, the North Harbor sediment mixing and drying site, is located in the northeastern portion of Moss Landing (ML) Harbor and west of Highway 1 (Plate 1).

The North Harbor sediment mixing and drying site is located northwest of central Moss Landing, at the southwest corner of the Highway 1/Jetty Road intersection (Plate 2). The 8-acre parcel was formerly owned by Western Salt Company and is commonly referred to as Western Salt Site 1. Jetty Road extends along the northern edge of the parcel, heads west, and becomes the entrance to Moss Landing State Beach. The site is characterized by rolling topography covered by wetland/sand dune vegetation. Trees at the south end effectively screen the site from the parking areas to the south. Access to the site is via Highway 1 and/or Jetty Road (LS4, 1995).

**Site History**

The area of Monterey County surrounding Moss Landing consists of flat marsh lands, flat sandy areas, and sand dunes. Prehistorically, the area surrounding Moss Landing was the homeland of the Ohlone/Costanoans, who have descendants still living in the area. Historically, the harbor has been used for commercial fishing and the surrounding land was farmed. The site of the proposed project, the sediment mixing and drying site, was used for dredge material disposal during the 1950's and 1960's. The area is covered by a dense layer of shell, originating from dredge spoils deposited during dredging of the slough and harbor (LS4, 1995).

**Project Description**

The following is a project description for transporting dredge material from various locations within ML Harbor, drying the material at the proposed project site, and transporting the dried material to an offsite disposal location.

**Background.** MLHD is responsible for operating ML Harbor and ensuring that the harbor is capable of accommodating existing uses. ML Harbor is subject to siltation problems arising from erosion upstream of the

Elkhorn Slough which is exacerbated in storm events. As such, MLHD is periodically required to dredge various locations within ML Harbor as the need arises to allow boat traffic to navigate freely. Sediment deposition in ML Harbor has been heavy over the past several years, requiring maintenance dredging to accommodate vessel traffic. Partially due to the record rainfalls over the past 3 years, ML Harbor has received enough sediments such that boat traffic must be timed around tides. No dredging has occurred in ML Harbor since 1993, and dredging of ML Harbor is currently planned but cannot begin until an approved disposal site for the dredge materials is identified.

Dredge materials must be removed from tidal channels in ML Harbor and disposed of at an appropriate disposal site. Dredge materials may be disposed of at either an approved aquatic site or an approved upland disposal site. A federally approved aquatic disposal site (SF-12) is located approximately 20 feet offshore of the Sandholdt pier, seaward of ML Harbor. The SF-12 disposal site has been used in previous harbor dredging projects. Potential upland disposal sites include beach replenishment, other beneficial re-use, or privately operated landfills. Generally, it is economically and often environmentally preferable to dispose of materials offshore.

**Aquatic Disposal Requirements.** Use of the SF-12 aquatic disposal site requires compliance with specific biological, chemical and physical requirements. Test results of the dredged material are reviewed by the Environmental Protection Agency (USEPA), the Central Coast Regional Water Quality Control Board (RWQCB), the U.S. Army Corps of Engineers (USACE), with input from agencies such as the California Department of Fish and Game (CDFG), the California Coastal Commission (CCC), and the Monterey Bay National Marine Sanctuary (MBNMS).

**Upland Disposal Requirements.** Material slated for upland disposal may be subject to chemical, biological, or physical requirements. Additionally, the material must be "transportable" meaning it must be dry enough to truck offsite, if necessary. Most dredged materials contain up to 90 percent water when they are first dredged by a suction dredge. Therefore an interim drying site must be established near the dredging site where the wet material can be transported, de-watered, and loaded for transport.

**Need for Interim Drying Site.** The sediment tests performed on samples from various regions in ML Harbor during 1994 through 1996 revealed that a portion of the material to be dredged was found unsuitable for aquatic disposal due primarily to the toxicity of the sediments, probably caused by the presence of pesticides such as DDT and toxaphene. In summary, the top 2 feet of sediment from within each of the tested areas would require upland disposal. From Gravelle's Boatyard, Southern A-Dock and MBARI Dock, approximately 14,759 cubic yards (cy) of sediments must be disposed of at an upland site. In September, 1997, it was determined that further dredging within ML Harbor was required. The sites in the southern end of ML Harbor requiring dredging include Northern A-Dock, Southern B-Dock, G-Dock, H-Dock, I-Dock, J-Dock, C-Dock, and the federal channel south of Gravelle Dock. The total volume of material to be dredged from these sites is estimated to be between 79,071 and 107,588 cy. If only the top 2 feet of sediments require upland disposal, then approximately 44,181 cy of sediments will also require upland disposal. Therefore, the total amount of sediments likely to require upland disposal would be approximately 58,940 cy with a maximum upland disposal amount of 122,347 cy.

**Upland Disposal.** The following describes the proposed upland disposal process, including transport from the dredge site to the drying site, the drying process, and transporting the material offsite to its final upland destination. Approximately eleven sites in the ML Harbor will be dredged over approximately a 2 year period in accordance with the Harbor District's maintenance dredging plan. The sites include three previously tested sites (Gravelle's Boatyard, Southern A-Dock and MBARI Dock), and the eight remaining sites to be analyzed (Northern A-Dock, Southern B-Dock, G-Dock, H-Dock, I-Dock, J-Dock, C-Dock, and the federal channel south of Gravelle Dock). Dredge materials unsuitable for aquatic disposal will be transported to the upland disposal site.

The MLHD has approval to dredge up to 50,000 cy of sediment per year under their current USACE permit. At this time, approximately 14,759 cy of dredge material from Gravelle's Boatyard, Southern A-Dock, and MBARI Dock must be disposed of at an upland site. Analysis of the remaining eight sites has not been completed. As previously stated, the maximum amount of additional dredged material from the additional sites that may require upland disposal is 107,588 cy. For the purposes of the project description, quantities of sediments to be handled for upland disposal will be evaluated for the maximum that may require upland disposal, or a total of 122,347 cy.

**Transport of Material to Upland Disposal Site.** Sediments requiring upland disposal will be transported to a sediment mixing and drying site located north of the Moss Landing Yacht Club. A sediment-water slurry will be pumped from the dredge equipment through a series of floating steel pipes to a temporary 10-inch-diameter plastic pipeline at landfall. The plastic pipeline will be located in the water as close to the shoreline as possible, crossing the Elkhorn Slough at the mudline. The pipeline alignment is intended to avoid navigational conflicts and minimize impacts to shore resources. A booster pump will be required to provide sufficient head to transmit the slurry to the drying site. The proposed pipeline alignment and drying site location are depicted on Plate 1.

The pipeline and accouterments will be maintained and inspected by the MLHD on a regular schedule to ensure proper operation and to eliminate potential waterway conflicts. The pipeline will be removed at the conclusion of the project, and the alignment route will be restored.

**Drying of Dredge Material.** The dredge sediment slurry will be piped to a settling basin/drying site located north of the Moss Landing Yacht Club. The settling basin/drying site will be designed to have a capacity of approximately 36,640 cy. Capacity limits will require processing of the dredge sediment slurry in batches.

Using the proposed suction dredging method, approximately 90 percent of the slurry will be water which must be decanted before processing and disposal of the sediments. Each batch of dredge sediment slurry will settle in the basin, and excess water will be allowed to flow back into ML Harbor. The turbidity of the nearby waterway will be monitored as required by RWQCB, and the water will not be discharged to ML Harbor until the turbidity reaches acceptable levels. The de-watered sediments will be mixed with a cement-based substance to facilitate handling and transportation.

Approximately 3,700 cy of sediments will be processed in each batch of dredge materials. Preliminary tests indicate that a ratio of 80% dredge material to 20% cement provides an appropriate texture. Heavy equipment will be used to accomplish the mixing. The mixture will be allowed to rest before being transported offsite. The time required to mix and dry the sediments will be determined onsite, but is estimated to take several days. The volume of the combined sediment and cement material would be approximately 4,625 cy per batch, with a maximum of approximately 153,000 cy over the 2 year period.

