

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT AND RECOMMENDATIONON CONSISTENCY DETERMINATION

Consistency Determination No. **CD-002-98**
Staff: JRR-SF
File Date: 1/8/1998
45th Day: 2/22/1998
60th Day: 3/9/1998
Commission Meeting: 2/3/1998

FEDERAL AGENCY: CORPS OF ENGINEERS**DEVELOPMENT****LOCATION:**

Marina del Rey, Dockweiler and Venice Beaches, and LA-2, an EPA designated offshore disposal site, Los Angeles County (Exhibits 1-4)

DEVELOPMENT**DESCRIPTION:**

Maintenance dredging of 210,000 cubic meters of material with beach and offshore disposal (Exhibit 5)

SUBSTANTIVE FILE DOCUMENTS:

1. CD-023-88, CD-031-91, CD-053-92, CD-068-94, CD-088-94, ND-112-94, ND-022-96 (previous Commission actions for dredging and disposal of dredged material at Marina del Rey).

EXECUTIVE SUMMARY

The Corps of Engineers submitted a consistency determination to support its proposed maintenance dredging of Marina del Rey. The Corps proposes to dispose of material dredged from the entrance and main channels at beach and offshore disposal sites. The beach disposal sites include Dockweiler and Venice Beaches. The Corps will dispose of the remaining material at LA-2, an EPA designated offshore disposal site.

The dredging is necessary to support recreational boating, recreational fishing, and U.S. Coast Guard Search and Rescue activities. Specifically, the proposed dredging will reduce the navigation hazard and improve boating activities in the area. Therefore, the project is consistent with the recreational boating policies of the California Coastal Management Program (CCMP).

The material proposed for ocean disposal has elevated levels of contaminants. The Corps has not completed the necessary toxicity and bioaccumulation tests to determine suitability for ocean disposal. Therefore, the Corps' consistency determination lacks the necessary information to determine the project's effect on water quality and habitat resources of the coastal zone.

The Corps' consistency determination does not include an evaluation of beach disposal impacts on coastal resources. There is not enough information to determine if the material proposed for disposal is compatible with the receiver beaches. Additionally, the Corps did not evaluate the effects from the elevated lead levels in the sediment on human health and biological resources. Therefore, the consistency determination does not contain enough information to evaluate the project's consistency with the water quality, sand supply, recreational, and habitat policies of the CCMP.

Finally, the Corps proposes to dredge during the nesting season of the California least tern, a federally listed endangered species. The Corps has not completed its evaluation required pursuant to the Endangered Species Act. This evaluation is necessary to determine the full extent of the impacts to the species and any mitigation measures. Therefore, the consistency determination does not contain enough information to evaluate the project's consistency with the environmentally sensitive habitat policy of the CCMP.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description.

The Corps proposes to remove approximately 210,000 cubic meters of sediment from the north and south navigation and entrance channels of Marina del Rey, and from the north

jetty fillet (Exhibits 1 and 5). The Corps will dispose much of this material at an EPA designated deep-ocean disposal site, LA-2 (Exhibit 2). The Corps determined, through physical and chemical analyses, that approximately 123,000 cu yd is suitable for beach or nearshore disposal in the littoral zone. Proposed disposal sites for beach-compatible material include Dockweiler Beach and Venice Beach, in the intertidal or nearshore zones (Exhibits 3 and 4). The Corps proposes to dredge between March and May 1998. Beach or nearshore disposal would conclude by April 1. Dredging with ocean disposal would continue through May. The Corps expects to dredge with either a hopper dredge or a clamshell dredge with disposal barge. However, the Corps may use a hydraulic cutterhead with a pipeline.

For beach disposal, the Corps proposes to use a pipeline with single-point discharge within the intertidal zone (+5 to -2 MLLW), to minimize impacts to grunion. The pipeline would extend from the dredge, along the beach (above the high tide line), to the discharge point. The outlet would consist of a perpendicular section of pipe extending into the intertidal zone (as described below). The Corps would move this extension as the disposal meets beach profile specifications.

II. Status of Local Coastal Program.

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has not incorporated the Los Angeles County LCP into the CCMP.

III. Federal Agency's Consistency Determination.

The Corps of Engineers has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

IV. Staff Recommendation:

The staff recommends that the Commission adopt the following motion:

MOTION. I move that the Commission concur with the Corps of Engineers' consistency determination.

The staff recommends a NO vote on this motion. Failure to receive a majority vote in the affirmative will result in adoption of the following resolution:

A. Objection

The Commission hereby **objects** to the consistency determination made by the Corps of Engineers for the proposed project, finding that the consistency determination does not contain enough information to evaluate the project for consistency with the California Coastal Management Program.

V. Necessary Information:

Section 930.42(b) of the federal consistency regulations (15 CFR Section 930.42(b)) requires that, if the Commission objects because of lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section states that:

If the State agency's disagreement is based upon a finding that the Federal agency has failed to supply sufficient information (see Section 930.39(a)), the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal activity with the management program.

As described fully in the Water Quality, Endangered Species, Sand Supply, and Access and Recreation sections below, the Commission has found this consistency determination to lack the necessary information to determine if the proposed project is consistent with Sections 30210, 30220, 30230, 30231, 30233, and 30240 of the Coastal Act. To evaluate the project's consistency with the CCMP, the Commission needs the following information:

1. Chemical and Biological testing, consistent with EPA's requirements, of proposed dredge sediments to verify suitability for ocean disposal at LA-2.
2. Physical and Chemical characterization of beach disposal sites.
3. Evaluation of dredging and beach disposal operations by the Los Angeles Regional Water Quality Control Board.
4. Biological Opinion by the U.S. Fish and Wildlife Service for impacts to the California least tern.
5. Analysis of potential trash and debris issue with commitments, if necessary, for post beach disposal clean-up.

