

MINUTE ITEM

This Calendar Item No. 26
was approved as Minute Item
No. 26 by the State Lands
Commission by a vote of 3
to 0 at its 7-16-87
meeting.

CALENDAR ITEM

A 58

26

07/16/87

W 23796 PRC 7115

Martinez

S 37

DREDGING PERMIT

APPLICANT: County of Orange
P. O. Box 4048
Santa Ana, California 92702-4048

AREA, TYPE LAND AND LOCATION:
Sovereign lands in Huntington Harbour, Sunset
Harbor, Sunset Aquatic Park Access Channel and
Sunset Channel, Orange County.

PROPOSED LAND USE:

Dredge a maximum 156,000 cubic yards of
material over 5 years to improve navigation by
returning the channel to nearly original width
and depth design dimensions. The dredged
material will be disposed of at the approved
EPA Ocean Disposal Site LA-2.

TERMS OF THE PROPOSED PERMIT:

Initial Period: Five years commencing August 1,
1987.

Royalty: No royalty for material placed at the
approved offshore site.

PREREQUISITE CONDITIONS, FEES AND EXPENSES:

Filing fee has been received.

STATUTORY AND OTHER REFERENCES:

A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.

B. Cal. Adm. Code: Title 2, Div. 3; Title 14,
Div. 6.

AB 884:

12/21/87.

CALENDAR ITEM NO. 26 (CONT'D)

OTHER PERTINENT INFORMATION:

1. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq.. Based upon the staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.
2. A Negative Declaration was prepared and adopted for this project by the Orange County Environmental Management Agency. The State Lands Commission's staff has reviewed such document and believes that it complies with the requirements of the CEQA.

APPROVAL OBTAINED:

United States Army Corps of Engineers,
California Coastal Commission and Regional
Water Quality Control Board

EXHIBITS:

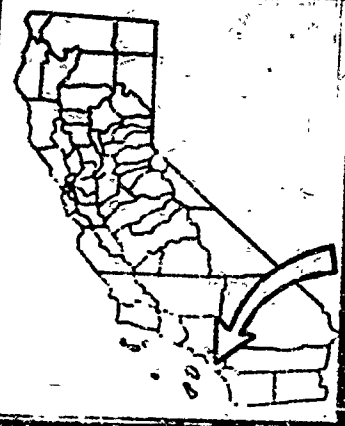
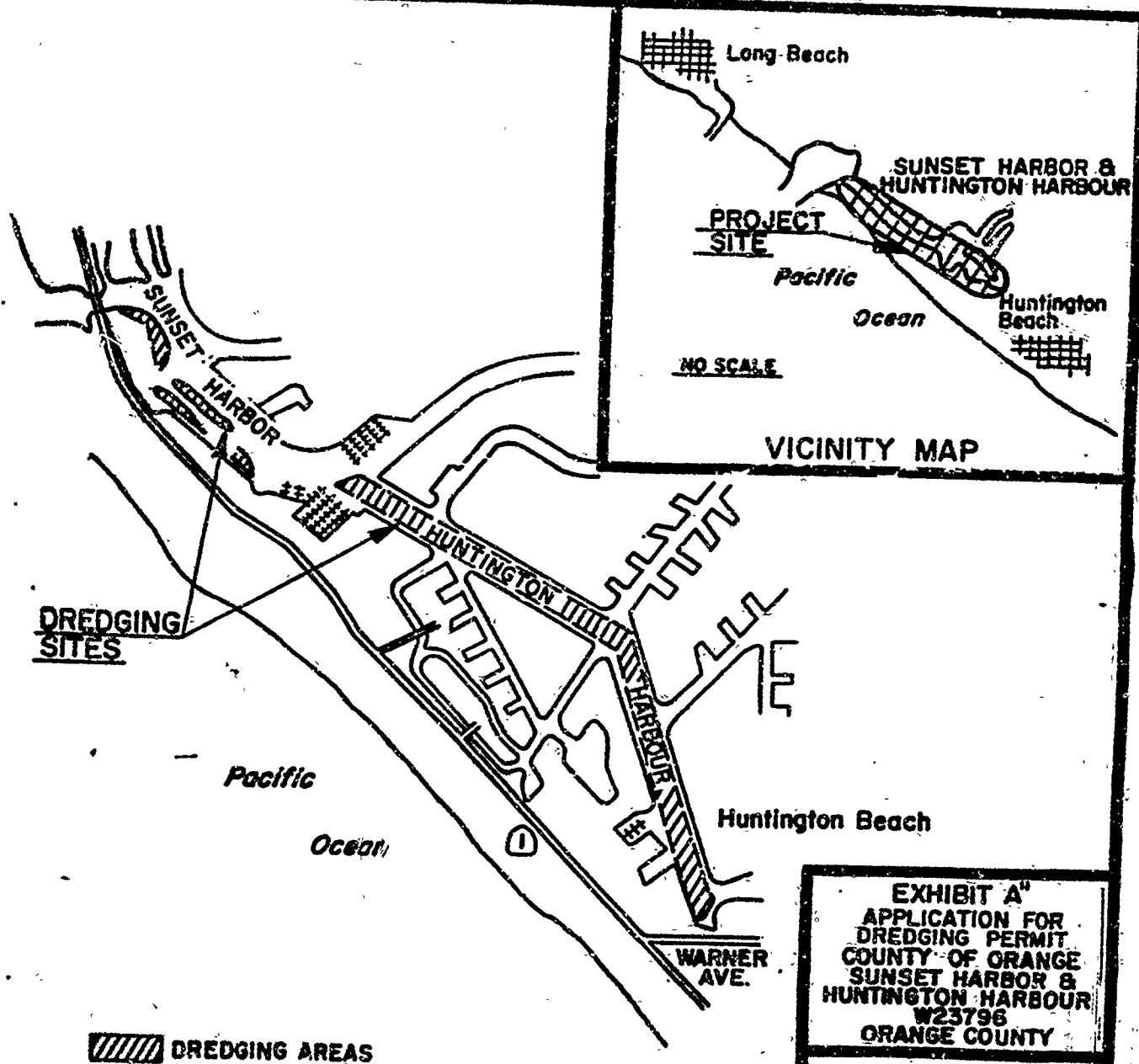
- A. Vicinity and Site Map.
- B. Negative Declaration.
- C. Permit.

IT IS RECOMMENDED THAT THE COMMISSION:

1. FIND THAT A NEGATIVE DECLARATION WAS PREPARED AND ADOPTED FOR THIS PROJECT BY THE ORANGE COUNTY ENVIRONMENTAL MANAGEMENT AGENCY AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.

CALENDAR ITEM NO. 26 (CONT'D)

4. AUTHORIZE STAFF TO ISSUE TO THE COUNTY OF ORANGE THE DREDGING PERMIT ATTACHED AS EXHIBIT "C" SAID PERMIT SHALL ALLOW DREDGING A MAXIMUM VOLUME OF 156,000 CUBIC YARDS OF MATERIAL OVER 5 YEARS IN HUNTINGTON HARBOUR, SUNSET HARBOR, SUNSET AQUATIC PARK ACCESS CHANNEL AND SUNSET CHANNEL, AND DISPOSAL AT AN APPROVED OFFSHORE SITE. SUCH PERMITTED ACTIVITY IS CONTINGENT UPON APPLICANT'S COMPLIANCE WITH APPLICABLE PERMITS, RECOMMENDATIONS OR LIMITATIONS ISSUED BY FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES.



