

## CALIFORNIA COASTAL COMMISSION

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# W 14c



### STAFF REPORT AND RECOMMENDATION

### ON CONSISTENCY CERTIFICATION

#### Consistency Certification

No. CC-146-96

Staff:

LJS-SF

File Date:

December 13, 1996

3 Months:

March 13, 1997

6 Months:

June 13, 1997

Hearing Date:

January 8, 1997

#### APPLICANT:

PORT OF LONG BEACH

#### DEVELOPMENT

#### LOCATION:

West Basin in the Port of Long Beach and EPA offshore disposal site LA-2, six miles southwest of Pt. Fermin, Los Angeles County (Exhibits 1-4)

#### DEVELOPMENT

#### DESCRIPTION:

Disposal of up to 500,000 cubic yards of West Basin dredged material at the LA-2 disposal site.

#### SUBSTANTIVE FILE DOCUMENTS:

1. Final EIR for the Port of Long Beach Pier T Marine Terminal, September 1996.
2. Sediment Characterization in the West Basin, Port of Long Beach, July 1996.
3. Sediment Testing for Proposed West Basin Dredging, Port of Long Beach, August 1996.
4. U.S. Army Corps of Engineers Public Notice/Application No. 96-00114-FT (West Basin, Port of Long Beach).
5. Coastal Development Permit Applications 5-96-182 and 5-96-231 (Port of Long Beach, Pier T Container Terminal Project).
6. Comment Letter from U.S. Environmental Protection Agency to U.S. Army Corps of Engineers regarding Public Notice 96-00114-FT, Port of Long Beach, Pier T, Long Beach Harbor, Los Angeles County, California, November 1, 1996.
7. Port of Long Beach Port Master Plan (as amended through October 1996).
8. Consistency Determination CD-63-90 (EPA; designation of LA-2 offshore disposal site).
9. Consistency Certification CC-60-95 (Port of Long Beach; disposal of dredged material from Cerritos Channel at LA-2).
10. Consistency Certification CC-41-95 (Port of Long Beach; disposal of dredged material from the expanded Pier J Expansion Turning Basin at LA-2).

11. Consistency Certification CC-79-92 (Port of Long Beach; disposal of Phase 2 dredged material from Pier J Expansion Turning Basin at LA-2).
  12. Consistency Certification CC-59-92 (Port of Long Beach; disposal of Phase 1 dredged material from Pier J Expansion Turning Basin at LA-2).
  13. Consistency Certification CC-129-96 (Port of Long Beach; disposal of West Basin dredged sediments at LA-2).
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#### EXECUTIVE SUMMARY

The Port of Long Beach has submitted a consistency certification for disposal of up to 500,000 cubic yards of dredged material at the EPA-designated LA-2 offshore disposal site. The material will be dredged from the Port's West Basin as part of a dredging project to remove approximately 3.695 million cubic yards of sediment in order to deepen berthing areas and shipping channels associated with the proposed Pier T container terminal project on the site of the former Long Beach Naval Station. The sediments underwent chemical and bioassay testing and the subject 500,000 cubic yards of sediment are suitable for ocean disposal at LA-2. The proposed project will not result in any significant adverse effects on the coastal zone, and therefore the project is consistent with the marine resources, water quality, port, and commercial and recreational fishing policies of the California Coastal Management Program (Sections 30230, 30233, 30234, 30220, 30224, 30255, and 30701 of the Coastal Act).

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#### STAFF SUMMARY AND RECOMMENDATION:

I. Project Description. The Port of Long Beach proposes to dispose of up to 500,000 cubic yards of dredged material at the EPA LA-2 offshore disposal site (Exhibits 1-4). The material will be dredged from the Port's West Basin as part of a dredging project to remove approximately 3.695 million cubic yards of sediment in order to deepen berthing areas and shipping channels associated with the proposed Pier T container terminal project. The sediments underwent full chemical and bioassay testing, and the subject 500,000 cubic yards of sediment from dredge areas I, VI, and VII are suitable for ocean disposal at LA-2. Dredging and disposal operations are scheduled to occur between January and December 1997.