VI. Findings and Declarations:

The Commission finds and declares as follows:

A. Recreational Boating. Section 30220 of the Coastal Act provides that:

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 of the Coastal Act provides, in part, that:

Increased recreational boating use of coastal waters shall be encouraged

....

Marina Del Rey is one of the larger recreational boat harbors on the West Coast. The land use plan (LUP) for Marina Del Rey describes the area as follows:

The primary use [of the harbor] is recreational boating for which the harbor was designed, providing 6,189 boat slips plus dry storage and launching. (Marina Del Rey LUP, p. I-1)

Shoaling of the entrance and main channels interferes with recreational boating at the Marina. The design depth of the Marina Del Rey's entrance channels is 20 feet below mean lower low water (MLLW). The Corps describes the current situation as follows:

Shoaling occurred far more rapidly than expected last year, after the previous maintenance dredging episode (March 1996). At that time, it was anticipated that dredging would not be required again for another three years. Both the north and the south entrance channel widths have now been reduced by approximately 50%, however, and the depth of the remaining "open" area has been reduced by approximately 10% (see Figure 7). Navigation within the north channel is restricted to a relatively narrow passage that is, on average, 200 feet wide and 12-17 feet deep. The south channel is even narrower, and is more likely to close due to its proximity to Ballona Creek. Maintenance efforts, therefore, will be focused primarily on restoring navigation in the north entrance. A potential emergency situation would occur if the north channel shoaled to leave less than 12' of depth and 150' of width.

As shoaling continues, the navigational hazard may result in a closure of the channels. In the past, when the Corps has documented hazardous situations, the Commission has been sensitive to and supportive of proposals to remove such hazards. In this case, the Corps

has documented that shoaling in the main and entrance channels to Marina del Rey could potentially interfere with recreational boating. The proposed project will remove those shoals, and thus protect recreational boating. However, the proposed dredging could interfere with recreational boating during operation of the dredge. This impact will be temporary, lasting for the duration of the project, and is insignificant when compared to the benefit from removing the shoaling hazard. Therefore, the Commission finds the project consistent with the recreational boating policies of the CCMP.

B. Water Quality and Biological Resources. Section 30230 of the Coastal Act provides that:

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 of the Coastal Act provides that:

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.

1. Ocean Disposal. The proposed project includes disposal of dredged material at LA-2, an EPA designated dredged material disposal site. The technical guidance for determining the suitability of dredged material involves a tiered-testing procedure, which includes four levels of testing. Tiers I and II apply existing or easily obtained information and limited chemical testing to predict effects. If these predictions indicate that the dredged material has any potential for significant adverse effects, EPA will elevate the sediment analysis to a higher tier. Tiers III and IV use water column and benthic bioassay and bioaccumulation tests to determine effects on representative marine organisms. The Corps's bulk chemistry evaluation for the Marina del Rey sediment shows that the material contains elevated levels of heavy metals, pesticides, phthalates,

and polynuclear aromatics hydrocarbons. Based on these results, EPA elevated the analysis of the sediment to Tier III testing.

To assess the effects of contaminated dredge spoils, EPA requires bioassay tests on suspended particulate and solid phases of the material before allowing the disposal (Tier III testing). (40 C.F.R. Section 227.6[c].) These tests allow EPA to evaluate the acute and chronic toxicity of the contaminated material on biological resources. Although these tests are not precise predictors of environmental effects, they provide quantitative estimators of impacts. EPA also measures bioaccumulation potential of contaminants. The intent of that test is to determine if organisms are concentrating chemicals in their tissues to levels that might prove harmful to either themselves or their predators. Like the bioassay tests, the bioaccumulation test measures the biological effect of contaminated dredge spoils.

EPA's regulations provide that:

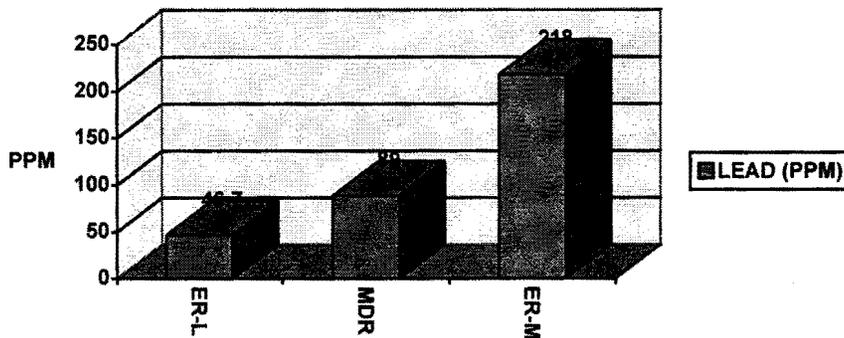
The limiting permissible concentration of the suspended particulate and solid phases of a material means that concentration which will not cause unreasonable acute or chronic toxicity or other sublethal adverse effects based on bioassay results using appropriate sensitive marine organisms in the case of the suspended particulate phase, or appropriate sensitive benthic marine organisms in the case of the solid phase; and which will not cause accumulation of toxic materials in the human food chain. (40 C.F.R. 227.27[b].)