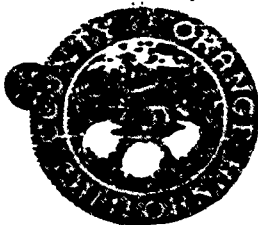


EXHIBIT "B"

MAY 11 1987

DATE -

DATE -

ENVIRONMENTAL MANAGEMENT AGENCY

12 CIVIC CENTER PLAZA
P.O. BOX 4048
SANTA ANA, CALIFORNIA 92702 - 4048

NEGATIVE DECLARATION

In accordance with Orange County Board of Supervisor's policies regarding implementation of the California Environmental Quality Act, the County of Orange has conducted an Initial Study to determine whether the following project may have a significant adverse effect on the environment and on the basis of that study hereby finds:



The proposed project will not have a significant adverse effect on the environment; therefore, it does not require the preparation of an Environmental Impact Report.



Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because the Mitigation Measures described on the reverse side of this sheet have been added to the project. An Environmental Impact Report is therefore not required.

The environmental documents which constitute the Initial Study and provide the basis and reasons for this determination are attached and hereby made a part of this document.

PROJECT:

Title: Sunset/Huntington Harbour Maintenance Dredging

File No: IP 86-113

Location: Main fairway channel of Sunset Harbor and Huntington Harbour between Pacific Coast Highway Bridge and Warner Avenue, Sunset Channel; Sunset Aquatic Park Access Channel

Description: Maintenance dredging to remove material that has shoaled into existing channel.

Project Proponent: Environmental Management Agency, County of Orange

Division/Department

Responsible for Proposed Project: Flood Control Design

Room No.

Address: 12 Civic Center Plaza, Santa Ana, CA 92702 - 4048

Contact Person: Negative Declaration: Lisa Burke

Telephone: (714) 834-5562

Proposed Project: Neil Jordan

(714) 834-6388

NOTICE:

This document and supporting attachments are provided for review by the general public. This is an information document about environmental effects only. Supplemental information is on file and may be reviewed in the office listed above. The decision-making body will review this document and potentially many other sources of information before considering the proposed project.

This Negative Declaration may become final unless written comments or an appeal is received by the office listed above by 4:30 p.m. on JUN 10 1987. If you wish to appeal the appropriateness or adequacy of this document, address your written comments to our finding that the project will not have a significant adverse effect on the environment: (1) identify the environmental effect(s), why they would occur, and why they would be significant, and (2) suggest any mitigation measures which you believe would eliminate or reduce the effect to an acceptable level. Regarding item (1) above, explain the basis for your comments and submit any supporting data or references.

May 8, 1987

List 1 Burke

CALENDAR PAGE	<u>143</u>
MINUTE PAGE	<u>2513</u>



ENVIRONMENTAL MANAGEMENT AGENCY

P.O. BOX 4048

SANTA ANA, CALIFORNIA 92702-4048

LA. 86-113

PROJ. REF. Huntington Harbor

ENVIRONMENTAL ANALYSIS CHECKLIST

IN ACCORDANCE WITH THE POLICIES OF THE ORANGE COUNTY BOARD OF SUPERVISORS REGARDING IMPLEMENTATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970, THIS DOCUMENT CONCERNING THE ATTACHED "ENVIRONMENTAL INFORMATION" FORM AND SUPPORTING DATA CONSTITUTES THE INITIAL STUDY ON THE SUBJECT PROJECT. THIS INITIAL STUDY PROVIDES THE BASIS FOR THE DETERMINATION WHETHER THE PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT. IF IT IS DETERMINED THAT THE PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT, AN ENVIRONMENTAL IMPACT REPORT WILL BE PREPARED WHICH FURTHERS THE AGENCIES OF ORANGE COUNTY IN THE INITIAL STUDY.

1. ISSUE - WILL THE PROPOSED RESULT IN OR IS AFFECTED BY:	YES	NO	IF	2. PRECISE INFO SOURCE WATER, OR IS ANY ALTERATION OF SURFACE-WATER QUALITY, INCLUDING BUT NOT LIMITED TO TEMPERATURE, DISSOLVED OXYGEN, OR TURBIDITY?	YES	NO	IF
A. EROSION							
1) UNSTABLE FLOOD CONDITIONS OR INCREASE IN EROSION OF OBSTRUCTIONS?			X	F. ALTERATION OF THE DIRECTION OR RATE OF FLOW OF GROUND WATERS?			X
2) IMPROVING OF PEOPLE OR PROPERTY TO EROSION DRAINAGE SUCH AS EROSION, LANDSLIDES, MUDSLIDES, GROUND FAILURE, OR SIMILAR DRAINAGE?			X	G. CHANGE IN THE QUANTITY OR QUALITY OF GROUND WATERS, EITHER THROUGH DIRECT ADDITIONS OR SUBTRACTIONS, OR THROUGH INTERCEPTION OF AN AQUIFER BY CUTOFF OR EXCAVATIONS?			X
B. LANDSLIDE/SLURRY				H. IMPROVING OF PEOPLE OR PROPERTY TO WATER-RELATED DRAINAGE SUCH AS FLOODING OR TIDAL WAVES?		X	
1) CHANGE IN TOPOGRAPHY OR GROUND SURFACE DRAINAGE FEATURES?			X	I. SUBSTANTIAL IMPROVING - WILL THE PROPOSED RESULT IN:			
2) THE DIRECTION, COVERING, OR INTENSIFICATION OF ANY OTHER EROSION OR FLOODING FEATURES?			X	A. CHANGE IN THE DIVERSITY OF SPECIES, CHANGE OR DEPLETION OF FLORA AND FAUNA HABITAT, CHANGE IN THE NUMBER OF ANY SPECIES OF PLANTS OR ANIMALS, DESTRUCTION OF NEW SPECIES OF PLANTS OR ANIMALS INTO AN AREA, OR INTRODUCTION OF A SPECIES TO THE LOCAL POPULATION OR DESTRUCTION OF EXISTING SPECIES?	X		
C. CHANGE IN DEPOSITION OR EROSION OF BEACH SANDS, OR CHANGE IN SILLATION, DEPOSITION OR EROSION WHICH MAY IMPAIR THE CHANNEL OF A RIVER OR BAY OR THE BED OF THE OCEAN OR ANY LAGOON, LAGOON, OR LAGOON?	X			B. REDUCTION OF THE NUMBER OF ANY SPECIES, SUBSTANTIALLY SIGNIFICANT, BASE OR ENDANGERED SPECIES OF PLANTS OR ANIMALS?		X	
2. AIR - WILL THE PROPOSED RESULT IN:				3. CUMULATIVE/SCIENTIFIC IMPROVING - WILL THE PROPOSED RESULT IN AN ALTERATION OF A SIGNIFICANT SCIENTIFIC OR HISTORICAL SITE, PREHISTORIC, OBJECT, OR BUILDING, PALEONTOLOGICAL SITE, OR OTHER SIGNIFICANT CULTURAL/SCIENTIFIC IMPROVING?			X
A. INCREASED AIR POLLUTION OR DECONTAMINATION OR AIR QUALITY IMPROVING PROTECTION BY THE STATE AND AIR QUALITY MANAGEMENT PLAN.		X		4. IMPROVING - WILL THE PROPOSED RESULT IN THE DESTRUCTION OF ANY SCIENTIFIC VIEWS OR VIEW CORRE TO THE PUBLIC, OR WILL THE PROPOSED RESULT IN THE CREATION OF AN ADVERSELY EFFECTIVE SITE OPEN TO PUBLIC VIEW?			X
B. IMPROVING OF FLOODING TO LOCALLY ELEVATED LEVELS OF AIR POLLUTION?		X		5. IMPROVING - WILL THE PROPOSED RESULT IN:			
C. THE CREATION OF OBJECTIONABLE GROUND?			X	A. THE USE OF ADVERSELY EFFECTIVE METHODS OF FUEL OR ENERGY?			X
D. ALTERATION OF AIR CURRENTS, WINDS, OR TEMPERATURE, OR ANY CHANGE IN CLIMATE, EITHER LOCALLY (ADJACENT TO PROJECT) OR REGIONALLY (IN COUNTY)?			X	B. INCREASED SOUND WITH EXISTING SOURCES OF SOUND, OR INCREASING THE DEVELOPMENT OF NEW SOURCES OF SOUND?			X
3. WATER - WILL THE PROPOSED RESULT IN:				6. IMPROVING - WILL THE PROPOSED RESULT IN:			
A. CHANGE IN CURRENTS, OR THE DIRECTION OR DIRECTION OF WATER FLOWING, OR EITHER FLOODING OR FLOODING?			X	A. THE USE OF ADVERSELY EFFECTIVE METHODS OF FUEL OR ENERGY?			X
B. CHANGE IN AQUIFER DRAINAGE, GROUNDWATER DRAINAGE, OR THE DRAINAGE OF SURFACE WATER DRAINAGE?			X	B. INCREASED SOUND WITH EXISTING SOURCES OF SOUND, OR INCREASING THE DEVELOPMENT OF NEW SOURCES OF SOUND?			X
C. ANY INTERFERENCE IN FLOW OR DRAINAGE OF WATERS, EITHER IN OR OFF-STREAM?			X	7. IMPROVING - WILL THE PROPOSED RESULT IN:			
D. CHANGE IN THE AMOUNT OF SURFACE DRAINAGE IN ANY WATER-BODY?			X	A. THE USE OF ADVERSELY EFFECTIVE METHODS OF FUEL OR ENERGY?			X