Construction of the settling basin/drying site will consist of soil berms reaching approximately 12 feet high on all sides. A 6-foot excavation will be required, and the excavated materials will be used as fill for the berms. Approximately 20,000 cy of the excavated soil (i.e. the amount not used for the berm construction) will need disposal upon completion of the berms. This 20,000 cy of material will be used for projects at the North Harbor.

Weirs, drainage facilities, and access routes will also be constructed to support the settling, drying, and transportation processes. Plates 2 and 3 provide detail and a cross-section of the settling basin/drying site. The complete design of the facility will be prepared by the construction contractor.

At the conclusion of the project, the settling basin/drying site will be finished at grade and restored to pre-project condition with enhancement of native and coastal vegetation. Fill to be used for the settling basin will consist of dried dredge materials, soil obtained from the 12-foot berms, and materials imported from offsite, as needed.

**Transport of Sediments Offsite.** Once the material is dried, it will be loaded into highway trucks and covered. Currently, approximately 16,000 cy of dredged material will be used for projects located adjacent to the sediments mixing and drying site along the north side of the entrance to ML Harbor (North Harbor Project). The material will be used to elevate existing parking areas and be placed behind a proposed bulkhead. For purposes of this analysis, it is assumed that the remaining 137,000 cy will be disposed of at a permitted offsite location. At present, 10,000 cy are projected for disposal at the Fort Ord Landfill and 20,000 cy will be used for grading purposes upon completion of the project. The remaining 107,000 cy will be disposed of at the Marina Landfill.

To reach the offsite disposal sites, trucks will necessarily travel south on Highway 1. Assuming that trucks with 20 cy of capacity will be used, approximately 231 truckloads will be required to haul each batch of approximately

4,625 cy of material. A total of 23 batches over a 2 year period will require disposal. Trucks will operate between the hours of 9 a.m. and 3 p.m. to avoid traffic impacts during peak a.m. and p.m. commute hours. For each batch of processed material, it is expected that up to 4 trucks per hour over a two week period will leave the project site.

**Project Schedule.** Dredging of Gravelle's Boatyard, MBARI Dock and Southern A-Dock is scheduled for early 1998, and a maximum of 18,450 cy (including drying cement) of sediments will be processed at the mixing/drying site. These sediments will be processed in approximately 4 batches and will be used onsite for construction projects at the North Harbor. Sampling of the remaining eight dredging sites will occur in early 1998, the results of which will be used to determine the required dredging schedule.

## DISCUSSION OF ENVIRONMENTAL CHECKLIST

An Initial Study was conducted for Moss Landing Harbor Dredging Project. Potential significant environmental effects were identified during the Initial Study process for air quality, biological resources, and transportation/circulation. Less than significant impacts were identified for geologic problems, water, hazards, noise, and aesthetics. No impacts were identified for land use and planning, population and housing, energy and mineral resources, public services, utilities and service systems, cultural resources, or recreation. A discussion of each topic, supplemental to the Initial Study checklist, is contained below. The discussion is presented in the same order as the Initial Study for consistency. Where appropriate, mitigation measures have been identified to reduce or eliminate potential significant adverse impacts.

### I. Land Use and Planning

*Existing Land Use.* Located on Monterey Bay, approximately halfway between Monterey and Santa Cruz, Moss Landing is primarily commercial and industrial in character. The PG&E oil-fired power plant, fishing, boat berthing and repair, marine research, and visitor-serving uses provide the major economic base. Most of the industrial activity at Moss Landing is located in the harbor and northeastern areas of the community where the proposed project site is located. The proposed project site is located on land that was historically used in the 1960's for dredged material disposal, which is primarily an industrial activity. Dredged material covers most of the proposed project site up to a depth of 10 feet below ground surface (bgs) (LSA, 1995).

*Relevant Plans and Policies.* Two relevant land use plans are applicable to the site, the Monterey County General Plan, and the North County Plan. The Monterey County General Plan designates the proposed project site as industrial in the northern and central part of the site. Commercial uses include existing shops and a restaurant located south of the proposed project site, adjacent to Moss Landing. The North County Plan, which is considered the Local Coastal Plan for the area, contains policies regarding resource management, land use development, and public access. According to the North County Plan, the proposed project site is designated as Recreation and Visitor Serving Commercial, and Resource Conservation-Wetlands and Coastal Strand. The Recreation and Visitor Serving Commercial component of the plan refers to the provision of commercial services for visitors, which is currently provided through existing shops and a restaurant, located at the south end of the site. Resource Conservation-Wetlands and Coastal Strand refers to a strip of land adjacent to the harbor in the southwestern portion of the site. Resource Conservation-Wetlands and Coastal Strand areas require protection of sensitive resources, plant communities, and animal habitats as identified in the North County Plan. The mitigations presented for biological resources in this initial study achieve protection of sensitive resources, plant communities, and animal habitats associated with these lands (LSA, 1995).

*Potential Impacts.* The proposed project involves the use of the site for drying dredged materials as part of the maintenance dredging for Moss Landing Harbor and transport of material to an permitted offsite disposal site. In summary, the project will not affect any agricultural lands, disrupt or divide an established community, conflict with current environmental plans, zoning, or general plan designation, or be incompatible with existing land use in the area.

The proposed project includes the creation of a sediment mixing and drying site which will be surrounded by a berm on all sides. The harbor maintenance dredging and creation of a sediment mixing and drying site is necessary to provide harbor access at all times for commercial and recreational boats, and the MBARI ocean-going research vessel. Currently, vessels may only enter and exit the harbor during high tide periods. Coastal dependent uses, including boating, commercial fishing, and ocean-going research vessels, are given priority under the LCP for the North County. As a result, the maintenance dredging of the harbor and subsequent storage of material at the sediment mixing and drying site, is consistent with the LCP. The proposed project is also consistent with the Monterey County General Plan which designates the area as industrial and commercial. Further, upon project completion, the proposed project site will be graded back to its original condition. Consequently, no conflicts with existing environmental plans or impacts to existing or planned land uses have been identified and therefore, no mitigation measures are required.

## II. Population and Housing

The proposed project will not result in any increases to population in the local area. Further, the proposed project will not result in increased housing demand or require the construction of new housing facilities to support the project. It is assumed that construction of the sediment mixing and drying site will be completed by a local construction company, and operation of the site will not require permanent relocation of new personnel. Therefore, no impacts to population or housing have been identified and no mitigation measures are required.

## III. Geologic Problems

*Site Conditions.* The primary source of information about the site is a report by LSA Associates, Inc., *Moss Landing Marine Laboratories Relocation, Environmental Assessment*, dated May 17, 1995, for the Federal Emergency Management Agency. The report references a prior soil investigation by Charles A. Fisher, *Geologic Report - Marina Village Project, Moss Landing Western Salt Company Properties*, dated May 12, 1990, for Triano Builders. The latter study included two soil borings drilled at the project site.

The available site data indicate that the property is covered by about 5 to 10 feet of old dredge spoils which are primarily sands. The sandy soils are underlain at depths of about 5 feet or more by natural fluvial marine deposits of silty clays, with some silty sand lenses. The contact between the sand fills and underlying predominantly clay soils is at about Elevation 3 feet, Mean Lower Low Water (MLLW) Datum (i.e., slightly above Mean Sea Level).

Groundwater levels were not measured in the two borings at the site, but the water table is expected to be at or slightly above sea level, near the base of the sandy fill soils covering the site.

*Geologic Hazards.* Based on the LSA report, the following is a summary of geologic/seismic hazards that may affect the proposed project site.

- The risk of surface rupture due to fault displacement is low because no known active faults cross the site.
- The potential for strong ground shaking is large because the site is located within 20 miles of several active fault zones, including the San Andreas. However, the risk of a large earthquake occurring during the short two-year life of the project is much less than for a "permanent" facility. Strong shaking could cause instability of overly steep ground slopes at the site, such as the shoreline banks described in the LSA report.
- If a large earthquake were to shake the site during the life of the project, liquefaction of saturated sandy soils could occur. Liquefaction is a temporary loss of soil strength that can be caused by ground vibrations from an earthquake. Evidence of liquefaction in the center of the site during the 1989 Loma Prieta earthquake is noted in the LSA report. The liquefaction led to lurching, or lateral spreading of the ground surface in some portions of the site. Erratic ground settlements can also be caused by liquefaction during a strong earthquake.