The Commission also uses the results from the EPA process to evaluate ocean disposal activities for consistency with the CCMP. In this case, the Corps has not finished its sediment testing and could not include the results in this consistency determination. Therefore, the Corps' consistency determination does not contain enough information to evaluate the project's consistency with the water quality and habitat policies of the CCMP.

2. Impacts at the Dredging Site. The Commission has concerns about the water quality impacts from the dredging operation. The dredging of the channels would increase the amount of sediment in the water column. Under normal conditions, this increase in turbidity has minor and temporary effects on light penetration and dissolved oxygen. However, since the material in these channels has elevated levels of contaminants, the project would make these pollutants more biologically available. In its consistency determination, the Corps concludes that this impact is not significant because the Corps will conduct the activity according to requirements of the Los Angeles Regional Water Quality Control Board. However, the Board has not yet reviewed the project and, obviously, has not developed its requirements. Therefore, the Commission cannot

evaluate the Board's requirements. Without this information, the Commission cannot evaluate the dredging for consistency with the water quality and habitat policies of the CCMP.

3. Beach Disposal. The material proposed for beach replenishment contains elevated levels of lead. Specifically, the bulk chemistry shows that the area proposed for beach replenishment contains lead at 89.0 parts per million. This level is above National Oceanic and Atmospheric Administration's (NOAA) ER-L (effects range low) level for lead, 46.7 parts per million, but below the ER-M (effects range median), 218.0 parts per million.



If the levels of contaminants are higher than the ER-L, then it is **possible** that there will be a biological effect from the contaminant. If the level is above the ER-M, then it is **likely** that there will be an adverse effect. Therefore, based on the NOAA guidance, it is possible that the material may have a biological effect. However, the Commission is reluctant to make a conclusion based on this information alone. The NOAA did not intend for its guidance to be a regulatory standard, rather it is a general benchmark to indicate possible concerns. To fully address this issue, the Commission requires more information on the biological and human health effects of lead at this concentration and a comparison to the chemistry of the existing sediments from the beach disposal sites.

In addition to NOAA's guidance, the EPA used Superfund standards to conclude that the sediment is chemically suitable for beach disposal. EPA used the Superfund standard for future residential use of a site contaminated with lead. It concluded that the concentration of lead in the sediment are significantly less than this standard and that there would be no significant risks to human health. Despite this conclusion, the Commission has concerns about the elevated level of lead. The Corps did not provide an evaluation of this potential impact and the Commission has incomplete information. At a minimum, the Commission needs bulk chemistry data from the receiver beach to compare the chemistry of the beach with the dredged material. Additionally, an evaluation by the Los Angeles Regional Water Quality Control Board is necessary determine if there are biological or human health risks from the sediment. Without this data, the Commission can not

determine if the project will affect recreational, water quality, and habitat resources. Therefore, the Commission finds that the Corps' consistency determination does not contain enough information to evaluate the project for consistency with the CCMP.

C. Endangered Species. Section 30240 of the Coastal Act provides that:

(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.

(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.

The proposed project potentially affects habitat for three federally listed species. These species include California least tern (*Sterna antillarum browni*); California brown pelican (*Pelecanus occidentalis californicus*); and the western snowy plover (*Charadrius alexandrinus nivosus*). The snowy plover does not nest on Dockweiler or Venice beaches. Additionally, the proposed critical habitat for this species does not include the project area. Therefore, the project will not affect the snowy plover. Although noise and turbidity may temporarily disturb the brown pelican, the project will not significantly affect this species. The pelicans do not breed in or have other critical ecological ties to the Marina del Rey area. Therefore, if the dredging disturbs the pelicans, they will probably move to other foraging and roosting areas without any ill effects and they will return to the Marina del Rey after completion of the project. Therefore, the project will not affect the brown pelicans. Several species of marine mammals and sea turtles may also be transient visitors to the harbor and the LA-2 disposal site. Since they will avoid the harbor and disposal site during the dredging and these areas are not a critical part of their habitat, the impact will be insignificant.

However, the proposed project does have the potential to adversely affect the California least tern. The bird nests on Venice Beach just north of Marina del Rey (Exhibit 1) and forages in and near the marina. In its consistency determination, the Corps describes the habitat needs of this species as follows:

***California Least Tern (*Sterna antillarum browni*).** The California least tern migrates from Mexico and Central and South America to coastal south-central California to breed. During their stay in California, the birds forage for fish in the nearshore coastal waters and embayments. Most foraging occurs within two miles of breeding colonies (Massey and Atwood, 1982). A nesting colony is known to occur at Venice Beach,*

immediately north of the entrance to the Marina (see Figure 1). The Venice Beach least tern nesting area is surrounded by a chain-link fence, in an attempt to protect the colony from small mammal predation and human disturbance. In the past, nesting also occurred on Dockweiler Beach, but that nesting area is no longer protected, and nesting has not occurred on that beach in recent years.

The least tern's nest usually occurs in the open expanse of lightly colored sand or dirt or dried mud, next to lagoons or estuaries or on open sandy beaches. The nest generally consists of merely a small depression or scrape in the soil or sand, and is lined with pebbles or sea shell fragments. Nesting usually concludes by mid-August, with post-breeding groups still present into September (USFWS 1980).