8. CONFLICT WITH EXISTING OR GENERAL PLAN ORDINANCE/POLICIES FOR THE PROJECT?

CALENDAR PAGE

144

MINUTE PAGE

2514

		YES ACTION NO	
FINDINGS:	A. DOES THE PROJECT HAVE THE POTENTIAL TO DEGRADE THE QUALITY OF THE ENVIRONMENT, SUBSTANTIALLY REDUCE THE QUALITY OF A FISH OR WILDLIFE POPULATION TO KEEP BELOW SELF-SUSTAINING LEVELS, THREATEN TO DESTROY A PLANT OR ANIMAL COMMUNITY, REDUCE THE NUMBER OR REDUCE THE RANGE OF A RARE ENDANGERED PLANT OR ANIMAL OR SIGNIFICANT POPULATION SAMPLES OF THE SALMON PRICES OF CALIFORNIA WILDLIFE OR FISHES?	—	X
	B. DOES THE PROJECT HAVE THE POTENTIAL TO ACHIEVE SHORT-TERM, TO THE DISADVANTAGE OF LONG-TERM, ENVIRONMENTAL GOALS? (A SHORT-TERM IMPACT ON THE ENVIRONMENT IS ONE WHICH OCCURS IN A RELATIVELY BRIEF, SENSITIVE PERIOD OF TIME WHILE LONG-TERM IMPACTS WILL BECOME MORE EVIDENT IN THE FUTURE.)	—	X
	C. DOES THE PROJECT HAVE IMPACTS WHICH ARE INDIVIDUALLY LIMITED, BUT COLLECTIVELY CONSIDERABLE? (A PROJECT MAY IMPACT ON TWO OR MORE SEPARATE RESOURCES WHILE THE IMPACT ON EACH RESOURCE IS RELATIVELY SMALL, BUT WHEN THE EFFECT OF THE TOTAL OF THESE IMPACTS ON THE ENVIRONMENT IS CONSIDERABLE.)	—	X
	D. DOES THE PROJECT HAVE ENVIRONMENTAL EFFECTS WHICH WILL CAUSE SUBSTANTIAL ADVERSE EFFECTS ON RARE OR RARE, RARE OR RARE OR RARE?	—	X
DETERMINATION:	ON THE BASIS OF THIS INITIAL EVALUATION:		
	<p>_____ I FIND THE PROPOSED PROJECT COULD NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT, AND A NEGATIVE DECLARATION WILL BE PREPARED.</p> <p>X _____ I FIND THAT ALTHOUGH THE PROPOSED PROJECT COULD HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT, THERE WILL NOT BE A SIGNIFICANT EFFECT IN THIS CASE BECAUSE THE ATTENTION REQUIRED (DESCRIBED ON AN ATTACHED SHEET) HAVE BEEN TAKEN TO THE PROJECT. A NEGATIVE DECLARATION WILL BE PREPARED.</p>		



COUNTY OF ORANGE
ENVIRONMENTAL MANAGEMENT AGENCY

I.S. #1P86-113

PROJ. REF. Huntington Harbour

ENVIRONMENTAL ANALYSIS EXPLANATIONS/MITIGATION DISCUSSION

SUPPLEMENT TO CHECKLIST FORM NO. F0250-338

I. PROJECT DESCRIPTION

The project consists of maintenance dredging to remove material that has shoaled into the existing channel and return to the channel to nearly original width and depth design dimensions. This dredging will include a total of approximately 156,000 cubic yards of material from Huntington Harbour, Sunset Harbor, Christiana Bay, Sunset Aquatic Park Access Channel, and Sunset Channel. The work will be performed in the main fairway channel of Sunset Harbor and Huntington Harbour between the Pacific Coast Highway Bridge and Warner Avenue, in the Sunset Aquatic Park Access Channel and in Sunset Channel. The City of Huntington Beach has requested that maintenance dredging in Christiana Bay also be included in the project, to be funded by the city. See Exhibits 1 and 2 for vicinity and project site maps. The dredged material will be disposed of at the approved Environmental Protection Agency ocean disposal site LA-2.

II. PROJECT BACKGROUND

The Huntington Harbour area is located seven miles southeast of Long Beach, and is accessed through the jetties at Anaheim Bay. The harbor, made up of Sunset Harbor and Huntington Harbour, consists of several man-made channels located in the cities of Huntington Beach and Seal Beach, and in the County of Orange.

The County is responsible for maintenance dredging within the Sunset Harbor and Huntington Harbour main channel. While the City of Huntington Beach is responsible for maintenance dredging of all other waterways within Huntington Harbour, the County has agreed to act as the agent for the City in performing dredging outside of the County's area of responsibility.