No other geologic hazards are believed to be significant to the site (collapsing soils, subsidence due to groundwater withdrawal, shrink/swell potential of soils, soil erosion, etc.).

*Geotechnical Considerations.* During design of the proposed project the following considerations should be addressed by a geotechnical investigation with subsurface exploration.

- The weight of the perimeter berms will cause some consolidation of the underlying natural clay soils. If the clays are moderately or highly compressible, settlements of the berm crest would have to be "made up" occasionally by the addition of new fill material, or the berms could be overbuilt to allow for the settlements to occur without loss of freeboard.
- Ground shaking during a strong earthquake could cause lateral displacement or instability of the perimeter berms around the containment area and/or the existing banks at the shoreline along the west side of the site. The potential for damage to the berms, and any contained new dredge spoils, can be reduced by (1) compacting the upper portions of foundation soils beneath the berms (the existing sandy dredge spoils) and the

fill soils that are used to construct the berms, and (2) maintaining a sufficient setback of the new construction from the shoreline.

- Earthquake-induced liquefaction of saturated layers or lenses of sandy foundation soils at the site could lead to erratic settlements of the containment berms. But unless the saturated sands are laterally extensive, damage to the berms is not expected to be major nor difficult to repair.
- Free water from the stored dredge spoils should be prevented from seeping into the perimeter berms and underlying foundation soils. This could cause increased risk of soil liquefaction and greater damage to (or loss of) containment berms during an earthquake; seepage of water through the toe of berms and sloughing erosion or slope instability; and/or seepage of water laterally outwards from the containment area, with discharge to the Harbor waters, local raises in groundwater levels, and/or surface ponding beyond the project site. One method of preventing water seepage would be to line the ponds with a manufactured membrane or compacted clay. Other methods will be developed in the geotechnical prepared by the construction firm as needed based on the specific design of the project.

*Mitigation.* For preliminary planning of the project, the following mitigations are recommended:

- A geotechnical investigation shall be completed by the construction firm responsible for project implementation to address geotechnical concerns. Mitigations identified in the geotechnical investigation will be incorporated into the project design.
- Onsite sands shall be used for general construction of the containment area berms. Natural clay soils shall be avoided except for low permeability elements of the design (such as pond lining) because of probable excavation, handling and compaction difficulties.
- Excavations that approach about 3 feet MLLW shall be avoided to reduce the risk of encountering groundwater and weak soils below berms and containment areas that would be difficult to compact.
- Foundation and berm soil compaction shall be at least 90 percent of "Modified Proctor" (ASTM D1557).
- Berm slopes shall be no steeper than 2 (horizontal) to 1 (vertical). Flatter slopes would require less repair following a strong earthquake. Also, lining of slopes (membrane or clay) would be less difficult for flatter slopes.
- Contingency plans shall be in place to ensure repair of berms damaged during a strong earthquake.

With implementation of mitigations, impacts to geological resources are anticipated to be less than significant.

#### IV. Water

The proposed project will not result in changes to groundwater and surface water resources. In addition, the proposed project site is situated above 5 feet MSL, which is the 100-year base flood elevation. Therefore, impacts to groundwater and surface water resources, and flooding are not anticipated.

The proposed project may result in impacts to water quality. The proposed project will involve the transport of dredge material via pipeline to a sediment mixing and drying site. The dredged material, a slurry composed of approximately 80 to 90 percent water, will be pumped into the site and allowed to settle until the turbidity of the overlying water reaches acceptable levels. Acceptable levels have been defined which is defined as no more than 5 nephelometric turbidity units (NTUs) above background levels. To ensure water quality is within requirements during construction and operation, the following mitigation has been incorporated into the project (HLA, 1997b):

- Turbidity of decant water will be monitored and will not be released unless at or below acceptable levels.
- Turbidity of surrounding receiving waters (ML Harbor) will be monitored after releasing overlying water from the project site through the weir structure. If turbidity is measured above required levels, decant water will be retained until turbidity reaches acceptable levels.

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- The release of decant water will be monitored to ensure that excess sediment and debris are not released.
  - If debris is encountered during the release of decant water back into Moss Landing Harbor, the operation will be halted and the debris will be removed and properly disposed of prior to recommencing operations.

Based on implementation of the mitigation measures described, it is anticipated that impacts to water quality will be less than significant.

#### V. Air Quality

During construction of the proposed project, air quality impacts, including the generation of PM<sub>10</sub> (dust) and mobile source exhaust emissions may occur. No sensitive receptors exist or are anticipated in the immediate vicinity of the proposed project site. The impacts would be short-term and localized. Construction emission impacts will be limited by ensuring that all vehicles comply with all local air pollution control district regulations and by limiting construction vehicles to only those necessary to complete the project. To reduce auto emissions resulting from workers arriving at the site and to control dust emissions, the following mitigation measures are provided during project construction.

- To reduce worker-related auto emissions, employees working at the site shall be encouraged to carpool to the project site.
- Water trucks shall be used to water the proposed project site as well as all roads leading into the construction site to control fugitive dust during excavation of the sediment mixing and drying site, as needed.
- Speed of construction vehicles shall be limited to 10 miles per hour in order to reduce the generation of dust onsite.

#### VI. Transportation/Circulation

The proposed project will involve the transportation of dredge material to an offsite location via Highway 1. Trucks will enter Highway 1 via the driveway to the Moss Landing Yacht Harbor. Assuming that trucks with 20 cy of capacity will be used, approximately 231 truckloads will be required to haul each batch of approximately 4,625 cy of material. A total of 23 batches over 2 years will require disposal. Assuming that trucks will operate between the hours of 9 a.m. and 3 p.m., approximately 4 trucks will leave the proposed project site each hour.

A previous traffic study indicated that Highway 1 operates at a level of service (LOS) F during peak hours in Moss Landing (LSA, 1995). LOS F roads are characterized as having excessive delays with many individual cycle failures. Conditions are usually stop-and-go with a breakdown of general traffic flow. Under the proposed project, up to 24 trucks per day would enter/exit Highway 1 from the proposed project site. As a result, traffic impacts may occur on Highway 1. To reduce impacts to less than significant levels, the following mitigation measures have been developed (Jeffreys, 1997):

- Prior to project implementation, a traffic management plan will be developed for the project. The TMP will include traffic control elements including routing of traffic entering/exiting the site, signage, and detours as needed.
- Truck traffic shall be limited to operation between 9 a.m. and 3 p.m. weekdays to avoid exacerbating LOS levels during peak hours.

#### VII. Biological Resources

The proposed project will potentially impact the Monterey spineflower, a federally-listed threatened species, the black legless lizard, a federally-proposed endangered species, and wetlands located in the southwestern corner of the site. A discussion of both species, and wetlands including mitigation measures to reduce impacts to less than significant levels, is presented below.

*Monterey Spineflower.* The proposed project would require excavation and berm construction over approximately 5 acres. A small population of Monterey spineflower was observed on the proposed project site during a recent survey conducted by HLA in 1997 (HLA, 1997c). Past surveys have also identified locations of Monterey



spineflower inside and adjacent to the proposed project footprint. As a result, project implementation could result in the direct take of spineflower plants and loss of spineflower habitat.

*Black Legless Lizard.* Black legless lizard habitat consists of sandy soils populated by coastal shrubs such as bush lupine and mock heather (LSA, 1995; USACE, 1996). Shrubs observed onsite included arroyo willow and coyote brush. Soils are gravelly, coarse, and shell-filled. Preferred habitat for black legless lizard is not found onsite, however, the shrub community present is considered to be degraded marginal habitat for black legless lizards. No black legless lizards were observed during surveys conducted in 1994 and 1997 (LSA, 1995; HLA 1997c). Although it is considered unlikely, this species could potentially utilize the shrub habitat at the proposed project site. As a result, a mitigation plan has been developed should black legless lizards be located during project implementation.

*Wetlands.* Seasonal wetlands occurring on the proposed project site consist of a large, monospecific patch of Santa Barbara sedge (*Care barbara*) in the southwestern corner of the site. A swale associated with the seasonal wetlands extends to the eastern edge of the proposed project site. The swale is approximately 10-to 15 feet wide and runs east to west through grassland at the center of the site. The swale is dominated by annual beard grass (*Polypogon monspeliensis*), sourclover (*Melilotus indica*), cut-leaved plantain (*Plantago coronopus*), and toad rush (*Juncus bufonius*). The swale was not identified as a jurisdictional wetland in a 1996 wetland delineation (Assegued & Associates, 1996).