Foraging behavior of least terns in the project area and other locations was studied for several years in the late 1970's and early 1980's. Reports on foraging and nesting ecology include Atwood and Minsky (1983), and Massey and Atwood (1980 and 1983). Massey and Atwood (1980) observed that the majority of feeding activity during courtship, incubation, and rearing of chicks occurred in nearshore ocean waters; an average of 7% of observed foraging activity from May through July of that year occurred within the harbor's entrance channel.

According to the Fish and Wildlife Service, the tern nesting colony on Venice Beach adjacent to Marina del Rey is one of the largest and most productive in the state. (Pers. comm., John Hanlon, U.S. Fish and Wildlife Service, 1/15/98.) The Service has potential concerns about proximity of the dredging to the tern nesting colony. Noise, turbidity, re-suspension of contaminants, and impacts to prey species could result in significant impacts to the tern. In most dredging projects, the Corps would avoid these impacts by completing the operation before the beginning of the tern's nesting season, April 1. However, for this project, the Corps proposes to complete dredging for beach disposal by April 1, and to continue dredging for ocean disposal through May 1998. Therefore, the proposed project is likely to affect nesting and foraging habitat for the tern. The significance of these impacts is under evaluation by the U.S. Fish and Wildlife Service, pursuant to Section 7 of the Endangered Species Act. Through its process, the Service will identify all the impacts to this species, the significance of those impacts, and necessary mitigation measures. The data produced through the Section 7 process is necessary for the Commission to evaluate the impacts to the endangered species. Therefore, the Commission finds that the Corps' consistency determination does not contain enough information to evaluate the project's consistency with the habitat policies of the CCMP.

D. Dredging. Section 30233(a) of the Coastal Act provides, in part, that:

(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:

....

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

Section 30233(a) of the Coastal Act imposes a three-part test on dredging and filling projects: (1) an allowable use test; (2) an alternatives test; and (3) a mitigation test. The project complies with the first test because maintenance dredging of existing navigation channels is an allowable use for dredging and filling. Although the project will result in habitat impacts at the dredging and disposal sites, the effects are not significant because they are temporary (i.e., natural recolonization will begin after completion of the dredging) and limited to degraded areas (i.e., existing channels and designated disposal site). However, the Commission cannot evaluate the project for consistency with the alternatives and mitigation tests, because the Corps' consistency determination lacks complete information on impacts to water quality and endangered species resources (see Water Quality and Endangered Species Sections above). Without a complete analysis of these issues, the Commission cannot determine if there are less damaging alternatives or if the project requires additional mitigation. Therefore, the Commission finds that the Corps' consistency determination lacks the necessary data and information to determine if the project is consistent with the dredging and filling policies of the CCMP.

E. Sand Supply. Section 30233(b) of the Coastal Act provides that:

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.

As described above, the Corps' consistency determination lacks complete information on impacts to water quality and endangered species resources (see Water Quality and Endangered Species Sections above). Without a complete

analysis of these issues, the Commission cannot determine if the Corps will plan and carry out the project "to avoid significant disruption to marine and wildlife habitats." Additionally, the consistency determination lacks a complete analysis of the sand supply issue. One of the main issues that the Commission evaluates to determine the consistency of any beach replenishment project is whether the material dredged is compatible physically and chemically with the receiver beach. The Corps' consistency determination lacks any physical or chemical analysis of sediment from the proposed beach disposal sites. Therefore, the Commission cannot determine if the dredged material is compatible with the sand on the beach disposal sites.

In conclusion, the consistency determination for the proposed project lacks a complete analysis of the project's impact on marine and wildlife habitat and lacks an analysis of suitability of the sediment for beach disposal. Therefore, the Commission finds that the consistency determination lacks the necessary data to evaluate the project for consistency with the sand supply policies of the CCMP.

F. Recreation and Public Access. Section 30210 of the Coastal Act provides, in part, that:

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 30220 of the Coastal Act provides that:

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

The Corps proposes to place approximately 123,000 cubic meters of sediment dredged from Marina del Rey in the surf zone for sand replenishment purposes. The Commission generally supports this type of beneficial reuse of dredged material because it improves sand supply, resulting in wider beaches and improved coastal recreation. However, beach disposal of dredged material can result in some adverse recreational impacts. The impacts include blocking vertical access by placement of a pipeline necessary to transport sand to the disposal site, temporary odd color and smell to dredged material, trash and debris disposed on the beach along with the sand, and possible increased noise pollution associated with the operation of the dredge and auxiliary pumps, if necessary. The Corps will partially mitigate any interference with beach recreational use by requiring the beach disposal portion of the project to conclude on April 1, and thus avoiding the peak

recreational season. Noise impacts will be temporary during project operation. The smell and discoloring will dissipate quickly as the dredged material oxidizes. Therefore, these impacts will not be significant. The Corps will mitigate any impacts to vertical access caused by the placement of the pipeline by constructing sand ramps over the pipeline.

Finally, in previous projects, the Corps avoided significant impacts from trash and debris by requiring post-project clean-up of the beach. However, in this project, the Corps has not evaluated the trash and debris issue. It may be that the material used for beach disposal is relatively free of trash and debris or the Corps has committed to beach clean-up, but the Corps did not identify that commitment in its consistency determination. Regardless, without an analysis of this issue, the Commission cannot determine if the project is consistent with the Recreational Policies of the CCMP. Therefore, the Commission finds that the proposed project lacks the necessary information to evaluate the project for consistency with the access and recreation policies of the CCMP.