Project dimensions consist of a channel depth to -10 to -12 feet MLLW and a variable channel width, depending on the location. For the majority of the project the channel width is defined as the distance between the established pierhead lines. In Sunset Harbor where there are no pierhead lines the channel width is defined by the original dredging adjusted to enhance eelgrass mitigation efforts. The Sunset Aquatic Park Access Channel width is 100 feet.

The harbor was dredged to -10 feet MLLW in the 1960's as part of the Huntington Harbour Development Project. Much of the channel has remained stable since the initial dredging. The only maintenance dredging that has been performed since construction is at the outlet of the Bolsa Chica Flood Control Channel. In 1979 about 100,000 cubic yards of material were removed and placed upland at Sunset Aquatic Park. In 1983, 50,000 cubic yards of material were removed in the area of the marina and also placed upland.

CALENDAR PAGE 146
MINUTE PAGE 2516

Exhibit 3 shows the areas within the main fairway, Sunset Aquatic Park Access Channel, Sunset Channel and Christiana Bay that are shallower than the proposed project depths. Maintenance dredging is needed to remove this shoaling which has resulted in numerous boat groundings and an inability of the Harbor Patrol to reach all parts of the harbor at all times. Navigation problems occur at both high and low tides at the Pacific Coast Highway Bridge, near Warner Avenue and in Sunset Channel.

Two specific features are being incorporated in the project to accomplish the maintenance dredging with the least impact to eelgrass habitat and to insure design depths in high shoaling areas. These are: (1) realign the channel in Sunset Harbor near the PCH Bridge to minimize the effect on eelgrass; and (2) perform two foot advance maintenance dredging for a 1,600 foot length in Sunset Harbor and a 500 foot length near Warner Avenue.

Various studies were prepared in conjunction with the proposed plan including an eelgrass survey, a geotechnical investigation, a bioassay study and an environmental impact analysis. Copies of the complete Project Report and associated studies are available for review at the County of Orange Environmental Management Agency, Flood Control Design Division or Environmental and Special Projects Division.

This project will also require regulatory approvals from the following agencies:

U.S. Army, Corps of Engineers
California Coastal Commission
California Division of State Lands
California Water Quality Control Board

III: ENVIRONMENTAL ANALYSIS (Keyed to attached Checklist)

1. EARTH C

Explanation

As described above, the project includes dredging in Sunset Harbor, Huntington Harbour, Sunset Aquatic Park Access Channel, Christiana Bay and Sunset Channel, totaling approximately 156,000 cubic yards of material. The material to be dredged has been deposited over the years since the harbor was dredged to -10 MLLW in the 1960's as part of the Huntington Harbour Development Project. This shoaling which has occurred results in navigational problems, boat groundings and an inability of the Harbor Patrol to reach all parts of the Harbor at all times. The proposed channel modification will resolve existing navigational/access problems and no mitigation is required.

2. AIR B,C

Explanation

The operation of dredging equipment used for this project will result in localized increases in pollutant emissions. Dredging equipment will be either a hydraulic dredge, or a clamshell dredge, or both. Operations will include disposal of dredging material by towing a dump scow to and from the ocean disposal site approximately twice a day. In addition, a tugboat may be needed to move the dredge throughout the harbor, as

needed, to reach shoaled areas. A pollutant emission analysis indicates that the emission from dredging equipment will not be significant. The most significant emissions would be CO and NOx. Compared to projected emissions for the County and the SCAQMD local source receptor area (SRA), maximum total project related emissions are determined to be insignificant:

REGIONAL EMISSIONS INVENTORY COMPARISON (1987)
(Tons/Day)

<u>POLLUTANT</u>	<u>Orange County^a</u>	<u>SRA # 18^b</u>	<u>Project</u>	<u>Projects Percent of SRA #18/OC</u>
CO	1,254.78	215.51	0.04	0.02/0.003
NOx	173.98	38.17	0.20	0.52/0.11

a) Source: SCAQMD, Draft AQME, Draft Appendix V-C, August 1982

b) Source: SCAQMD, Air Quality Handbook for EIRs, Revised December 1983.

Mitigation

Although it has been determined that project-related emission will not be significant, standard contract regulations will be required to minimize project emissions, including the following:

- a. Contractor shall maintain all engines in proper tune to assure efficient working order.
- b. Contractor shall shut down engines when not in, or prepared for, direct operational use.

3. WATER E

Explanation

Dredging operations will cause increased turbidity in the surface waters, from discharging the suspended fine sediments within the liquid portion of the dredge material, and may also result in lowered dissolved oxygen values. These impacts are anticipated to be short-term. Because the Sunset Harbor dredging area near the Pacific Coast Highway Bridge is within potential least tern foraging area, the reduction in water clarity may reduce the least terns' ability to locate and obtain the fish on which they rely for food. Additionally, substantial increases in turbidity could decrease the productivity of algae and eelgrass species, and if sufficiently heavy, the coating of these plants with sediment could result in decreased viability of the plants for the duration of dredging operations in the area. Mitigation measures to reduce these impacts are discussed below.

The dredged material will be disposed of at the ocean disposal site LA-2, south of Point Fermin. A bioassay and sediment chemistry analysis was conducted for the proposed dredge material to allow the Corps of Engineers and Environmental Protection Agency to determine if the material was acceptable for ocean disposal. Upland and beach disposal

sites were also considered for this project, but were found to be infeasible. Based on the bioassay analysis, the EPA approved ocean disposal of dredge material at the local site, LA-2.

Mitigation

The potential least tern foraging areas and the primary eelgrass beds are located in Sunset Harbor between the PCH Bridge and the Sunset Aquatic Park. In this area, the following mitigation shall apply:

Because the spring and summer months are the most critical months at this location for the least tern, dredging shall be avoided to the maximum extent feasible in Sunset Harbor from April to mid-September. In the event that dredging must be conducted in this area during spring or summer months, only a hydraulic dredge and dump scow shall be used (hydraulic dredging equipment causes less turbidity than clamshell dredging equipment).

The dump scow shall be loaded during ebb tide so that suspended material will be flushed out of the harbor.

Impacts to the least tern or eelgrass due to increased turbidity will be short-term, with a return to predredge conditions expected shortly after the completion of dredging. A plan for eelgrass mitigation is discussed under 4. Biological Resources.

4. BIOLOGICAL RESOURCES A,B

Explanation

Although the dredging area has been refined to avoid eelgrass beds as much as possible, approximately 0.3 acres of eelgrass habitat is located within the proposed dredging near the middle of the main channel through Sunset Harbor (See Exhibit 4).

As described above, the California least tern may use Sunset Harbor for foraging from April to September. Any increased turbidity due to dredging operations could impact least tern foraging activity.

Mitigation

An eelgrass mitigation plan has been prepared as part of this project to mitigate the direct loss of eelgrass habitat during dredging. The complete mitigation plan is attached as Exhibit 5.

Primary components of the eelgrass mitigation plan include dredging and transplanting eelgrass habitat; monitoring of the transplant; determination of transplant success; and provisions to ensure successful eelgrass transplant. The proposed eelgrass transplant replaces 100 percent of the removed habitat; therefore, impact to eelgrass is mitigated to a level of insignificance.

Please refer to 3. Water for discussion of potential impact to the least tern and mitigation to reduce this impact.