*Mitigation Plan.* Based on the presence of Monterey spineflower, the potential for black legless lizards, and potential impacts to wetlands, mitigation measures have been prepared to reduce impacts to less than significant levels. In addition, a detailed mitigation plan has been prepared for the proposed project as part of the biological assessment prepared for the Monterey spineflower and black legless lizard. This information is contained in the Biological Assessment for the North Harbor Interim Drying Site Report prepared for this project (HLA, 1997c). Specific measures required to implement mitigation for the Monterey spineflower, including replacement ratios and success criteria, are presented in the Mitigation Plan which is subject to review and approval by the United States Fish and Wildlife Service (USFWS). For purposes of this initial study, a summary of the mitigation plan is presented below (HLA, 1997c; USFWS, 1994).

The following mitigations will be implemented as part of the proposed project:

- To avoid or reduce impacts to listed or proposed-listed species and protect wetland habitat during project implementation, an onsite biological monitor will be present during excavation of the proposed sediment drying and mixing site.
- If avoidance of Monterey spineflower is not feasible, all individuals of Monterey spineflower that would be affected will be translocated to suitable habitat in the immediate vicinity of the project site.
- If necessary, suitable spineflower habitat would be constructed onsite upon project completion.
- Areas on the proposed project site identified as Monterey spineflower habitat during past surveys will be scraped to 2 inches below-ground-surface to remove dormant seeds present in the soil. Soil underlying the known population of Monterey spineflower identified by HLA occurring within the proposed project footprint will be collected separately in order to ensure a concentrated collection of spineflower seed. Optimally, seed and soil should be collected from June through October. Outside this time period, soils may be collected with approval of and in consultation with USFWS.
- Soil will be transported to a local responsible party (e.g., nursery or university) for propagation and seed magnification.
- Upon completion of the project, propagated seedlings and/or seed will be used to restore Monterey spineflower populations in appropriate habitat areas on the proposed project site.
- Mitigation sites shall be surveyed by a qualified biologist immediately following implementation of the mitigation plan to ensure compliance with the plan. Any modifications to the plan will be recorded to provide a baseline of information from which to evaluate progress at the sites. Ongoing monitoring of the mitigation sites would be conducted to track the progress of the mitigation plan. Data would be gathered on standardized data forms to ensure consistency and allow for comparison of results.

- Annual reports will be prepared to describe methods and results of the monitoring surveys, summarize the overall progress of the mitigation plan, and make recommendations for remedial actions.
- A biological monitor will be present during initial grading and project excavation to identify, remove, and relocate legless lizards uncovered during excavation activities.
- Legless lizards found during excavation activities will be collected and placed in a 5-gallon bucket half-filled with local soil and immediately relocated into suitable adjacent unoccupied habitat. Documentation of each relocated legless lizard will include location of where the specimen was collected and pictures of the individual and collection location.
- Proposed project will be designed with appropriate buffer zones in order to avoid and protect wetland habitat. Wetland areas will be fenced to ensure that construction does not impact wetland areas. Construction zones will be established to avoid wetland areas and provide adequate buffers between wetland areas and the construction site.

#### VIII. Energy and Mineral Resources

The proposed project will not result in the use of substantial amounts of energy nor substantially increase demand upon existing energy sources, or require new energy sources to be built. In addition, the proposed project will not conflict with adopted energy conservation plans or result in the use of non-renewable resources in a wasteful and inefficient manner. Therefore, no impacts to energy have been identified and no mitigation measures are required.

#### IX. Hazards

The proposed project does not involve the use of explosives or any other such hazardous materials nor will it disrupt or interfere with any county emergency response plan or evacuation plan. Dredge materials present the only potential health hazard resulting from the proposed project. To address potential health hazards, a study was conducted to characterize the sediments that would be placed in the sediment mixing and drying site. Sediments were tested for sulfides, petroleum hydrocarbons, butyltins, metals, polyaromatic hydrocarbons (PAHs), Phthalates, pesticides, and polychlorinated biphenyls (PCBs). The maximum concentration of chemicals detected in the top sediments were compared to both industrial and residential preliminary remediation goals for soil (PRGs) (EPA, 1996). All chemical concentrations, with the exception of arsenic, were well below industrial and residential PRGs. Arsenic is known to naturally occur at concentrations exceeding PRGs in the Monterey region. Shacklette and Boerngen (1984) report arsenic concentration in soils of the conterminous U.S. of up to 97 parts per million (ppm), with an arithmetic mean concentration of 7.4 ppm for the western U.S. In addition, arsenic concentrations for reference site sediment samples, which represent local background sediment conditions, ranged from 2.4 to 6.2 ppm. Because all sediment arsenic concentrations were below 7.4 ppm, these levels likely represent background levels and would not be expected to result in public health risks above those resulting from exposure to background levels in area soils. Consequently, no impacts are identified under hazards and no mitigation measures are required.

#### X. Noise

During implementation of the proposed project, it is assumed that noise will be generated during construction of the sediment mixing and drying site. Currently, there are no noise-sensitive receptors within 1,000 feet of the project. The nearest noise receptors are Highway 1, located east of the site, and the commercial area located approximately 1,200 feet south of the site. Background noise levels were recorded in 1994 for the relocation of the Moss Landing Marine Laboratory (LSA, 1995). Background noise levels were recorded between 59-62 db. The Monterey County General Plan has identified acceptable noise levels for industrial and commercial sites with a maximum conditionally acceptable noise level of 75 decibels (db) (Ldn or CNEL).

During construction of the sediment mixing and drying site, earthmoving equipment, including water trucks, and other project-related vehicles would generate noise. Noise would also be generated by hauling dried dredge material offsite or to stockpiling locations at the southern end of the project site. For the basis of this analysis, it is assumed that up to five pieces of heavy equipment (two scrapers, one grader, one loader, and one water truck) would be operating at the same time in the same location. The noise level produced by scrapers was assumed to be 80 dB at 50 feet. Noise levels from other pieces of equipment were assumed to be 75 dB at 50 feet. These numbers assume that all equipment would be outfitted with mufflers. Based on this calculation, it is estimated that, under

the worst-case scenario, equipment operating on the site would generate a combined noise level of 84.7 db at 50 feet. Although there are no sensitive receptors within 1,000 feet of the proposed project site, the following mitigation measures have been developed to address potential offsite noise impacts.

- Equipment operation onsite should be limited to the hours of 7 a.m. to 7 p.m.
- All equipment should be equipped with mufflers that are in good condition.
- No more than five pieces of equipment (such as a scraper, loader, water truck, etc.) should be operating at the same time at the closest point to any receptor.

#### XI. Public Services

The proposed project will not require any changes to or result in the disruption of any public services including fire protection, police protection, schools, parks or other recreational facilities, maintenance of any public facilities, or any other governmental services. Therefore, no impacts to public services have been identified and no mitigation measures are required.

#### XII. Utilities and Service Systems

The proposed project will not require the construction of new utilities or service systems nor will it result in upgrades to existing utilities or service systems. The project will involve construction of a sediment mixing and drying site and subsequent offsite disposal of dredge materials. Therefore, no impacts to utilities and service systems have been identified and no mitigation measures are required.

#### XIII. Aesthetics

The proposed project is located adjacent to Highway 1 which has been designated as a state scenic highway. According to Sections 260 of the State Highways Code, scenic highways "require continuing and careful coordination of planning, design, construction, and regulation of land use and development, by state and local agencies as appropriate, to protect the social and economic values provided by the state's scenic resources." In section 261 of the State Highway Code, it further states that "The standards for official scenic highways shall also require that local government agencies take such action as may be necessary to protect the scenic appearance of the scenic corridor, the band of land generally adjacent to the highway right-of-way, including, but not limited to, (1) regulation of land use and intensity (density) of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) the design and appearance of structures and equipment."