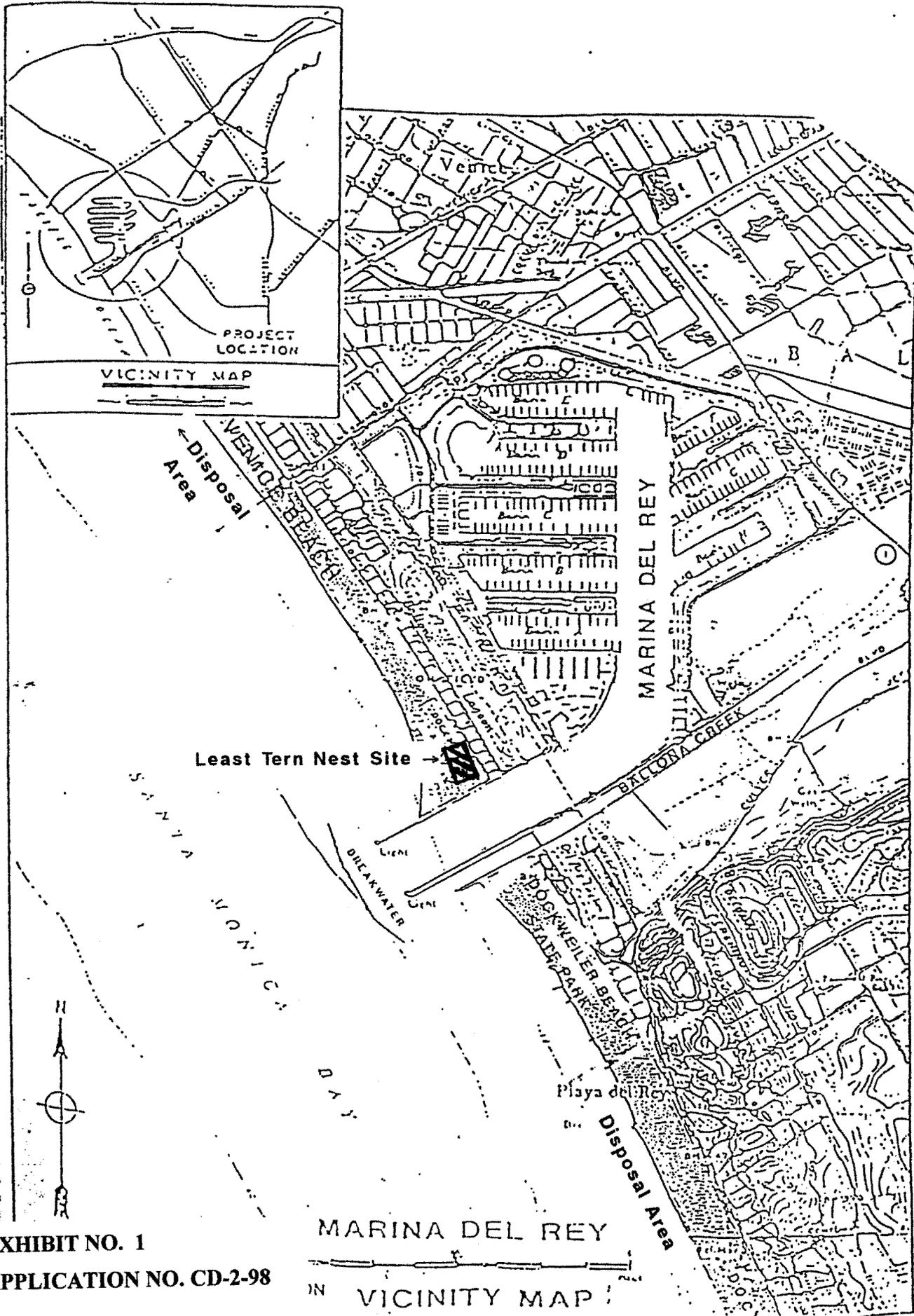
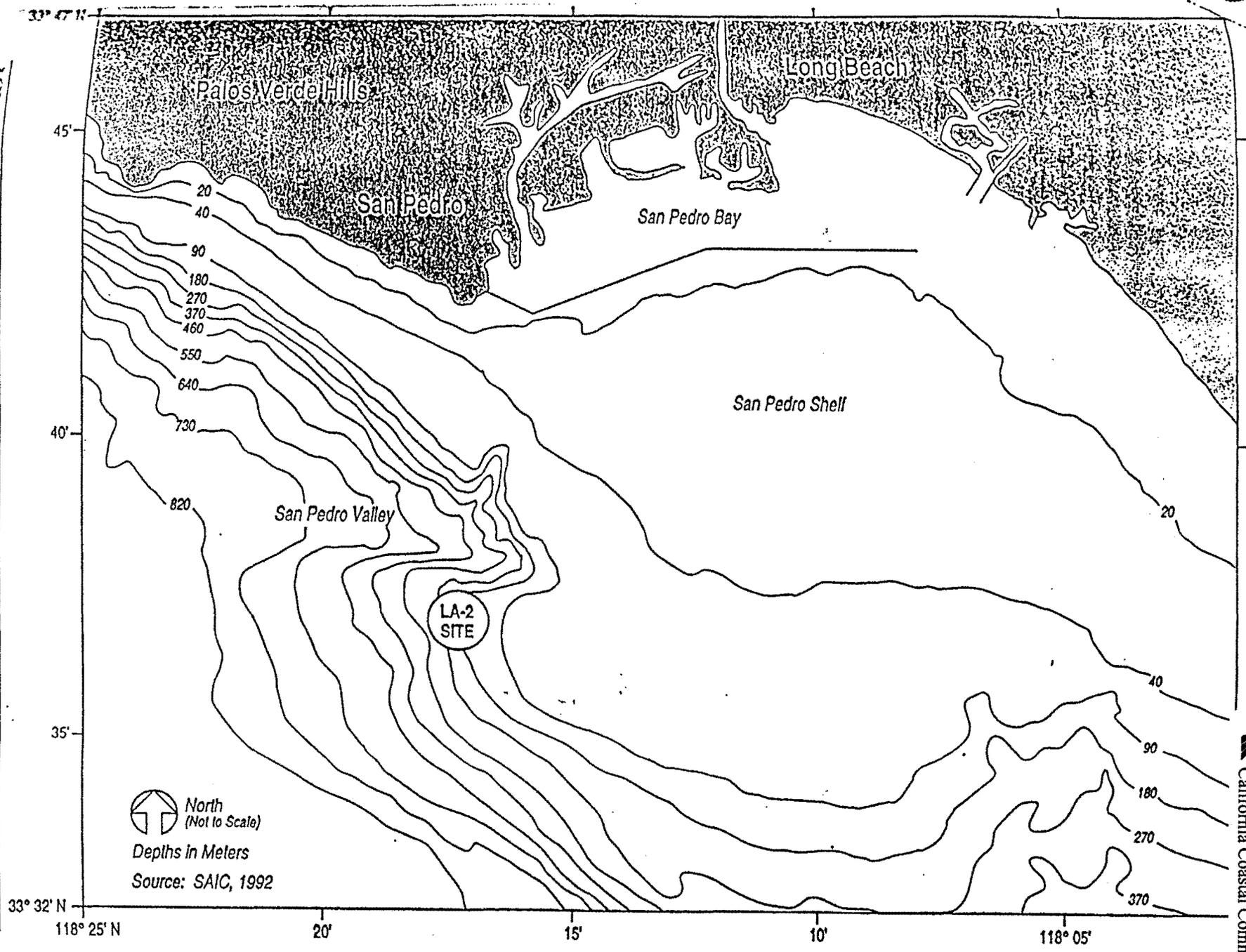