8. LAND USE B

Explanation

Temporary land use conflicts could result between dredges, scows and other ancillary equipment with such land uses as fishing docks, public beaches and the public boat launching facility near Warner Avenue. In addition, dredging could be considered a temporary adverse aesthetic impact to local restaurants and other uses where views are a marketable feature.

Mitigation

Potential land use conflicts will be short-term, occurring while dredging is conducted. To minimize any conflict, dredging shall be scheduled as much as possible between September and April to avoid the high use spring/summer seasons.

9. TRANSPORTATION/CIRCULATION D, E, G; WATER H

Explanation

Proposed dredging operations will affect water traffic patterns, navigation, and mooring.

Dredging activities in the main fairway will cover an area approximately 100 feet wide by 400 feet long, thereby reducing the navigable portion of the waterway by those dimensions. During dredging in the main fairway, occurring over approximately 24 weeks, passage of vessels through the waterway and around the dredge and ancillary equipment will be restricted, particularly near the PCN Bridge where existing shoals already narrow the navigable area.

Dredging in Sunset Channel will impact navigation in this area. Continuous passage through the channel is currently restricted due to the 5 foot vertical bridge clearance midway across the channel. The 5 foot width between docks will not allow boat mooring or navigation during dredging. Therefore, Sunset Channel will be temporarily closed to permit dredging activity within the channel. Fifty to sixty boats currently docked within the channel will have to be relocated outside Sunset Channel until dredging is completed; this will result in a temporary impact by eliminating access and docking for boats normally kept in the area. Dredging in this channel will take about five weeks to complete. The dump scow for this portion of dredging will be located at the southerly end of Sunset Channel.

Similarly, about 12 boats in Christiana Bay will have to be relocated for about 2 weeks while dredging under the docks is performed.

The potential for water related hazards will exist due to restricted navigable area and use of the channels by both dredging equipment and other boats.

Mitigation

While there are short-term adverse impacts as described above, the long-term impact of proposed dredging will result in the elimination of shoals and an overall safer boating area.

To reduce the potential impact to boating due to the dredging, the Contractor will be required to retain a navigable channel at all times by employing a minimum width operation, and if a hydraulic dredge is used, by sinking the dredge pipe. However, this will not be possible in Sunset Channel and Christiansa Bay where navigation and mooring will be impacted.

In addition, dredging shall be scheduled to avoid the high use spring/summer seasons.

10. RECREATION

Explanation/Mitigation

Recreational boating requiring the use of the dredging area will be temporarily impacted during dredging operations. Mitigations to reduce the impact on this water traffic are described above under 6. Transportation/Circulation.

11. NOISE B

Explanation

Dredging activities will include the operation of the dredge between 7 a.m. and 8 p.m., Monday through Friday, and 9 a.m. to 6 p.m. on Saturday. No work will be allowed on Sundays or on Federal holidays. The dredging operations could produce a noise level of up to 75 dB(A) at 30 feet for either hydraulic or clamshell dredges. This is the noise level that would be experienced at the residences and other uses that are closest to the waterway when dredging occurs near-shore. Such noise levels may exceed City and County noise ordinances when the dredge is closest to the houses or in a confined area such as Sunset Channel.

Mitigation

The contractor shall employ muffling and sound attenuation devices such that no project-related equipment exceeds local or state noise standards.

The contractor shall comply with the noise ordinances of the cities of Huntington Beach and Seal Beach, and of the County of Orange.