The local agency responsible for land use planning within the county is the Monterey County Planning Department. As such, the Monterey County Planning Department is responsible for land use designation at the proposed project site. The site is currently designated as industrial with a small commercial zone along the southern border of the site. The proposed project, including the storage of dredge material at the sediment mixing and drying site and subsequent disposal both onsite and offsite, is an industrial activity. Consequently, the proposed project is consistent with the land use designation as identified in the Monterey County General Plan. In addition to the land use designation for the site, the Monterey County General Plan has identified the following objectives for scenic highways.

- Employ a cooperative planning effort among all public and private interests to implement appropriate land use techniques and controls for maintaining the scenic beauty and atmosphere of the scenic corridor.

For this project, the project has been designed to blend in with the existing landscape to the maximum extent practicable. The following design features are part of the project.

- Construction of the settling basin/drying site will consist of soil berms reaching approximately 12 feet above MSL on all sides. The project site currently ranges from 6 feet MSL to approximately 18 feet MSL. The 12 foot berms, therefore, have been designed to fit into the existing topography range.
- Excavation for the sediment mixing and drying site will occur over a two week period. Once completed, the berms will shield Highway 1 from any visual impacts that may occur during project implementation.

- Material used to construct the berms will be taken from materials onsite, thus continuing the existing visual character of the site.
- Upon project completion, the sediment mixing and drying site will be finished at grade and restored to the existing conditions, thus preserving the existing visual character of the site.

Based on the incorporation of design features into the proposed project, it is not anticipated that the proposed project will alter any scenic vistas or result in the creation of an aesthetically offensive site open to public view. Therefore, no impacts to aesthetics have been identified and no mitigation measures are required.

#### XIV. Cultural Resources

No prehistoric or historic archeological site or historic structure is located at the proposed project site. Construction of the sediment mixing and drying site will include excavation of the proposed project site. The site was formerly used as a dredge material disposal site. The proposed excavation will uncover and move soils that are primarily dredge spoils remaining from previous dredge disposal at the site. Therefore, impacts to cultural resources are not anticipated. However, during construction, in the event that any archeological or historic resources are discovered, the following mitigation is required.

- If cultural resources are discovered during construction, construction shall be stopped until an archeological survey is completed and appropriate measures are taken to protect those resources.

#### XV. Recreation

No recreational opportunities for the public exist at the proposed project site. The nearest recreational opportunity exists at Zmudowski State Beach located northwest of the proposed project site. The main access to Zmudowski State Beach is through Jetty Road which is located north of the site. Jetty Road is not identified as an access road for the proposed project, therefore, no impacts to recreation have been identified and no mitigation measures are required.

## References

Assegued & Associates, 1995. *Moss Landing North Harbor Western Salt Site Biotic Assessment Project*. Moss Landing, California.

Harding Lawson Associates (HLA), 1997a. *Geotechnical Evaluation, Moss Landing Harbor North Harbor Sediment Drying Site*. Prepared for the Moss Landing Harbor District, Moss Landing, California.

\_\_\_\_\_, 1997b. *Dredging Plan, Gravelle Dock, Southern A-Dock, and MBARI Dock, Moss Landing Harbor*. Moss Landing, California.

\_\_\_\_\_, 1997c. *Biological Assessment for the North Harbor Interim Drying Site, Moss Landing Harbor District*. Moss Landing, California.

Jeffrey, Jim, 1997. Personal communication with Jim Jeffreys, Engineering Consultants, Los Gatos, California. December 8, 1997.

LSA Associates, Inc., 1995. *Moss Landing Marine Laboratories Relocation Environmental Assessment*. May 17, 1995

Shacklette, H.T. and J.G. Boerngen, 1984. *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*. U.S. Geological Survey Professional Paper 1270. U.S. Government Printing Office: Washington D.C.

U.S. Army Corps of Engineers (USACE), 1996. *Environmental Assessment Review for the Moss Landing Harbor Maintenance Dredging*. April, 1996.

U.S. Environmental Protection Agency (USEPA), 1996. *Region 9 Preliminary Remediation Goals (PRGs) 1996*. Memorandum from Stanford J. Smucker. August 1, 1996.

U.S. Fish and Wildlife Service, 1994. *Biological Opinion for the Relocation of Moss Landing Marine Laboratory, Moss Landing, Monterey County, California*. (1-8-94-F-35). Ventura Field Office, Ventura, California. October.

**Exhibit I. CEQA Supplemental Mitigated Negative Declaration,  
Moss Landing Maintenance Dredging Project.**

(includes Dolan Road Upland Disposal Site)

(This document contains only relevant pages – the complete text can be found in permit files)



SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

RECEIVED

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CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

SECTION IV

SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION  
PURSUANT TO TITLE 14, CHAPTER 3, SECTIONS 15000, et seq.

CALIFORNIA CODE OF REGULATION

SUBJECT: CEQA SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION, MOSS LANDING  
MAINTENANCE DREDGING PROJECT

Pursuant to the State of California Public Resources Code and the "Guidelines for Implementation of the California Environmental Quality Act of 1970" as amended to date, a Draft Supplemental Mitigated Negative Declaration is hereby attached for the project listed below:

*The applicant, Moss Landing Harbor District, dredges up to 50,000 cy of sediment per year from Moss Landing harbor. The sediment is dried at the harbor and transported by truck to the Marina Landfill for disposal. This project amends that operation by increasing the maximum volume of material that may be handled to 100,000 cy per year, and adds an additional disposal site that is located on Dolan Road in Northern Monterey County. The Dolan Road site is permitted to accept dredge sediment. Sediment will be transported to the Dolan site and Marina Landfill.*

In compliance with CEQA, a Supplemental Initial Study (IS) has been prepared for the project (see Attachment A). Based on the Supplemental IS, a determination has been made that a Supplemental Mitigated Negative Declaration is required for the project. The justification for preparing a Supplemental Mitigated Negative Declaration is based on the results of the Supplemental IS, which determined with the incorporation of mitigation measures, that no potential significant effects to the environment would result from the proposed project. Documents used in preparation of the Supplemental IS and Supplemental Mitigated Negative Declaration can be reviewed at the Moss Landing Harbor District Office located in Moss Landing, California.

PREVIOUS ENVIRONMENTAL DOCUMENTATION

*Initial Study/Mitigated Negative Declaration*

An Initial Study/Mitigated Negative Declaration was adopted in February 1998 for the dredging operation. The approved project included the following:

- Dredging of the Moss Landing Harbor;
- Construction of a floating pipeline system for transport of dredged sediment to the adjacent drying site;
- Construction of a settling basin and drying site with an approximate capacity of 36,640 cy per year; and
- Transportation of sediment via highway trucks to be used as fill for adjacent projects and disposal at the Marina Landfill.

Potentially significant environmental effects were identified during the Initial Study process in the subject areas of air quality, biological resources, and transportation/circulation. Mitigation measures were identified to reduce or eliminate potential significant adverse impacts. Less than significant impacts were identified for geologic problems, water, hazards, noise, and aesthetics. No impacts were identified for land use and planning, population and housing, energy and mineral resources, public services, utilities and service systems, cultural resources, or recreation. A mitigation monitoring program (MMP) was developed to track the implementation of required mitigation measures. The environmental documentation of this evaluation is available for review at the MLHD Office located at 7881 Sandholdt Road, Moss Landing, California.

SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

*Monterey County Coastal Development Permit (#PLN980137)*

MLHD obtained an Emergency Coastal Development Permit (CDP) in March 1998 for the creation of an upland dredge sediment mixing and drying site located in the North Harbor area of Moss Landing. The CDP application for the project was deemed complete in August 1998. An Initial Study/Mitigated Negative Declaration (IS/NegDec) was prepared for the project concurrently with the initial Emergency CDP as previously discussed. The IS/NegDec was approved in February 1998 by the Moss Landing Harbor District Board. The Monterey County CDP was approved by the Monterey County Planning Commission on December 17, 1998.