II. Status of Local Coastal Program. The standard of review for federal consistency certifications is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) or Port Master Plan (PMP) of the affected area. If the LCP or PMP has been certified by the Commission and incorporated into the CCMP, it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP or PMP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The Port of Long Beach PMP has been certified by the Commission and incorporated into the CCMP.

III. Applicant's Consistency Certification. The Port of Long Beach has certified that the proposed activity complies with California's approved coastal management program and will be conducted in a manner consistent with such program.

#### IV. Staff Recommendation:

The staff recommends that the Commission adopt the following resolution:

CONCURRENCE.

The Commission hereby concurs with the consistency certification made by the Port of Long Beach for the proposed dredged material disposal, finding that the project will comply with California's approved coastal management program and will be conducted in a manner consistent with such program.

V. Findings and Declarations:

The Commission finds and declares as follows:

A. Marine Resources/Water Quality/Commercial and Recreational Fishing.

1. Coastal Act Policies. The Coastal Act provides the following:

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.

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) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

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

(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.

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

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.

30234. Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of the commercial fishing industry.

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

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

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.

30701. The Legislature finds and declares that:

(a) The ports of the State of California, including the Humboldt Bay Harbor, Recreation, and Conservation District, constitute one of the state's primary economic and coastal resources and are an essential element of the national maritime industry....

2. Water Quality and Commercial and Recreational Fishing. In analyzing the consistency certification submitted by the Port of Long Beach, the Commission will rely heavily on the findings it adopted in reviewing EPA's LA-2 site designation consistency determination (CD-63-90), since those findings addressed the coastal resource protection issues raised by disposal of dredged material at LA-2. Consequently, the remainder of the findings in this section on water quality and commercial and recreational fishing rely heavily on (and quote extensively from) those findings.

In reviewing CD-63-90, the Commission noted that the designation of LA-2 was intended, for the most part, to support the dredging needs of the Ports of Los Angeles and Long Beach, its tenants (which include commercial and recreational fishing boats, ship building and repair, cargo transportation, and recreational boating), the U.S. Navy, the Corps of Engineers (Corps), and some of the recreational harbors in the area. As cited above, the Coastal Act supports and encourages protection of many of those uses.

The LA-2 site had been previously designated an interim dredged material disposal site between 1977 and 1988. After that interim designation lapsed, all dredge disposal activities at LA-2 ceased. The dredging is necessary to maintain coastal-dependent activities including commercial and sports fishing, recreational boating, and port-related activities. The Commission found that

the LA-2 site designation supported these coastal-dependent activities and was consistent to the maximum extent practicable with Coastal Act Sections 30220, 30224, 30234, 30255, 30260, and 30701.

At the same time, the proposed dredged material disposal has the potential to adversely affect marine species, including those that are recreationally and commercially valuable. The Coastal Act provides for the protection of these resources, as discussed in the above quoted provisions of Sections 30230, 30253, 30234, as well as Section 30705(c), which provides, in part, that: "... dredge spoils may be deposited in open coastal water sites designated to minimize potential adverse impacts on marine organisms ...."[Emphasis added.] Thus, while supporting the need for dredging, the Commission was concerned about the impact of the proposed designation on recreational and commercial fishing resources of the coastal zone. Even though the LA-2 site is located in an area that is valuable for commercial and recreational fishing, it was used for dredged material disposal for 11 years without apparently reducing fishing values. Despite the lack of historic conflict, the Commission was concerned about potential impacts to fishing resources. Regarding these impacts, the Commission found:

...that evidence does not conclusively show that dredged material disposal will not affect fishing resources. The information about fishing productivity is at a rather general scale; fish blocks are approximately eight by ten miles. Thus, these blocks do not provide specific enough information to make conclusions regarding resource impacts to area near the disposal site. Even if the fish block information was specific enough to assess the fishing impact, most of the data included in the [EPA's] EIS and consistency determination was collected while LA-2 was an active site. Thus, it is conceivable that the area was more productive prior to interim designation of LA-2. Therefore, the fish block data is too general to conclude that turbidity caused by dredged material disposal will not affect fishing values of the area near LA-2. Without site specific turbidity analysis, there is not enough information for the Commission to conclude that the project's effect on fisheries is consistent with the CCMP.