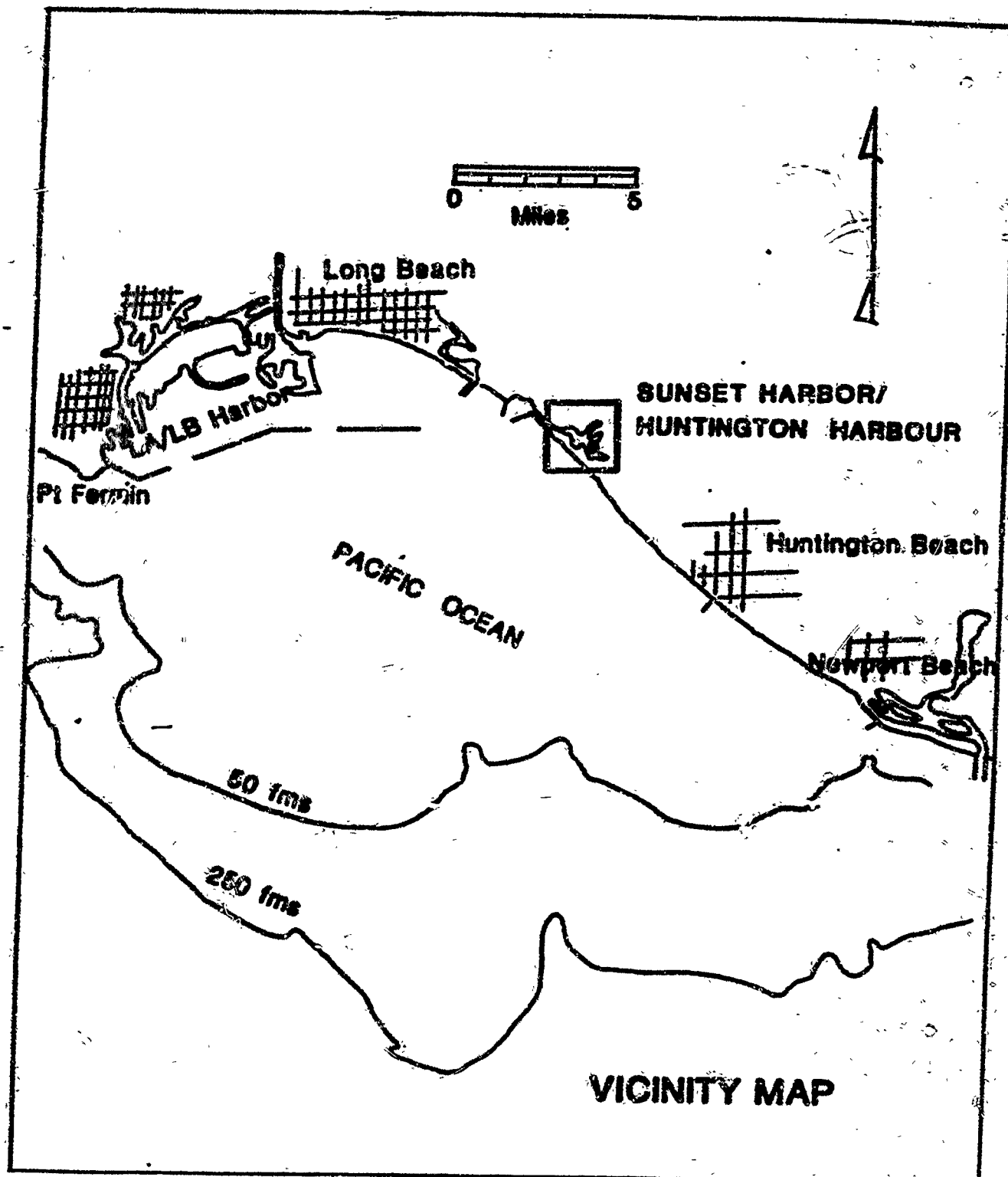


EXHIBIT 1



CALENDAR PAGE	152
MINUTE PAGE	2522

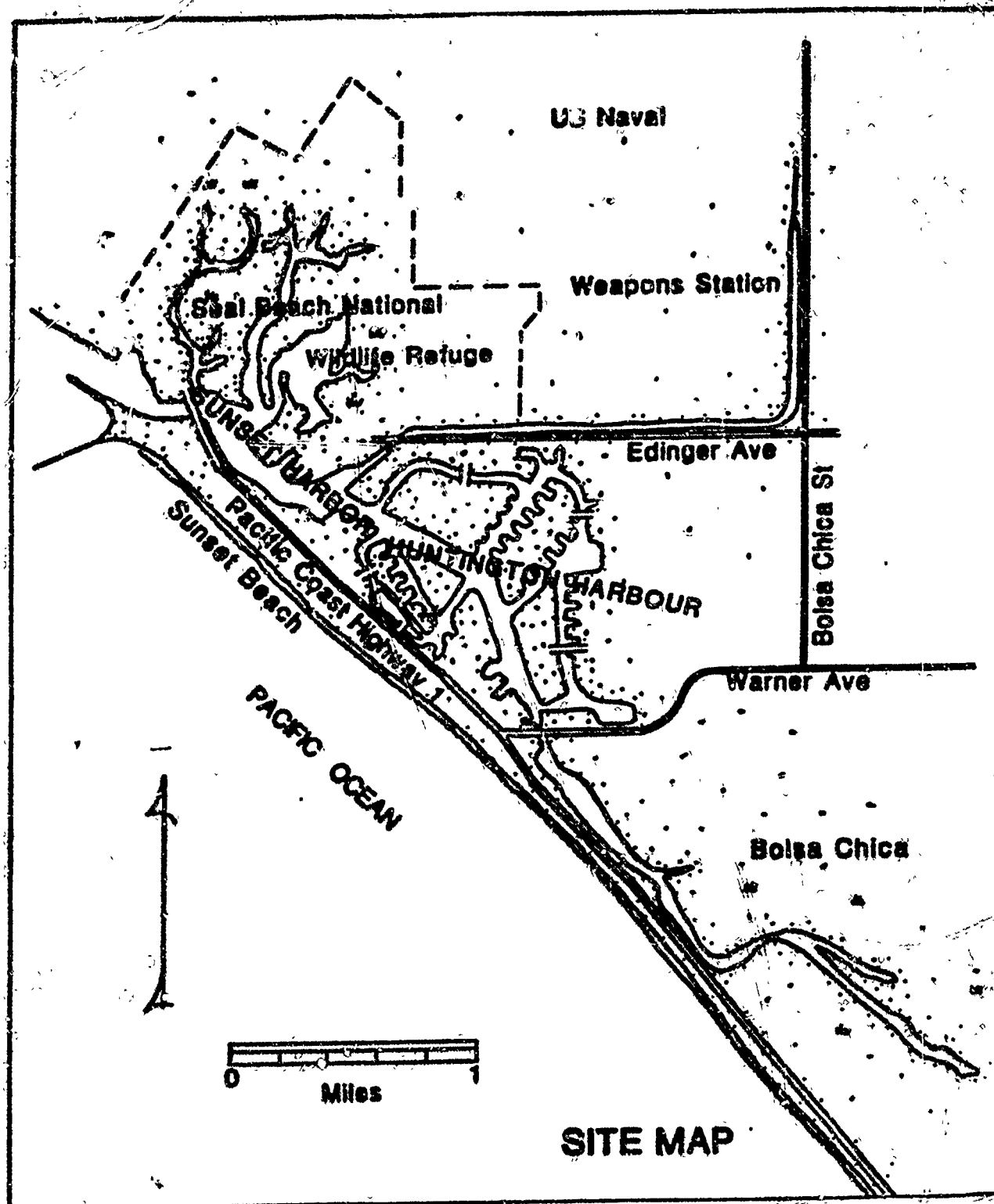


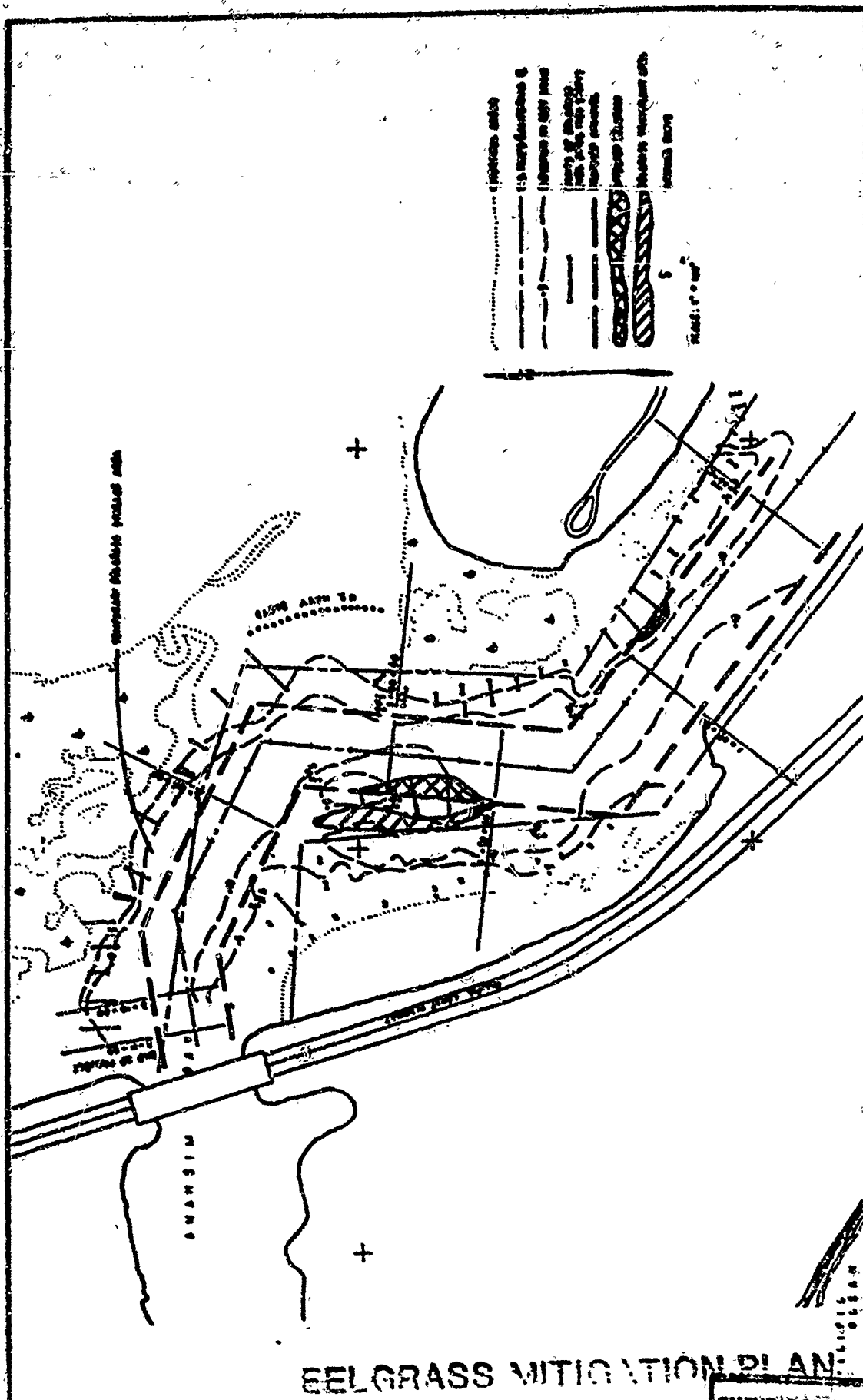
EXHIBIT 2



CALENDAR PAGE	153
MINUTE PAGE	2523

CHANNEL CONDITIONS

[illegible]



