STATE OF CALIFORNIA -- THE RESOURCES AGENCY PETE WILSON, *Governor*

**CALIFORNIA COASTAL COMMISSION**
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# W 12a

STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY DETERMINATION

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| Consistency Determination No. | **CD-094-98** |
| Staff: | JRR/LJS-SF |
| File Date: | 8/6/98 |
| 45th Day: | 9/20/98 |
| 60th Day: | Extended to 12/18/98 |
| Commission Meeting: | 12/8-10/98 |

**FEDERAL AGENCY: CORPS OF ENGINEERS**

**DEVELOPMENT LOCATION:** Los Angeles River Estuary in the City of Long Beach, LA-2 ocean disposal site, and the Pier E/Slip 2 landfill in the Port of Long Beach (Exhibits 1-5).

**DEVELOPMENT DESCRIPTION:** Maintenance dredging of an existing navigation channel at the mouth of the Los Angeles River, and disposal of clean sediment at LA-2 and contaminated sediment at the Pier E/ Slip 2 landfill in the Port of Long Beach.

**SUBSTANTIVE FILE DOCUMENTS:**

1. Environmental Assessment for Los Angeles River Estuary maintenance dredging, Long Beach California, Department of the Army, Corps of Engineers, July 1998.

2. Consistency Determinations CD-043-95 and CD-005-97 for dredging and disposal of Los Angeles River navigational channel sediment by the U.S. Army Corps of Engineers.

3. Consistency Determinations CD-63-90 and CD-114-96 (EPA, Designation and Designation Extension, respectively, of LA-2 Ocean Disposal Site).

4. Coastal Development Permit 5-96-231-A1 (Port of Long Beach).

5. Port of Long Beach Port Master Plan (as amended through November 1998).

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## EXECUTIVE SUMMARY

The Corps of Engineers has submitted a consistency determination for its proposed maintenance dredging of a navigation channel in the Los Angeles River estuary. The Corps proposes to dredge and dispose approximately 390,000 cubic yards of clean dredged material at LA-2, an Environmental Protection Agency (EPA) designated offshore disposal site, and approximately 195,000 cubic yards of contaminated dredged material at the Pier E/Slip 2 landfill in the Port of Long Beach. Dredging and disposal operations for this project will extend through March 31, 1999.

The dredging is necessary to maintain navigational safety for the Catalina Ferry, a recreational boating operation located in Queen's Way Marina adjacent to the Los Angeles River estuary. The proposed maintenance dredging is designed to eliminate existing channel shoaling that interferes with ferry navigation. Therefore, the project is consistent with the recreational boating policies of the California Coastal Management Program (CCMP; Sections 30220 and 30224 of the Coastal Act).

Sediments in the project area underwent physical, chemical, and bioassay testing to determine their suitability for placement at various disposal locations. Approximately 390,000 cubic yards of sediment are suitable for disposal at the LA-2 offshore disposal site. Approximately 195,000 cubic yards of sediment are contaminated and will be placed in the Pier E/Slip 2 landfill in the Port of Long Beach. This site was previously approved by the Commission for disposal of contaminated sediments and will permanently isolate the Los Angeles River estuary contaminants from the marine environment. The proposed dredging and disposal will not generate any significant adverse effects on the coastal zone, and the project is consistent with the marine resource and water quality protection policies of the CCMP (Sections 30230 and 30231 of the Coastal Act).

The dredging area supports foraging habitat for the California brown pelican and the California least tern, both federally listed endangered species. Dredging in this area could result in re-suspension of contaminated sediment and accumulation of pollutants in the tissue of prey species for the pelican and tern, which in turn could adversely affect

these listed species. Because the Corps intends to begin dredging in December and complete operations before the beginning of the tern nesting season on April 1, the potential for significant adverse effects on pelicans or least terns will be minimized. Therefore, the project is consistent with the environmentally sensitive habitat protection policies of the CCMP (Section 30240 of the Coastal Act).

The proposed project includes disposal of sediment in an area that will not support beach replenishment. Grain size analysis indicates that the proposed clean dredge material is not suitable for beach replenishment due to the predominately small grain size of the clean material. Therefore, the clean dredged sediments are not suitable for beach replenishment and the proposed disposal at LA-2 is consistent with the sand supply policies of the CCMP (Section 30233 of the Coastal Act).

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## STAFF SUMMARY AND RECOMMENDATION:

### I. Project Description.

The Corps of Engineers proposes maintenance dredging of a navigation channel within the Los Angeles River estuary to allow for unobstructed passage of vessels in and out of Queen's Way Marina (Exhibits 1-5). Approximately 585,000 cubic yards (c.y.) of sediment (390,000 c.y. clean and 195,000 c.y. contaminated) will be dredged to provide the authorized federal channel advanced maintenance depth of –31 feet MLLW. The proposed project extends from Queen's Way Marina to approximately 1300 feet downstream of Queen's Way Bridge, within the same general boundaries that were dredged in previous maintenance dredging operations. The dredged portion of the channel will be approximately 250 feet in width.