The Commission notes that there are some fishermen that are concerned about reduced productivity potentially caused by dredged material disposal at the site. Some of the people opposed to the proposed LA-2 site, have argued that the selection of the deep water site, an alternative considered in the EIS, would be less damaging to commercial and recreational fishing. [However the Commission notes that the] ...disposal of dredged material at the deep water site has the potential of depleting all dissolved oxygen at and near the site. This anoxic condition could eliminate all habitat values at the deep water site and could have long term implications because the lack of water circulation and naturally low oxygen levels would significantly lengthen the amount of time that it would take for the oxygen levels to return to normal conditions. Therefore, disposal of dredged materials at the deep water site could create a dead zone within the San Pedro Basin, and thus, based on the information available at this time, the Commission agrees that the deep water site would be a more environmentally damaging alternative.

In the case of LA-2, the best way to gather the needed information is to study disposal activities at the site. Since there is no clear historic conflict between disposal activities and fishing, the Commission believes that a temporary approval of the dredged material disposal site with a monitoring program will allow for further analysis of the impacts from dredged material disposal without significantly risking fishing resources.

The EPA has agreed... to modify its consistency determination so that it is only valid for five years. During that period, EPA will monitor dredged material disposal activities at the site ... and continue to evaluate both the deep water site and the shallow water site as alternative disposal sites. As part of the evaluation of the deep water alternative, EPA agreed to model oceanographic conditions at the deep water site. On an annual basis, the EPA will inform the Commission of any results and progress of its data gathering. After three years, the EPA will submit to the Commission for its review, during a public hearing, an analysis of the monitoring results, turbidity plume modeling using project specific current and grain size data, and alternative site evaluations. If that analysis produces evidence that the disposal activities are significantly affecting fishing values, EPA will begin the process for selecting a new site or, if possible, manage disposal activities at the site to minimize or avoid impacts to coastal zone resources. After five years, the EPA will submit a new consistency determination for the designation of LA-2. That consistency determination will contain results from five years of monitoring, plume modeling, and alternative site evaluations. In addition, the Commission will be able to regularly evaluate the results of EPA's data gathering through its consistency review of disposal activities at the site. Through its review authority, the Commission can work with the COE [Corps], EPA, and any permit applicants to develop necessary mitigation of impacts revealed through the monitoring process. In addition, the Commission notes that if the disposal activities have coastal zone impacts substantially different than anticipated, a new consistency determination could be required, pursuant to 15 CFR Section 930.44(b), prior to the end of the five year period.

In partial fulfillment of the commitments referred to in the previous paragraph, EPA submitted to the Commission staff the results of current meter studies and physical oceanographic studies (for both the LA-2 and LA-5 sites). Regarding EPA's commitment for a more extensive report in the third year of the 5 year designation, EPA states:

The three-year site monitoring program sponsored by EPA Region IX at the ocean disposal sites is progressing well. Region IX has a Cooperative Agreement with a non-profit consortium in Monterey, named CIRIOS, to evaluate 10 years of satellite imagery in the Southern California Bight. This analysis will provide information on surface current movements that influence the LA-2 and LA-5 sites. We hope to analyze California Department of Fish and Game fish block data this year as the last step to compile information for the report that EPA Region IX must submit to the Commission in March 1994.

EPA submitted a draft site management/monitoring report to Commission staff in August 1994. The final monitoring report was submitted to the Commission in

1996 and a consistency determination for redesignation of the LA-2 site is tentatively scheduled for the Commission's January 1997 meeting.