EXHIBIT NO. 1
 APPLICATION NO. CD-2-98

MEC Analytical Systems, Inc.

Draft August 16, 1994

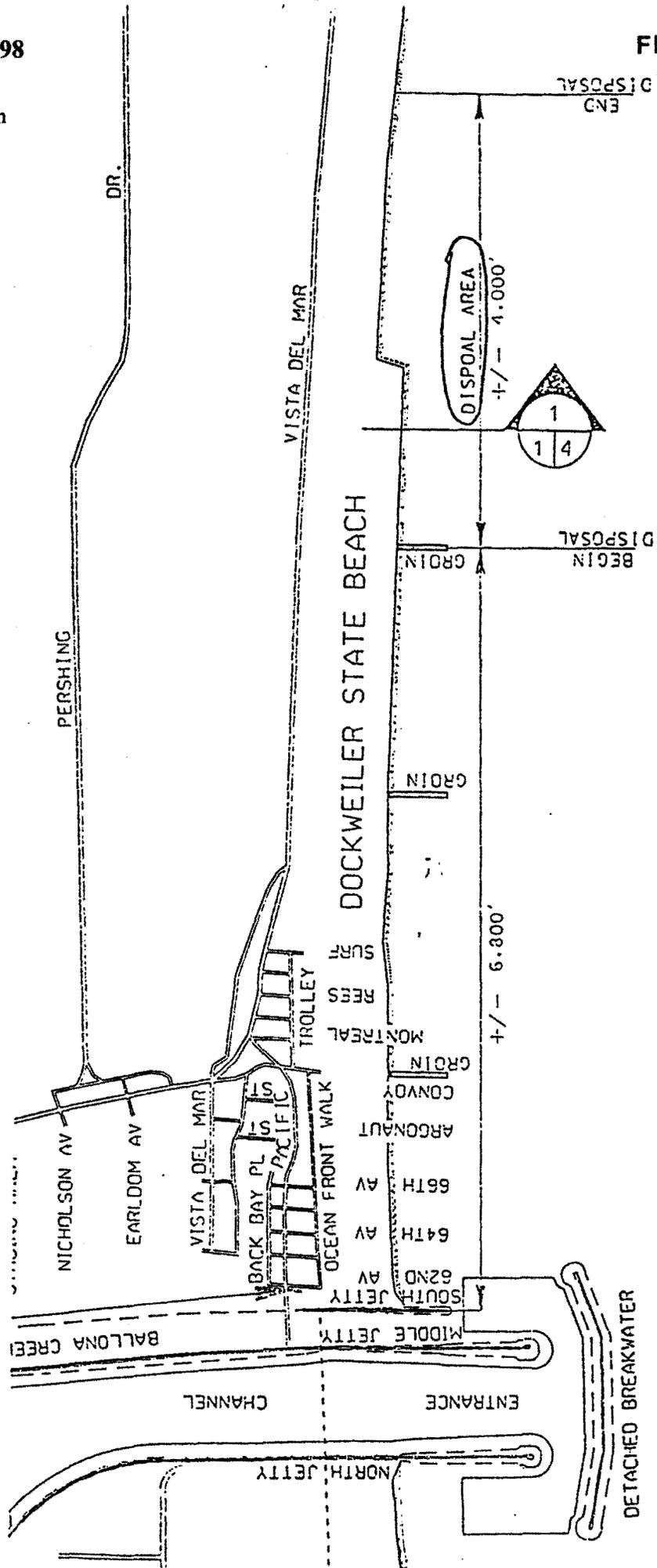


California Coastal Commission

APPLICATION NO. CD-2-98

EXHIBIT NO. 2

LA-2 Ocean Dredged Material Disposal Site Vicinity Map.