**EELGRASS MITIGATION PLAN
HUNTINGTON HARBOUR/SUNSET HARBOR/
CHRISTIANA BAY/SUNSET CHANNEL MAINTENANCE DREDGING
COUNTY OF ORANGE, ENVIRONMENTAL MANAGEMENT AGENCY**

November 12, 1986

The County of Orange proposes transplanting about 14,000 sq. ft. (0.3 acres) of subtidal area with Zostera Marina (eelgrass) to mitigate for the loss of eelgrass with a similar area due to maintenance dredging in Sunset Harbor. The mitigation plan consists of the following:

LOCATION:

Transplanting will occur adjacent to the main part of the effected beds. Figure 1 shows the eelgrass beds that will be affected. Limits of dredging areas, remaining eelgrass beds, and transplanting areas will be marked with buoys during the work.

SUBSTRATE:

Approximately 800 cubic yards of dredged sandy material from the effected area will be deposited in the transplanting area to form a suitable substrate for eelgrass attachment and growth. A transplanting area about 14,000 sq. ft. in size, with a minimum coverage of 1 foot of sandy material, and with a range in elevation of -1 to -6 ft MLLW will be created. Dredging and disposal techniques, such as low exit velocities, high material concentration, and placement of the disposal pipe will be specified in the dredging contract to ensure that the required area is obtained and remaining beds are not damaged.

TRANSPLANTING STOCK:

Eelgrass transplanting stock will be obtained from the effected area prior to the dredging. The stock will be temporarily stored, unless an acceptable alternative is proposed, by placing it adjacent to existing eelgrass areas on the north side of the channel as shown on figure 1.

If the stored eelgrass does not survive, then donor eelgrass will be obtained from a source acceptable to the National Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDF&G), the Corps of Engineers, and the County of Orange.

DREDGING AND TRANSPLANTING PROCEDURE:

The following steps will be performed before or during the transplant:

1. Prior to dredging, 5 to 10 sediment grab samples will be obtained from the areas to be dredged in Sunset Harbor. A grain size analysis of the samples will be performed. The best material for improving the eelgrass transplant area will be determined in consultation with the resource agencies.
2. Prior to dredging, a test transplant will be performed to determine the best means of temporarily holding eelgrass before the transplant.
3. An eelgrass survey of the area to be effected will be performed prior to dredging for the purpose of determining the actual impact on eelgrass beds.
4. Prior to dredging the effected area, 52,500 shoots will be obtained from the effected area and temporarily placed in the area designated for temporary storage.
5. The dredging contractor, under supervision by the County and its representatives, shall dredge and place sufficient sandy material to obtain the required transplanting area.
6. Within one week of dredging in the effected area, an eelgrass survey will be performed in order to determine the remaining eelgrass.
7. Eelgrass shall be transplanted using a bundle/anchor technique. A total of 3,500 planting units (based on an affected area of 14,000 sq. ft.) consisting of 15 shoots per bundle will be planted on 2 foot centers. Transplanting will occur about, but no sooner than, 30 days after dredging unless modified by the resource agencies.

Alternatively, if suitable sandy material can be placed to improve the substrate and allowed to stand for a minimum of 60 days prior to dredging the eelgrass area, then the effected eelgrass can be transplanted directly to the improved area and temporary transplanting will not be necessary. If this occurs then: step 2 above will not be required; step 4 will involve transplanting directly to the improved area; and in step 7, transplanting will occur no sooner than 60 days after material has been placed to improve the substrate.

MONITORING

The eelgrass transplant will be monitored at the following times:

1. At 3 and 6 months after the transplant, diving surveys will be performed to determine the survival of eelgrass. The transplant area will be subdivided into a minimum of 4 areas and survival determined for each area. A short letter report relaying the results will be submitted to the Corps of Engineers, and the resource agencies.
2. At 1 and 2 years after the transplant, diving surveys will be performed to determine the density of the transplanted eelgrass. A short letter report relaying the results will be submitted to the Corps of Engineers, and the resource agencies.

Additionally, hydrographic surveys shall be performed at intervals of 6 months over the two year period.

SUCCESS:

Success of the transplanting will be based on:

1. A 65% survival of eelgrass in the 4, or more, subdivided areas at the end of 3 and 6 months.
2. At the end of the first year, 50% density of eelgrass over the transplant area compared to the control site.
3. At the end of the second year, a 90% density of eelgrass over the transplant area compared to the control site.

PROVISIONS:

The following is a list of provisions to ensure that the mitigation is successful. A matrix is included that summarizes the actions.

1. If at the end of 3 months, 6 months and 1 year the success criteria has not been met, then additional eelgrass will be imported and transplanted, and/or other remedial measures will be taken in consultation with the resource agencies.
2. If at the end of the second year:
 - a. The success criteria has been met, then mitigation is satisfied, or,

- b. An 80 to 90% eelgrass density compared to the control exists, then additional shoots will be added to the area. Mitigation will then be satisfied, or,
- c. Less than 80% eelgrass density compared to the control exists, then the difference between the relative density and 100% will be the percent of the impacted area remaining to be mitigated for in lieu of transplanting eelgrass. The Mitigation will be satisfied by turning an equal upland area (equal to the impacted area remaining to be mitigated for) at the westerly end of Sunset Aquatic Park into an intertidal zone (to 0 ft. MLLW). For example, if 70% eelgrass density exists compared to the control, then 4,200 sq. ft. of upland habitat, 30% of the effected area ($.3 \times 14,000$ sq. ft.), will have to be converted to intertidal habitat. The actual area to be converted will be subject to approval of the resource agencies, the County of Orange, and other groups interested in Sunset Aquatic Park.

3. Potential remedial measures include:

- a. Import coarse sandy material and retransplant;
- b. Transplant at another site in the project vicinity;
- c. Transplant to an offsite area;
- d. Combine with another eelgrass transplanting project; or
- e. Other appropriate measures agreed to.