The Commission also noted in reviewing the designation of LA-2 that if the ongoing monitoring program showed adverse environmental impacts, EPA would implement management directives to reduce the impacts. Options for such measures consist of: regulating the quantities and types of material and times, rates, and methods of disposing material and enforcing permit requirements; implementing changes in site use. Examples of this last measure (site use changes) include: limiting the amount of dredged material disposal at the site; reconfiguring site boundaries; restricting disposal to specific locations within the dump site; re-evaluating bioaccumulation testing and analytical procedures; restricting timing of disposal; and limiting designation of the site to a finite time and evaluating alternative disposal sites. The Commission further noted that EPA was working with the Corps to develop a permit condition that requires the use of precise navigation equipment to determine the center of the disposal site and reporting that information to the Corps, and that local fishermen would be used to spot and document errant dumping activities.

Regarding testing for water quality impacts, the Commission found in reviewing CD-63-90 that:

Section 30231 of the Coastal Act emphasizes the protection of biological productivity and optimum populations of marine organisms. EPA's bioassay and bioaccumulation test requirements will be a part of the Commission's evaluation of the biological effects from the disposal activities when it evaluates specific disposal projects for consistency with the biological resource protection policies of the CCMP. In order to ensure consistency with the water quality policies of the CCMP, EPA agreed to modify the project by evaluating all proposed dredging projects received after January 9, 1991 using the procedures defined in the newest version of the Ocean Dumping Implementation Manual, which are the most comprehensive procedures for testing water quality impacts from disposal. Thus, the standards used by EPA will enable the agency to minimize the biological impacts from placement of contaminants at the disposal and will enable the Commission during case-by-case review of such projects to verify whether these standards will be met. Therefore, the Commission finds that its future review will enable it to assure that the water quality impacts associated with the transportation and disposal of dredge spoils at LA-2 will be consistent to the maximum extent practicable with the water quality protection policies of the CCMP.

Finally, because commercial or recreational fishing continued at the site during the historic disposal activities, and because the commitments and studies promised by EPA would enable more detailed evaluation of the activities, the Commission concluded that the temporary designation of LA-2 in order to gather information on potential coastal zone effect was consistent to the maximum practicable with the commercial and recreational fishery resource policies of the CCMP. In concurring with the site designation for LA-2, the Commission has inherently accepted, and found consistent with the Coastal Act, use of that site for disposal of dredged material meeting applicable water quality testing requirements.

The sediments in the West Basin project area were extensively tested by the Navy (as part of its site assessment and remediation investigations) and by the Port (in support of its Pier T container terminal project). Both testing efforts established that portions of the West Basin are contaminated by heavy metals, PAHs, PCBs and pesticides. The Port's 1996 testing program, designed in consultation with the U.S. Army Corps of Engineers, USEPA, and the California Regional Water Quality Control Board, and in accordance with the provisions established in the Commission's review of the designation of the LA-2 site, was conducted in order to document contamination levels and establish disposal options for the dredged sediments.

The proposed dredge area was divided into seven areas (Exhibit 4). The Navy test data established that Areas IV and V (adjacent to Piers 6 and 7) were too contaminated for ocean disposal, but that the remaining five areas were potentially suitable for ocean disposal. The Port's sediment testing results established that sediments in Areas I, II (except under and around Pier 9), VI, and VII, which together comprise the bulk of the sediments in the dredge area, are suitable for ocean disposal. The Port test data also established that while the top layer of sediments in Areas III, IV, and V will require special handling due to contamination levels, the balance of the sediment in these three areas can be disposed of as clean material at the in-Port disposal sites. In addition, tests to determine suitability for ocean disposal were performed on sediments in Areas I, VI, and VII. In conclusion, approximately 730,000 cubic yards of sediment are contaminated and will be handled and disposed of separately at two in-water locations in the Port, approximately 2.465 million cubic yards of sediment are classified as clean material and suitable for in-Port disposal, and 500,000 cubic yards of material from areas I, VI, and VII are suitable for ocean disposal at LA-2. (The disposal of the aforementioned contaminated and clean sediments at several locations within the Port of Long Beach is the subject of coastal development permit 5-96-231 (Port of Long Beach) on the Commission's January 8, 1997, meeting agenda.)