LOCATION MAP
NOT TO SCALE

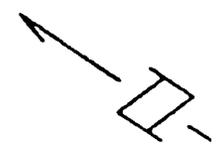
MATCH LINE - SEE SHEET 3

EXHIBIT NO. 4

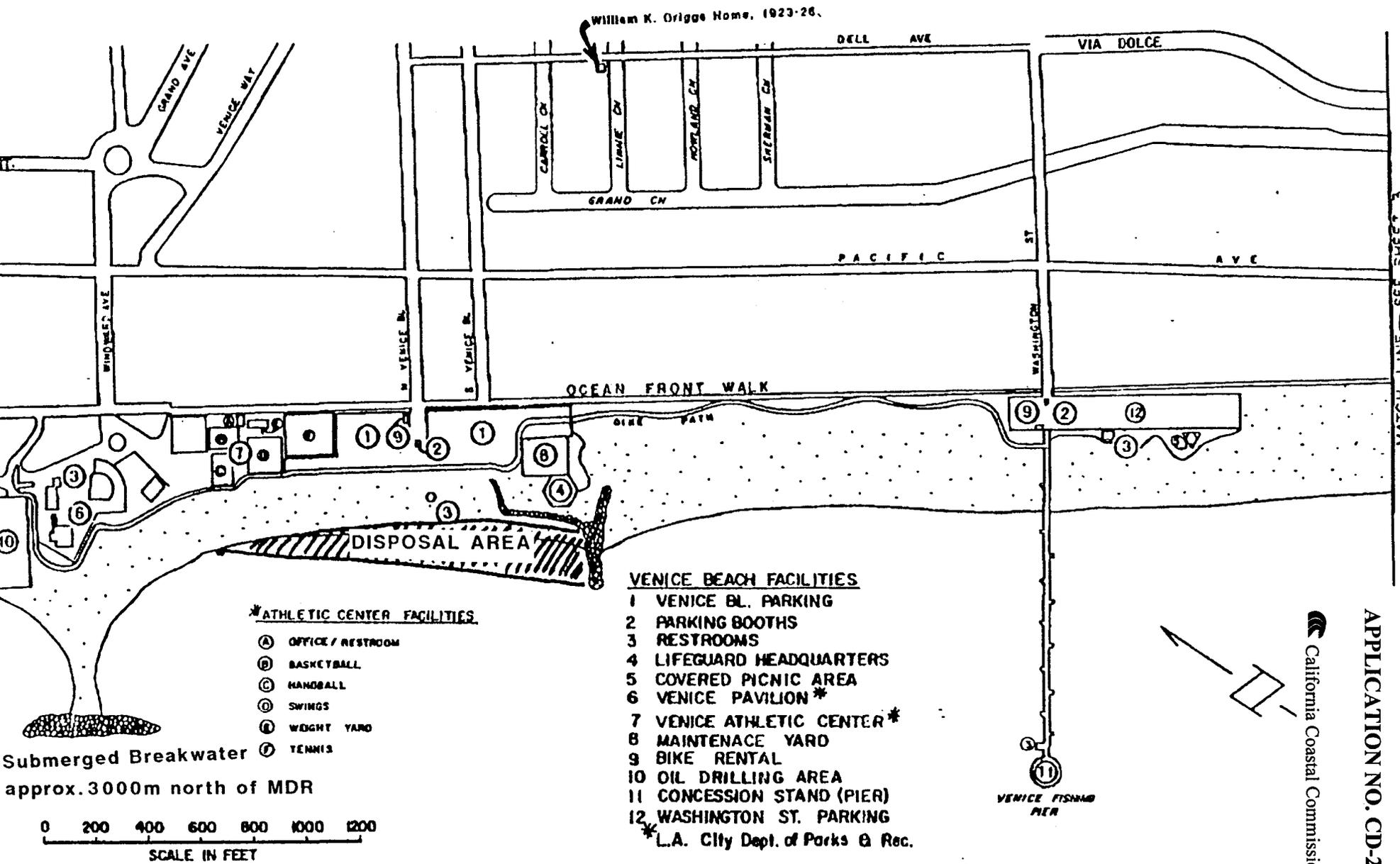
APPLICATION NO. CD-2-98

2 OF 3

California Coastal Commission



VENICE FISHING PIER



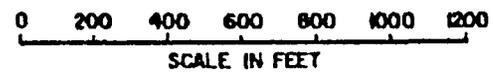
VENICE BEACH FACILITIES

- 1 VENICE BL. PARKING
 - 2 PARKING BOOTHS
 - 3 RESTROOMS
 - 4 LIFEGUARD HEADQUARTERS
 - 5 COVERED PICNIC AREA
 - 6 VENICE PAVILION*
 - 7 VENICE ATHLETIC CENTER*
 - 8 MAINTENANCE YARD
 - 9 BIKE RENTAL
 - 10 OIL DRILLING AREA
 - 11 CONCESSION STAND (PIER)
 - 12 WASHINGTON ST. PARKING
- * L.A. City Dept. of Parks & Rec.