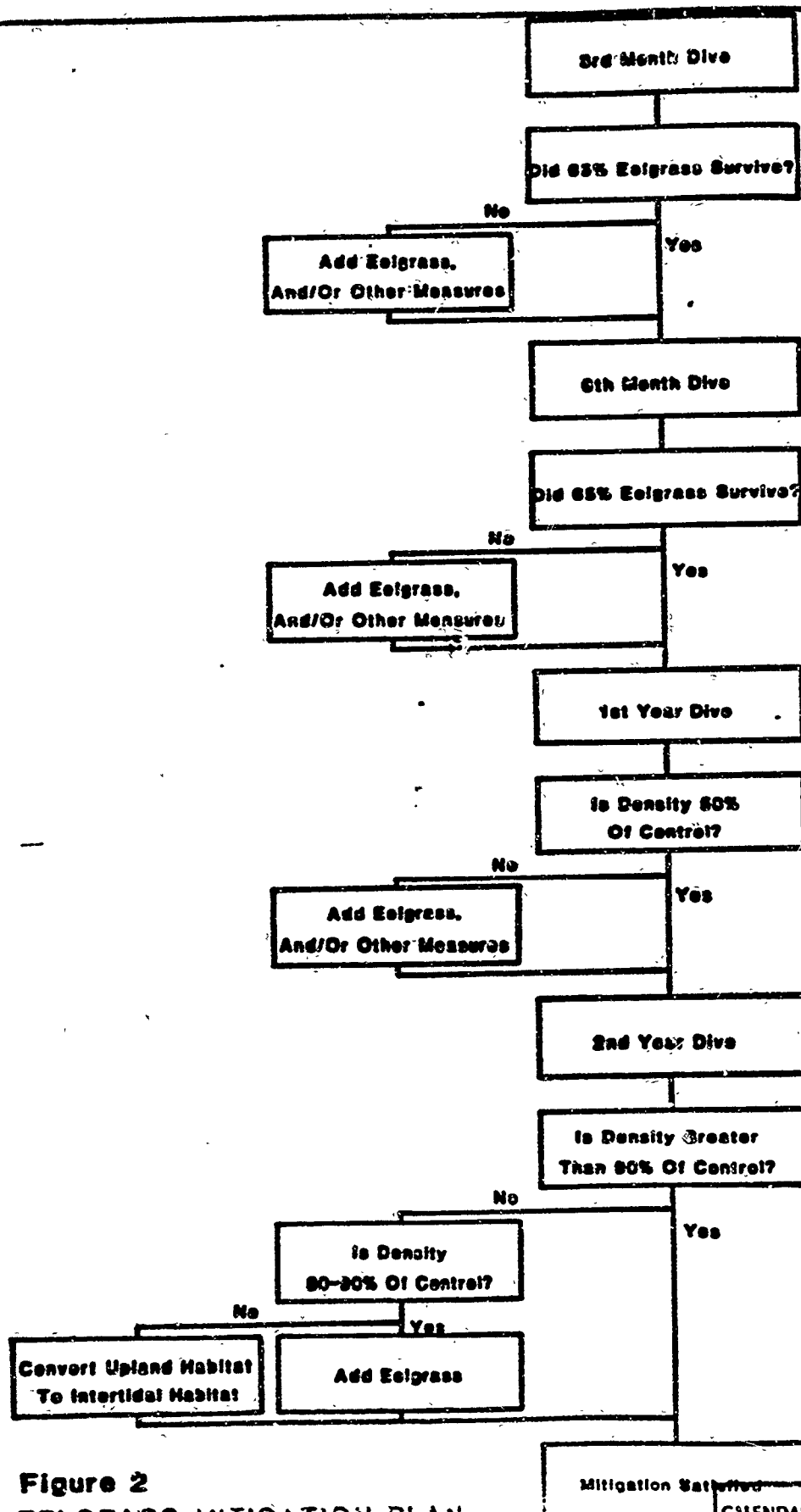


Figure 2
EELGRASS MITIGATION PLAN

Mitigation Satisfied

CALENDAR PAGE
MINUTE PAGE

161
2531

STATE LANDS COMMISSION

1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814

August 1, 1987

File Ref.: W 23796

County of Orange
P. O. Box 4048
Santa Ana CA 92702-4048

Gentlemen:

Pursuant to your application dated May 19, 1987, and by the authorization of the State Lands Commission on July 16, 1987, you are hereby granted permission to dredge, during the term of the permit, a maximum 156,000 cubic yards of sand, silt, clay, and gravel, excluding all other minerals, including, but not limited to, oil, gas, and geothermal from an area of sovereign lands in Huntington Harbour, Sunset Harbor, Sunset Aquatic Park Access Channel and Sunset Channel, Orange County as designated in Exhibit "A" attached hereto, which is by this reference expressly made a part hereof. Said permission includes the right to deposit dredge spoils at the approved EPA Ocean Disposal Site IA-2.

No royalty shall be paid for material placed at the approved offshore disposal site. A royalty of \$0.25 per cubic yard shall be paid for any material used for any private or commercial benefit. Said permission is given on the condition that all dredging and spoils deposition shall be done in accordance with all applicable Federal, State, and local government laws, rules, and regulations. Said permission shall be effective from August 1, 1987 through July 31, 1988.

It is hereby agreed that the operations authorized under this permit shall be performed with diligence, in a good and workmanlike manner, and with the use of due care and safety precautions.

It is further agreed that you shall submit copies of reports or contracts with the dredging operator substantiating the volume of materials dredged and any royalties due to the Commission on a quarterly basis, on forms supplied by the Commission (Form 30.9NC). It is agreed that you shall submit said forms on or before the fifteenth (15th) day of the month following the end of each permit quarter, together with payment for the royalty due on the volume removed during that quarter. The first permit quarter shall be the first three months following the effective date of this permit, and every three-month period thereafter shall be a permit quarter.

It is hereby agreed that, pursuant to Public Resources Code Section 6224, any installments of royalty accruing under the provisions of this permit that are not paid when due shall be subject to a five percent (5%) penalty and shall bear interest at the rate of one and one-half percent (1½%) per month from the date when the same was payable by the terms hereof.

August 1, 1987

It is agreed that you shall furnish the Commission with copies of final surveys or copies of any other computations used as a basis to verify dredge volumes within twenty-five (25) days of completion of the activity authorized hereunder.

It is agreed that you shall indemnify, save harmless and at the option of the State of California, defend said State, its officers, agents and employees, against any and all claims, demands, causes of action, or liability of any kind which may be asserted against or imposed upon the State of California or any of its officers, agents, or employees by any third person or entity, arising out of or connected with the issuance of this permit, operations hereunder, or the use by you or your agents, employees or contractors, of the above-described lands.

Without limiting the generality of the foregoing, such indemnification shall include any claim, demand, cause of action or liability of any kind asserted against or imposed upon the State of California or any of its officers, agents or employees, arising out of or connected with any alleged or actual violation by you, your agents, employees or contractors of the property or contractual rights of any third persons or entity. It is agreed that you shall, at the option of the Commission, procure and maintain liability insurance for the benefit of the State in an amount satisfactory to the Commission.

You agree to comply with the terms and conditions hereof, and you further agree that any violation thereof shall constitute grounds for termination of this permit and shall allow the Commission to pursue any other remedy available to it under the law. It is further agreed that this permit may be suspended, modified, or terminated, whenever the State Lands Commission deems such action to be in the best interests of the State, and that no such action by the Commission shall be deemed to be a basis for any claim or cause of action for damages against the State or any officer, employee or agency thereof.

STATE OF CALIFORNIA
STATE LANDS COMMISSION

W. M. THOMPSON, Chief
Extractive Development Program

DATE _____

ACCEPTED:

BY: _____

TITLE: _____

DATE: _____

CALENDAR PAGE	163
MINUTE PAGE	2533