In addition, EPA Region 9 staff reviewed the sediment testing report and informed Commission staff in November 1996 that up to 500,000 cubic yards of dredged materials from areas I, VI, and VII are suitable for ocean disposal at LA-2. EPA staff also reported that the balance of the dredged materials appear to be suitable for beneficial reuse as beach nourishment, habitat mitigation, aquatic capping, and construction fill material. Finally, EPA continues to encourage the Port of Long Beach to minimize the volume of material proposed for disposal at LA-2 and to investigate other potential reuse alternatives for portions of the 500,000 cubic yards targeted for LA-2. The Commission concurs. Nevertheless, disposal of dredged sediments from West Basin at the LA-2 site will not generate any significant adverse impacts on water quality or fisheries at or adjacent to LA-2. The Port states that disposal activity will be performed in accordance with all Army Corps of Engineers permit conditions issued under Section 103 of the Marine Protection, Research, and Sanctuaries Act to assure compliance with environmental and safety regulations. Therefore, the Commission finds that the proposed activity will be consistent with the marine resource, water quality, and commercial and recreational fishing policies of the CCMP.

3. Dredging and Disposal. The proposed project involves disposal of up to 500,000 cubic yards of dredged sediment suitable for ocean disposal in open coastal waters at the LA-2 offshore disposal site, and as a result, the project must pass the allowable use, alternative, and mitigation tests of



Section 30233 of the Coastal Act. The proposed disposal of dredged material from berthing and navigation areas in the Port of Long Beach is an allowable use under Section 30233(a)(1). The Commission must next find that the proposed disposal at LA-2 is the least damaging feasible alternative. The Port identified six disposal options for the dredged material associated with the proposed Pier T container terminal project:

1. LA-2 ocean disposal site. This site is located approximately 7 miles south-southwest of the Queens Gate entrance to Long Beach Harbor, and is used by a number of southern California entities to dispose of uncontaminated dredged material. Because of the heavy demands on the site compared to the quantities considered during the certification process, the regulatory agencies have indicated that only in exceptional circumstances will any one project be permitted to dispose of more than 500,000 cubic yards at LA-2.
2. Permanent shallow water habitat. A new shallow-water habitat site will be constructed on the southern face of the Navy Mole to replace shallow-water in the West Basin that will be eliminated by dredging. The new habitat will raise the sea bottom, currently 30 to 48 feet deep, to approximately -15 ft MLLW. The total capacity of the new habitat to hold dredged material is approximately 1,220,000 cubic yards. The site could hold up to 730,000 cubic yards of contaminated sediments; the remaining material, consisting of clean sand, would line the rock dikes and provide a cap of at least five feet thick.
3. Temporary shallow water habitat. Pending completion of the permanent habitat it will be necessary to construct a temporary shallow-water habitat, to be located in water currently 30 to 35 feet deep along the Pier 400 causeway, approximately 1,000 feet southwest of the permanent habitat. To build this feature the Port would place 450,000 cubic yards of clean dredged material to create water depths of 15 to 20 feet.
4. Main Channel borrow pit. The Port of Long Beach Main Channel borrow pit, created when the Port built the Pier J Expansion Landfill in 1989-1990, consists of a 30-acre area next to and overlying the Main Channel. Water depths exceed the channel project depth of -76 ft. MLLW due to overexcavation to obtain structural fill material. Depths are generally about -80 ft. MLLW, but in a 10-acre area immediately west of the channel they reach -95 ft. MLLW. The total capacity of the site is approximately 2.15 million cubic yards (to bring the bottom up to -78 ft. MLLW), and the bottom five to seven feet of the deepest area could be utilized for confining contaminated sediments. The Port is not proposing to place any contaminated sediments at this location, however.
5. Pier S upland. An upland area on Pier S (the northeastern quadrant of Terminal Island) has been identified to receive some of the material from Pier T. Most of Pier S is an active oilfield, and it also contains large areas of contaminated soil and ground water that are in the remedial investigation/feasibility study phase. The disposal of clean sediments on Pier S would be limited by the need to protect the oilfield activities and the need to avoid compromising

future investigation and remediation activities. However, a 30-acre site at the extreme northeast corner of Pier S can be cleared of oil infrastructure and accommodate disposal of the estimated 450,000 cubic yards of excavated material and a minimum of 100,000 cubic yards of clean dredged sediments (the disposal of contaminated sediments at the site is impractical because there is not enough space to manage dewatering operations and runoff).