**PROJECT SUMMARY**

The project is described as an increase in the volume of sediment that may be dredged from Moss Landing harbor and transported to local disposal facilities. Based on consultation with the Governors Office of Planning and Research (OPR), a Supplemental Mitigated Negative Declaration has been prepared to address the proposed changes in the existing operation. With the exception of those changes noted below, the former Moss Landing Dredging Project remains unchanged. The changes in the project that are the subject of the Supplemental Environmental Checklist, Supplemental IS, and this Mitigated Negative Declaration are:

- the maximum volume of sediment that may be dredged and processed is to be increased from 50,000 to 100,000 cubic yards (cy) annually;
- a portion of the sediment will be transported to Assessor's Parcel Number (APN) 131-054-004 (Dolan Road site), a permitted disposal location owned and operated by Dolan Development Partners, Ltd. The Dolan site is currently permitted to accept 16,400 cy, but is in the process of increasing the permitted capacity. The project proposes to transport whatever volume can be accepted to the Dolan site; and,
- the maximum volume of sediment that may be transported to the Marina Landfill is to be increased from the currently approved 50,000 cy to the balance of the 100,000 cy minus that transported to the Dolan site annually.

The Supplemental IS (Attachment A) addresses both the increased capacity at the harbor drying site as well as transport from the harbor to the Dolan Road site and the Marina Landfill.

As described above, a CDP has been approved by the Monterey County Planning Commission for the existing operation that allows the processing of up to 50,000 cy per year. Under the existing operation, sediment is dredged from the harbor and deposited on an adjoining site to dry. After the material has dried, it is transported to neighboring locations for use as fill or to an approved disposal location. Since initiation of the original operation, it has become evident that a greater volume of sediment needs to be processed to maintain the navigability of the harbor. MLHD proposes to increase the volume of sediment that may be processed to a maximum of 100,000 cy annually. No significant changes to the existing drying site will be required to accommodate the proposed increase in sediment processing.

The Dolan Road disposal site is located on Dolan Road approximately 1½ miles east of Highway 1 and one mile south of Moss Landing. The site is served by paved roads (Plate 1). CDP #PC94196) has been approved by the Monterey County Planning and Building Inspection Department that allows the site to accept 16,400 cy of fill. However, the operators of the Dolan site have requested that their volume be increased. The project proposes to transport to the Dolan site the volume of material that they are permitted to accept. The balance of the 100,000 cy will continue to be transported to Marina Landfill.

The Marina Landfill currently accepts dredge sediment from Moss landing harbor. The volume of sediment is limited by the dredging operation to a maximum of 50,000 cy per year. The sediment represents a relatively clean source of fill material for the landfill. The proposed project would increase the volume of sediment delivered to the landfill.





SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

**IMPACT SUMMARY**

The proposed increase in the volume of material processed would not result in any significant modification of the ongoing dredging, drying or disposal activities. A larger volume of material can be processed by simply increasing the period of dredge operation. The dredging and drying process is accomplished in "batches". The dredge is operated until the desired volume of sediment has been deposited on the drying site. As soon as the material has appropriately dried, it is loaded and transported to the disposal or use destinations. As described below, the potentially significant effects of the project are essentially limited to the increased number of truck trips required to transport the increased volume of material.

The size of the batch is established by the capacity of the drying site. A maximum batch would be approximately 4,625 cy of material. Assuming that each truck has a 20 cy capacity, approximately 231 truckloads will be required to haul each batch. An estimated maximum of 80 truck trips per day could be generated to transport the sediment from the site. In compliance with the previous Mitigation Monitoring Plan prepared by the MLHD, trucks will operate only between the hours of 9 a.m. and 3 p.m. to avoid traffic impacts during peak a.m. and p.m. commute hours. In compliance with Condition #9 of the Coastal Development Permit (PLN980137), a Traffic Management Plan has been prepared for the project. The TMP contains mitigation addressing traffic impacts resulting from the project, including limited night-time operations to minimize traffic congestion as needed. To date, it has not been necessary to redistribute trips to the night-time period. At the County's discretion, a portion of the loading and transport may be shifted to the night-time period as needed. This activity is addressed in the MMP and TMP.

**FINDINGS**

A Supplemental IS has been prepared for the proposed changes in the operation. Potential significant environmental effects were identified during the Supplemental IS process for transportation/circulation. No impacts were identified for air quality, biological resources, geologic problems, water, hazards, noise, and aesthetics, land use and planning, population and housing, energy and mineral resources, public services, utilities and service systems, cultural resources, or recreation. A discussion of each topic area is presented in the Supplemental Initial Study. For all significant impacts, mitigation measures have been identified to reduce or eliminate potential significant adverse impacts. In all cases, the proposed mitigation would reduce the potential impacts to less than significant levels. In summary, impacts will be mitigated as follows:

*Transportation/Circulation*

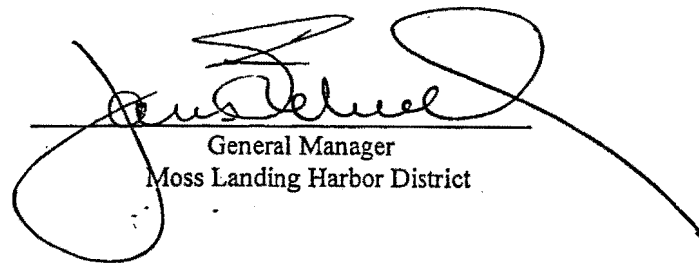
With the incorporation and implementation of the mitigation measures listed below, no significant impacts to transportation/circulation are expected to occur.

- A traffic management plan has been developed for the project (March 1998). The TMP includes traffic control elements including routing of traffic entering/exiting the site, signage, and detours as needed.
- Truck traffic shall be limited to operation between 9 a.m. and 3 p.m. weekdays to avoid exacerbating traffic during peak hours.
- At the discretion of the County, MLHD will initiate night-time trucking operations in compliance with Condition #9 of the CDP as needed during peak trucking periods.

SUPPLEMENTAL MITIGATED NEGATIVE DECLARATION  
MOSS LANDING MAINTENANCE DREDGING PROJECT - MOSS LANDING HARBOR DISTRICT  
MOSS LANDING, MONTEREY COUNTY

The proposed change in project operations pose no potential for significant adverse effects, either individually or cumulatively. Copies of previous environmental documentation and the Supplemental Mitigated Negative Declaration and IS can be obtained by request from the Moss Landing Harbor District, which is the Lead Agency. Requests should be addressed to:

Moss Landing Harbor District  
Mr. James Stilwell  
PO Box 10  
Moss Landing, California 95039  
(831) 633-2461



General Manager  
Moss Landing Harbor District

1.29.99  
Date

**ATTACHMENT A**

**MOSS LANDING HARBOR DISTRICT  
MOSS LANDING HARBOR DREDGING PROJECT  
SUPPLEMENTAL INITIAL STUDY**

This Supplemental Initial Study has been required and prepared by Moss Landing Harbor District (MLHD), P.O. Box 10 Moss Landing, California 95039 (831) 633-2461, pursuant to CEQA Guidelines, Section 15063.

**APPLICANT AND PROPERTY OWNER NAME AND ADDRESS**

Project Name:	Moss Landing Dredging Project
Project Location:	Moss Landing, California
Applicant Name:	Moss Landing Harbor District
Address:	P.O. Box 10, Moss Landing, CA 95039

**PROJECT BACKGROUND AND DESCRIPTION**

**Regional and Local Setting**

Moss Landing is an unincorporated community in Monterey County, California. The community is located on Monterey Bay at the mouth of Elkhorn Slough, approximately halfway between the cities of Monterey and Santa Cruz. Highway 1 is the main thoroughfare through Moss Landing. The community lies between two rivers, the Pajaro, approximately 1½ miles north of Moss Landing, and the Salinas, approximately 4 miles south. San Francisco is located about 100 miles north of Moss Landing. Approximately 520 people live in Moss Landing. The project site, the North Harbor sediment mixing and drying site, is located adjacent to Moss Landing harbor, west of Highway 1 and south of Jetty Road (Plate 1). The Dolan Road Disposal site is located approximately 1½ miles east of the North Harbor Sediment Mixing and Drying Site. The Marina Landfill is located approximately five miles south of the harbor via Highway 1 and Reservation Road.