*ATHLETIC CENTER FACILITIES

- (A) OFFICE / RESTROOM
- (B) BASKETBALL
- (C) HANDBALL
- (D) SWINGS
- (E) WEIGHT YARD
- (F) TENNIS

Submerged Breakwater
approx. 3000m north of MDR

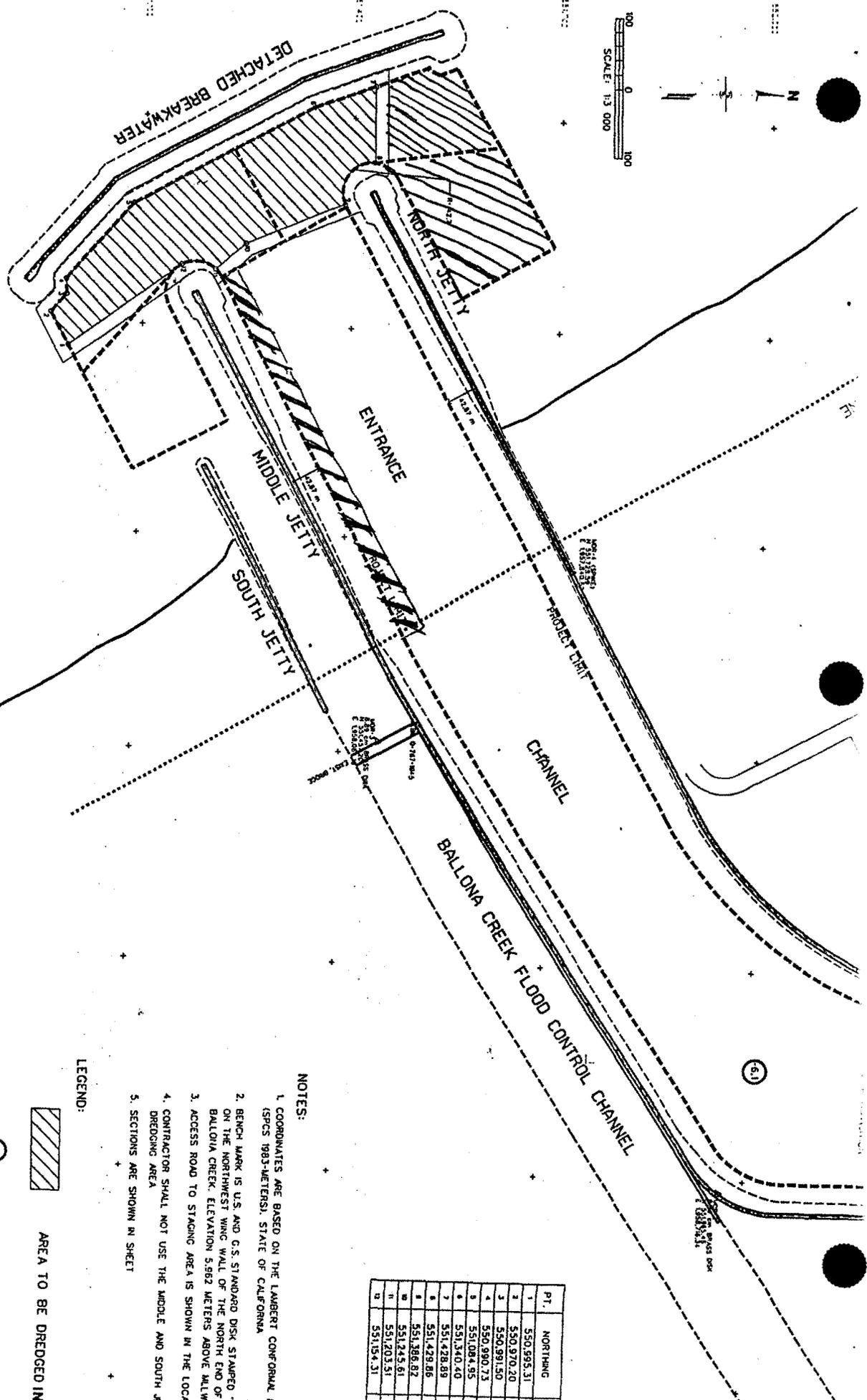


VENICE CITY BEACH
WINDWARD AV. to WASHINGTON ST.

1/2/86

S. DRIGGS

LOS ANGELES COUNTY DEPARTMENT OF BEACHES AND HARBORS



PT.	NORTHING
1	550,995.31
2	550,970.20
3	550,991.50
4	550,990.73
5	551,084.95
6	551,340.40
7	551,428.89
8	551,386.82
9	551,245.61
10	551,203.31
11	551,154.31

NOTES:

1. COORDINATES ARE BASED ON THE LAMBERT CONFORMAL PRO (SPCS 1983-METERS), STATE OF CALIFORNIA
2. BENCH MARK IS U.S. AND G.S. STANDARD DISK STAMPED "0-7 ON THE NORTHWEST WING WALL OF THE NORTH END OF #1 BALLONA CREEK. ELEVATION 5.982 METERS ABOVE MLLW.
3. ACCESS ROAD TO STAGING AREA IS SHOWN IN THE LOCATION.
4. CONTRACTOR SHALL NOT USE THE MIDDLE AND SOUTH JETTY DREDGING AREA
5. SECTIONS ARE SHOWN IN SHEET

LEGEND:

-  AREA TO BE DREDGED IN F
-  PROJECT DEPTH
-  FEDERAL PROJECT LIMITS

EXHIBIT NO. 5
APPLICATION NO. CD-2-98