6. Beach nourishment. The City of Long Beach has expressed an interest, in past projects, to receive beach-compatible material from Port dredging projects. If final geotechnical testing confirms the presence of such material and the Corps of Engineers grants approval, local beaches could receive approximately 100,000 cubic yards of suitable material.

The Port intends to use all six alternative sites for disposal of the approximately 3.695 million cubic yards of dredged sediment associated with the Pier T/West Basin project. A net result of maximizing the available capacity of upland and in-Port sites is the subject proposal that meets the Port/EPA objective of limiting single-project disposal volumes at LA-2 to a maximum of 500,000 cubic yards. The Port is continuing to investigate other possible uses for the material slated for disposal at LA-2 in an effort to further minimize that disposal volume. At this time, however, due to sediment characteristics (both physical and chemical) and capacity constraints at the feasible upland and in-water disposal sites, it appears that these other disposal sites will be unable to accommodate an additional 500,000 cubic yards of sediment, and that the LA-2 site is the least environmentally damaging feasible alternative. The Commission agrees with: (1) the Port's evaluation of the project disposal alternatives and disposal site capacities; (2) the Port's determination that given the maximized use of other disposal sites, LA-2 is the preferred site for disposal of a maximum 500,000 cubic-yard increment of clean West Basin sediments from areas I, VI, and VII; and (3) the Port's determination that, as described below and in the previous section of this report on the designation of the LA-2 disposal site, the environmental effects from the dredging and disposal at LA-2 are minor. Therefore, the Commission finds that the proposed project is the least environmentally damaging feasible alternative.

Finally, the Commission must evaluate any mitigation requirements generated by the project. The Port of Long Beach examined the potential effects on marine resources from disposal of 500,000 cubic yards of dredged sediments at the LA-2 site and concluded that only minor and temporary impacts will occur. The disposal site consists of deep water habitat 600 feet below the surface, which has been previously disturbed by the disposal of dredged material. This project will result in minor, short-term impacts to existing benthic habitat, but the disposal areas will recolonize quickly. Turbidity increases will be localized and short-lived. The Commission previously found that these types of impacts are not significant, and do not trigger mitigation requirements, when it concurred with the designation of LA-2. In conclusion, the proposed filling of coastal waters will not significantly affect the marine environment at LA-2, is an allowable use, is the least damaging feasible alternative, and does not require additional mitigation. Therefore, the Commission finds that the proposed project is consistent with the filling and marine resource protection policies of the California Coastal Management Program (Sections 30230, 30233, 30234, 30220, 30224, 30255, and 30701 of the Coastal Act).