**Project Site Description and History**

The applicant, Moss Landing Harbor District (MLHD), is currently allowed to dredge up to 50,000 cy of sediment per year from Moss Landing harbor. The sediment is dried at a MLHD site adjacent to the harbor and subsequently transported by truck to local properties for use as fill or to the Marina Landfill for disposal. The existing sediment drying site is located adjacent to the harbor, west of Highway 1, and south of Jetty Road (Plate 1). Jetty Road is the entrance to Moss Landing State Beach. Marina Landfill is located approximately five miles south of the harbor via Highway 1 and Reservation Road.

This project proposes amendment of the existing operation, increasing the maximum volume of material that may be dredged to 100,000 cy per year, and adding an additional disposal site located on Dolan Road in Northern Monterey County. The Dolan Road site is permitted to accept sediment. Sediment will be transported to the Dolan site and the Marina Landfill. The Dolan Road site is currently permitted to receive approximately 16,400 cy per year. However, the operators of that facility have requested that a greater volume be approved. The project proposes to transport the volume of material that can be accepted to the Dolan Road site with the balance of material continuing to be sent to the Marina Landfill.

The Dolan Road site is located on Dolan Road approximately 1½ miles east of Highway 1 and approximately ½ mile south of Elkhorn Slough (Plate 1). Elkhorn Slough is the most significant natural feature in the area and designated by the North County General Plan as a National Estuarine Sanctuary. Historically, the area was extensively covered with oak trees and chaparral. Surrounding areas are now utilized as farmland for artichoke production, livestock grazing, and dairy farms. The land directly adjacent to the Dolan Road site is primarily industrial in nature including the Moss Landing Power Plant, auto wrecking yards, and the Southern Pacific Railroad rail line. The Dolan Road site has an existing CDP #PC94196 with the Monterey County Planning and Building Inspection Department that allows 16,400 cubic yards (cy) of fill.



## Project Description

This Supplemental Initial study examines impacts associated with changes to the project. Modification of the project since adoption of the original Initial Study/NegDec warrants this Supplemental IS/NegDec. The changes in the project that are the subject of the Supplemental Environmental Checklist, Supplemental IS, and this Mitigated Negative Declaration are:

- the maximum volume of sediment that may be dredged and processed is to be increased from 50,000 to 100,000 cubic yards (cy) annually;
- a portion of the sediment will be transported to Assessor's Parcel Number (APN) 131-054-004 (Dolan Road site), a permitted disposal location owned and operated by Dolan Development Partners, Ltd. The Dolan Road site is currently permitted to accept 16,400 cy, but is in the process of increasing the permitted capacity. The project proposes to transport whatever volume can be accepted to the Dolan Road site; and,
- the maximum volume of sediment that may be transported to the Marina Landfill is to be increased from the currently approved 50,000 cy to the balance of the 100,000 cy minus that transported to the Dolan site annually.

The proposed increase in the volume of material processed would not result in any significant modification of the ongoing dredging, drying or disposal activities. A larger volume of material can be processed by simply increasing the period of dredge operation. The dredging and drying process is accomplished in "batches". The dredge is operated until the desired volume of sediment has been deposited on the drying site. As soon as the material has appropriately dried, it is loaded and transported to the disposal or use destinations. As described below, the potentially significant effects of the project are essentially limited to the increased number of truck trips required to transport the increased volume of material.

The size of the batch is established by the capacity of the drying site. A maximum batch would be approximately 4,625 cy of material. Assuming that each truck has a 20 cy capacity, approximately 231 truckloads will be required to haul each batch. An estimated maximum of 80 truck trips per day could be generated to transport the sediment from the site. In compliance with the previous Mitigation Monitoring Plan prepared by the MLHD, trucks will operate only between the hours of 9 a.m. and 3 p.m. to avoid traffic impacts during peak a.m. and p.m. commute hours. In compliance with Condition #9 of the CDP (PLN980137), a Traffic Management Plan (TMP) has been prepared for the project. The TMP contains mitigation addressing traffic impacts resulting from the project, including limited night-time operations to minimize traffic congestion as needed. To date, it has not been necessary to redistribute trips to the night-time period. At the County's discretion, a portion of the loading and transport may be shifted to the night-time period as needed. This activity is addressed in the MMP and TMP.

The following is a discussion of impacts to environmental resources resulting from changes in the project. For consistency, the discussion is presented in the same order as the previous environmental document approved in February 1998.

## DISCUSSION OF ENVIRONMENTAL CHECKLIST

The following is a discussion of the environmental checklist. A potentially significant environmental effect has been identified in the subject of transportation/circulation. That impact reflects a concern that project generated truck trips could contribute to day-time traffic congestion. As recommended by Monterey County, the applicant has agreed to shift a portion of the truck loading and transport to night-time operations when/if the County determines such action is warranted. That action is already stipulated in the adopted CDP (PLN980137) and has been added to the amended Traffic Mitigation Plan (TMP) prepared for this project modification.

No impacts were identified for air quality, biological resources, geologic problems, water, hazards, noise, aesthetics, land use and planning, population and housing, energy and mineral resources, public services, utilities and service

systems, cultural resources, or recreation. A discussion of each topic, supplemental to the Initial Study checklist, is contained below. The discussion is presented in the same order as the previous Initial Study for consistency. Where appropriate, mitigation measures have been identified to reduce or eliminate potential significant adverse impacts.

## I. Land Use and Planning

*Existing Land Use.* Located 1.5 miles west of Moss Landing on Monterey Bay halfway between Monterey and Santa Cruz, the Dolan Road Disposal site is designated as light industrial in Monterey County's North County General Plan. Light industrial includes fish processing, aquaculture processing, limited-scale boat building, boat repair, agriculture processing and other coastal dependent operations. Operations at the Dolan road disposal site will be consistent with this designation. Surrounding land use includes heavy industrial and agricultural preservation and conservation areas to the west, Elkhorn Slough, a wetland and coastal strand conservation area to the north, the Cojo Slough wetlands and agricultural use designations to the south, and wetlands, residential lands and a railroad to the east.

*Relevant Plans and Policies.* Two relevant land use plans are applicable to the site, the Monterey County General Plan, and the North County Plan. The Monterey County General Plan designates the proposed project site light industrial. The North County Plan, which is considered the Local Coastal Plan for the area, contains policies regarding resource management, land use development, and public access. According to the North County Plan, the proposed project-site is designated as light industrial. The proposed land use is consistent with this designation.

*Potential Impacts.* The proposed project is consistent with the land use designation for the site. The added disposal site on Dolan Road site has an approved Coastal Development Permit issued by the Monterey County Planning and Building Inspection Department that authorizes the placement of 16,400 cy of fill at the site. A request to increase the volume of material that can be accepted has been submitted to the County for consideration. The project proposes to transport only that amount allowed by permit to the site. Consequently, no impacts to land use and planning have been identified and no mitigation measures are required.

## II. Population and Housing

The proposed project will not result in any increases to population in the local area. Further, the proposed project will not result in increased housing demand or require the construction of new housing facilities to support the project. Therefore, no impacts to population or housing have been identified and no mitigation measures are required.

## III. Geologic Problems

The proposed site at Dolan Road has an existing Coastal Development Permit (#PC94196). Under the existing permit, an approved grading and erosion control plan has been specified for the site. This project will be consistent with the approved grading and erosion control plan. Consequently, impacts to geological resources will not occur.

## IV. Water

Transport of materials to the Dolan Road site will not result in changes to groundwater and surface water resources. In addition, the Dolan Road site is situated above the 100-year base flood elevation. Therefore, impacts to groundwater and surface water resources, and flooding are not anticipated.

## V. Air Quality

The proposed project will not result in impacts to air quality above those identified during the previous Initial Study/Mitigated Negative Declaration. Transport of dredge sediments to the Dolan Road site will reduce the overall distance required for upland disposal. Consequently, a net reduction in air impacts associated with truck traffic to and from the disposal site will occur under the revised project. Therefore, impacts to air quality will not occur and no mitigation is required.

## VI. Transportation/Circulation

The proposed project will involve the transportation of dredge material to an offsite location via Highway 1 and Dolan Road. Trucks will enter Highway 1 via the driveway to the Moss Landing Yacht Harbor. Assuming that



trucks with 20 cy of capacity will be used, approximately 231 truckloads will be required to haul each batch of approximately 4,625 cy of material.