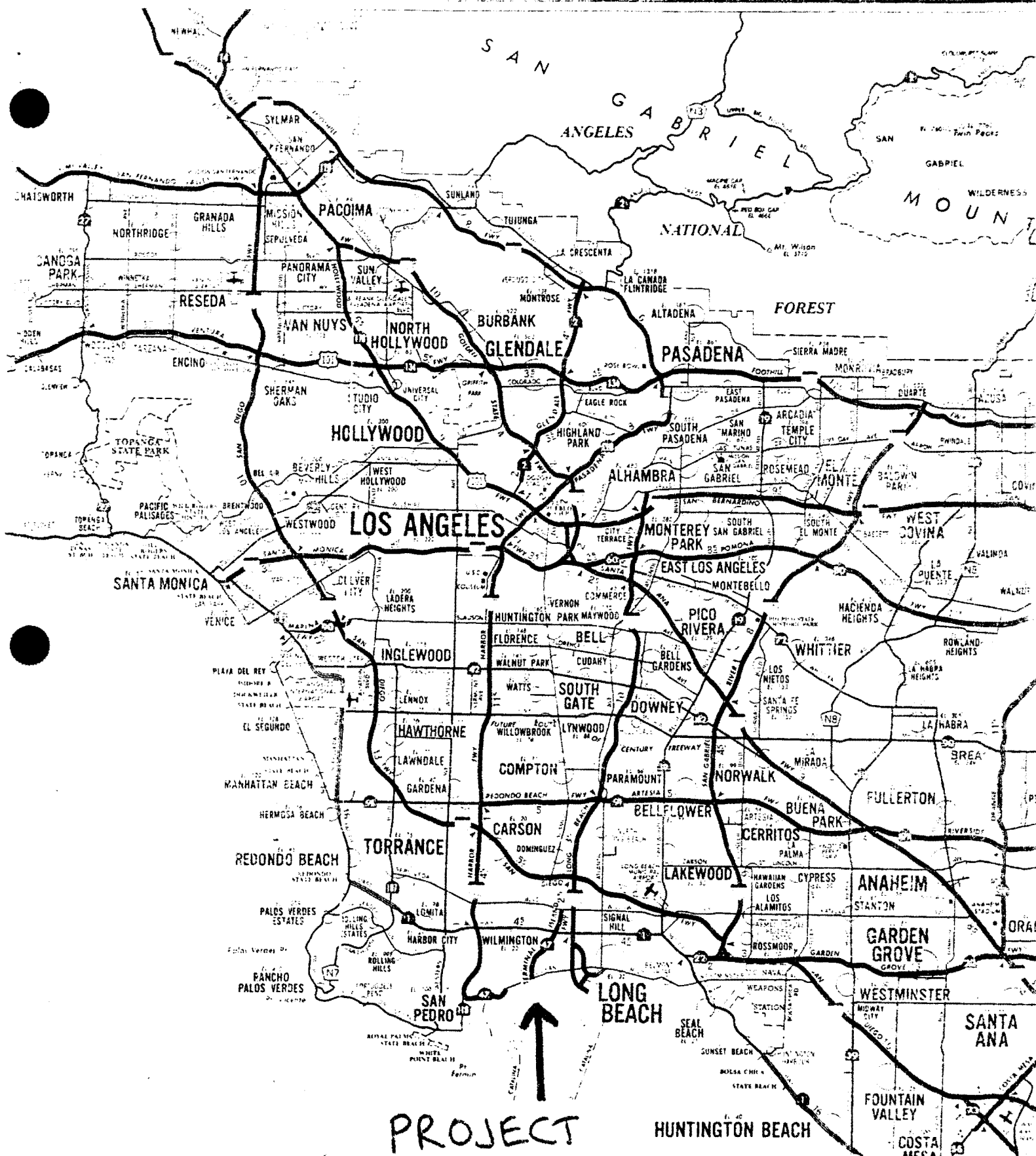


EXHIBIT NO. 1

APPLICATION NO.

CC-146-96



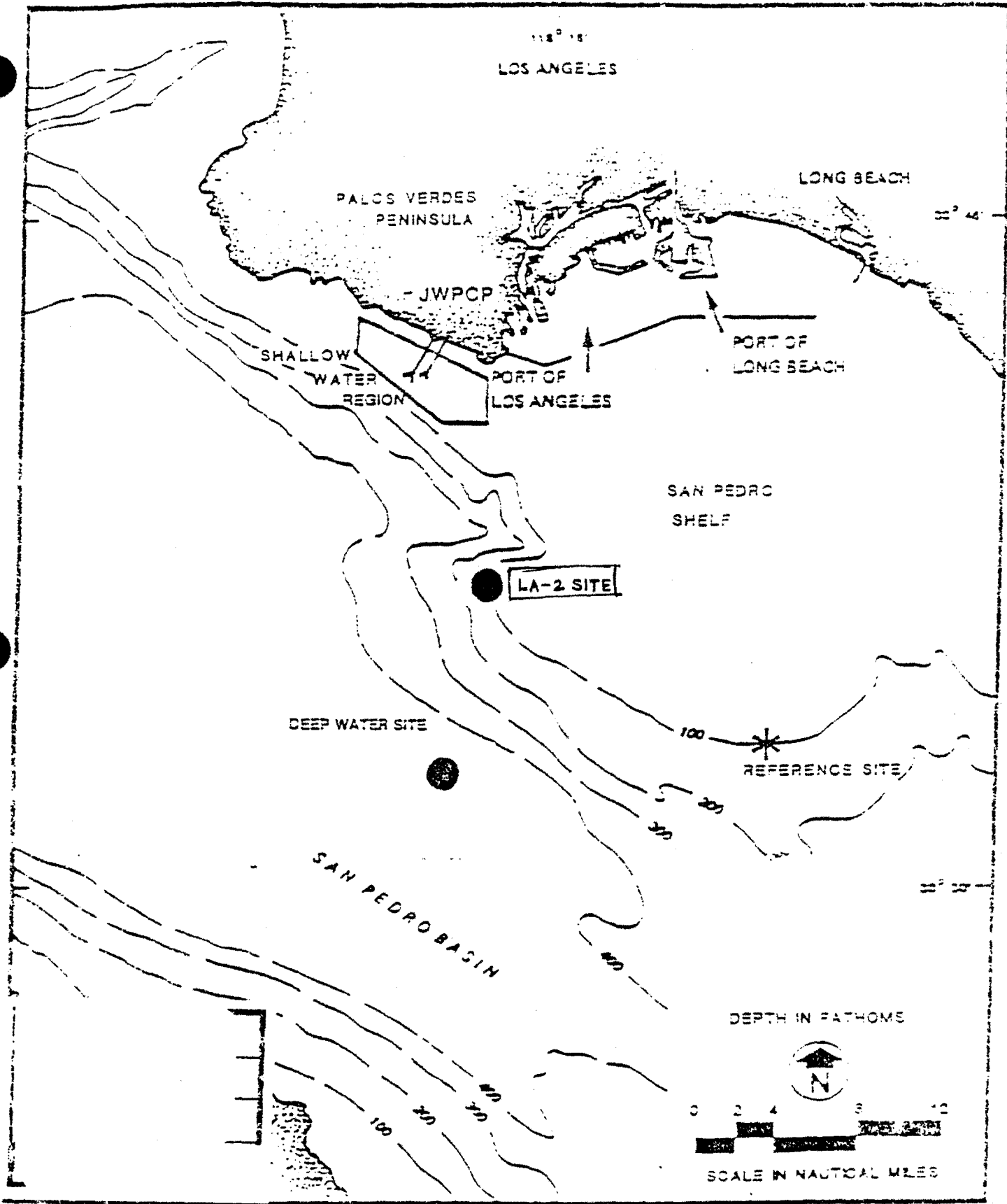


FIGURE 1-1. MAP OF THE PROJECT AREA

JWPCP: LOS ANGELES COUNTY JOINT WATER POLLUTION CONTROL PROJECT AT WHITE

EXHIBIT NO. 3

APPLICATION NO.

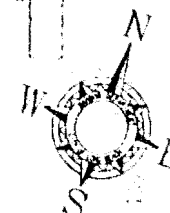
CC-146-96

WHARF CUT TOP OF SLOPE  
(UPLAND EXCAVATION)

LIMIT OF  
EXISTING SHALLOW  
WATER HABITAT

WHARF CUT TOP  
OF SLOPE (DREDGING)

APPROX. TOP OF  
DREDGE SLOPE  
(3H : 1V TYP.)



EXIST -51.0  
CONTOUR

DREDGE AREA	DREDGE QNTY. (KCY)		TOTAL QNTY. (KCY)
	UNSUIT.	SUITABLE	
I	0	2,029	2,029
II	83	656	739
III	66	34	100
IV	408	265	673
V	173	21	194
VI	0	302	302
VII	0	108	108
TOTAL	730	3,415	4,145

Harris, Inc. **KPII** Consulting Engineers

**THE PORT OF LONG BEACH**

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DREDGE AREAS AND QUANTITIES

NAVAL STATION  
CONTAINER TERMINAL

FIGURE 2  
AUGUST 29, 1964

EXHIBIT NO. 4  
APPLICATION NO.

CL-116-91