A previous traffic study indicated that Highway 1 operates at a level of service (LOS) F during peak hours in Moss Landing (*LSA, 1995*). LOS F roads are characterized as having excessive delays with many individual cycle failures. Conditions are usually stop-and-go with a breakdown of general traffic flow. Under the proposed project, up to 24 trucks per day would enter/exit Highway 1 from the proposed project site. With changes to the project, a maximum of 80 daily truck trips would be generated by the project under worst-case conditions. As a result, an adverse traffic impact could be realized on Highway 1. To reduce this impact to a less than significant levels, the following mitigation measures have been developed (*Jeffreys, 1997; Monterey County, 1998*):

- A traffic management plan has been developed for the project (March 1998). The TMP includes traffic control elements including routing of traffic entering/exiting the site, signage, and detours as needed.
- Truck traffic shall be limited to operation between 9 a.m. and 3 p.m. weekdays to avoid exacerbating traffic during peak hours.
- At the County's discretion, night-time trucking operations will be implemented as needed. This mitigation is consistent with Condition #9 of the adopted CDP. (*Monterey County, 1998*).

#### VII. Biological Resources

The proposed project involves trucking sediments to a permitted disposal site via a paved road. No land alteration is proposed under the project. Consequently, no impacts to biological resources have been identified as a result of the proposed project.

#### VIII. Energy and Mineral Resources

The proposed project will not result in the use of substantial amounts of energy nor substantially increase demand upon existing energy sources, or require new energy sources to be built. In addition, the proposed project will not conflict with adopted energy conservation plans or result in the use of non-renewable resources in a wasteful and inefficient manner. Therefore, no impacts to energy have been identified and no mitigation measures are required.

#### IX. Hazards

The proposed project does not involve the use of explosives or any other such hazardous materials nor will it disrupt or interfere with any county emergency response plan or evacuation plan. Dredge materials present the only potential health hazard resulting from the proposed project. To address potential health hazards, a study was conducted to characterize the sediments that would be placed in the sediment mixing and drying site. Sediments were tested for sulfides, petroleum hydrocarbons, butyltins, metals, polyaromatic hydrocarbons (PAHs), Phthalates, pesticides, and polychlorinated biphenyls (PCBs). The maximum concentration of chemicals detected in the sediments was compared to both industrial and residential preliminary remediation goals for soil (PRGs) (EPA, 1998). All chemical concentrations, with the exception of arsenic, were well below industrial and residential PRGs. Arsenic is known to naturally occur at concentrations exceeding PRGs in the Monterey region. Shacklette and Boerngen (1984) report arsenic concentration in soils of the conterminous U.S. of up to 97 parts per million (ppm), with an arithmetic mean concentration of 7.4 ppm for the western U.S. In addition, arsenic concentrations for reference site sediment samples, which represent local background sediment conditions, ranged from 2.4 to 6.2 ppm. Because all sediment arsenic concentrations were below 7.4 ppm, these levels likely represent background levels and would not be expected to result in public health risks above those resulting from exposure to background levels in area soils.

A composite sample for Benzo (a) pyrene was measured at 120 parts per billion (ppb), which is below the industrial PRG of 320 ppb but above the residential PRG of 56 ppb. The concentration of 120 ppb is not uncommon for anthropogenically affected areas such as harbors. The residential PRG of 56 ppb assumes that an individual is exposed directly to the material everyday for 30 years. Benzo (a) Pyrene is highly immobile and therefore, has a very low chance of migrating into groundwater or volatilizing into air. The chance of direct exposure to the material is low since the material has been mixed with other dredge sediment, as well as soil stabilizing material which did not contain Benzo (a) Pyrene. Also, it is possible that the fill proposed for cover at the Dolan site will be

capped with additional fill prior to development of the site, further reducing the chance for direct contact. Consequently, no impacts are identified under hazards and no mitigation measures are required.

#### X. Noise

The proposed project will not result in increased noise levels near sensitive receptors beyond those impacts analyzed in the previous environmental documentation for the project. There are no sensitive receptors that would be adversely impacted by night-time transport should such action be required. Therefore, no impacts to noise have been identified and no mitigation measures are required.

#### XI. Public Services

The proposed project will not require any changes to or result in the disruption of any public services including fire protection, police protection, schools, parks or other recreational facilities, maintenance of any public facilities, or any other governmental services. Therefore, no impacts to public services have been identified and no mitigation measures are required.

#### XII. Utilities and Service Systems

The proposed project will not require the construction of new utilities or service systems nor will it result in upgrades to existing utilities or service systems. The project will involve transport of dredge sediments to an offsite permitted location. Therefore, no impacts to utilities and service systems have been identified and no mitigation measures are required.

#### XIII. Aesthetics

The proposed project is located adjacent to Highway 1, which is designated as a state scenic highway. According to Sections 260 of the State Highways Code, scenic highways "require continuing and careful coordination of planning, design, construction, and regulation of land use and development, by state and local agencies as appropriate, to protect the social and economic values provided by the state's scenic resources." In section 261 of the State Highway Code, it further states that "The standards for official scenic highways shall also require that local government agencies take such action as may be necessary to protect the scenic appearance of the scenic corridor, the band of land generally adjacent to the highway right-of-way, including, but not limited to, (1) regulation of land use and intensity (density) of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) the design and appearance of structures and equipment."

The local agency responsible for land use planning within the county is the Monterey County Planning Department. As such, the Monterey County Planning Department is responsible for land use designation at the proposed project site. The site is currently designated as industrial with a small commercial zone along the southern border of the site. The proposed project, the trucking of sediment to the permitted Dolan Road site, is consistent with the land use designation as identified in the Monterey County General Plan, light industrial. Therefore, no impacts to aesthetics have been identified and no mitigation measures are required.

#### XIV. Cultural Resources

The project involves trucking dredge sediments from an upland drying site to a permitted disposal site via existing paved roads. As such, no impacts to prehistoric or historic archeological site or historic structures is anticipated and no mitigation measures are required.

#### XV. Recreation

No recreational opportunities for the public exist at the proposed Dolan Road site. The nearest recreational opportunity exists at Elkhorn Slough, located approximately ½ mile from the Dolan Road site. Access to Elkhorn Slough is through boat launch areas located in Moss Landing Harbor. The project access road, located along Dolan Road, does not provide access to recreational opportunities within the project vicinity. Therefore, no impacts to recreation have been identified and no mitigation measures are required.

## References

- Assegued & Associates, 1995. *Moss Landing North Harbor Western Salt Site Biotic Assessment Project*. Moss Landing, California.
- Monterey County, 1998. *Coastal Development Permit #980137, Moss Landing Harbor District*. Prepared by the Planning Commission, County of Monterey, State of California. December, 1998.
- Harding Lawson Associates (HLA), 1997a. *Geotechnical Evaluation, Moss Landing Harbor North Harbor Sediment Drying Site*. Prepared for the Moss Landing Harbor District, Moss Landing, California.
- \_\_\_\_\_, 1997b. *Dredging Plan, Gravelle Dock, Southern A-Dock, and MBARI Dock, Moss Landing Harbor*. Moss Landing, California.
- \_\_\_\_\_, 1997c. *Biological Assessment for the North Harbor Interim Drying Site, Moss Landing Harbor District*. Moss Landing, California.
- Jeffrey, Jim, 1997. Personal communication with Jim Jeffreys, Engineering Consultants, Los Gatos, California. December 8, 1997.
- LSA Associates, Inc., 1995. *Moss Landing Marine Laboratories Relocation Environmental Assessment*. May 17, 1995
- Shacklette, H.T. and J.G. Boerngen, 1984. *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*. U.S. Geological Survey Professional Paper 1270. U.S. Government Printing Office: Washington D.C.
- U.S. Army Corps of Engineers (USACE), 1996. *Environmental Assessment Review for the Moss Landing Harbor Maintenance Dredging*. April, 1996.
- U.S. Environmental Protection Agency (USEPA), 1996. *Region 9 Preliminary Remediation Goals (PRGs) 1998*. Memorandum from Stanford J. Smucker.
- U.S. Fish and Wildlife Service, 1994. *Biological Opinion for the Relocation of Moss Landing Marine Laboratory, Moss Landing, Monterey County, California*. (1-8-94-F-35). Ventura Field Office, Ventura, California. October.

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