Dredging and disposal of clean and contaminated sediments will be accomplished using a clamshell dredge and disposal barges. Operations are scheduled to commence in December 1998 and conclude no later than March 31, 1999, in order to avoid adversely affecting shallow water foraging habitat used by the California least tern. The Corps proposes to dispose of 390,000 c.y. of clean material at LA-2, an EPA designated ocean dredged material disposal site. In addition, approximately 195,000 c.y. of contaminated material will be placed in the Pier E/Slip 2 landfill in the Port of Long Beach (Exhibit 6). The Corps' consistency determination describes the proposed disposal of contaminated sediments at the Slip 2 landfill:

> *Fill material would be secured by a new closure dike consisting of approximately 194,000 tons of fill and rock (see Figure 5). Unsuitable material of structurally poor quality will be placed at the bottom of the slip, and will be topped or mixed with contaminated material of good structural quality. Contaminated material will be conveyed by barge to the slip, where it will be bottom-dumped, clamshelled out, or hydraulically unloaded. Uncontaminated material will be dredged and placed*

*hydraulically, forming a 25 to 35-foot-thick cap over the unsuitable material and a 100-foot-thick liner between it and the rock dike. Finally, the entire site will be sealed with approximately 3 feet of base rock and asphalt/concrete paving. The Port of Long Beach will place a silt curtain to close off the work area and will monitor water quality during construction, in accordance with California Regional Water Quality Control Board (CRWQCB) waste discharge requirements (WDR's).*

. . .

*Full environmental impact analyses of the Slip 2 fill project and the Pier T dredging project are provided in the June 1998 EIR, the Local Reuse Authority Plan EIR (August 1998), and associated permit applications (including Coastal Commission Permit #5-96-231-A). These documents are hereby incorporated by reference as per 40 CFR 1502.21. The Coastal Commission permit was approved at the November 6, 1998 hearing and the CRWQCB issued amended WDR's on November 2, 1998; the Corps of Engineers permit is expected to be in place by December 1998. The Corps' LARE dredging project will only be implemented if the Port of Long Beach's Slip 2 landfill is approved by Corps Regulatory. Otherwise, another disposal alternative will be evaluated.*

*Provided that the Port of Long Beach obtains all necessary environmental clearance for the Slip 2 landfill, the Corps proposes to place approximately 150,000 cubic meters (cm)* [195,000 c.y.] *of contaminated material from the LARE at this site. Material would be dredged prior to April 1, 1999 to avoid potential impacts to the California least tern, and discharged within the Slip 2 area designated for contaminated sediment. This schedule, however, would result in discharge of contaminated material prior to the Port's construction of the containment dike. Therefore, to minimize the potential for sediment movement, material will be deposited toward the back of the slip, in an area with little water circulation. In addition, a silt curtain would be placed in front of the disposal mound, to be removed only after the Port's outer silt curtain or containment dike is in place. As discussed previously, the Port's construction of containment structures is scheduled to begin within a few months of the Corps' project.*

As noted above, the Coastal Commission approved the designation of the Pier E/Slip 2 landfill as a disposal site for contaminated dredged materials, including materials from the Los Angeles River Estuary, when it certified Port of Long Beach port master plan amendment No. 12 and approved coastal development permit amendment No. 5-96-231-A1 at its October 1998 and November 1998 meetings, respectively.

**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) or Port Master Plan (PMP) of the affected area. If the Commission certified the LCP or PMP and incorporated it into

the CCMP, the LCP or PMP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP or PMP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has incorporated the City of Long Beach LCP and the Port of Long Beach PMP 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 **YES** vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

> **Concurrence**
>
> The Commission hereby **concurs** with the consistency determination made by the Corps of Engineers for the proposed project, finding that the project complies with and will be conducted in a manner consistent with the California Coastal Management Program.

**V. 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....*

Shoaling of Los Angeles River estuary interferes with recreational boating at the Queen's Way Marina. The design depth of the Los Angeles River estuary's channels is -31 feet mean lower low water (MLLW). In its consistency determination, the Corps describes the current situation as follows:

> *The mouth of the Los Angeles River* [LAR] *serves as part of the transportation corridor for coastal cruise liners transiting from Queen's Way Marina, in the City of Long Beach, to Santa Catalina Island. The Los Angeles District, Corps of Engineers (COE-LAD) is responsible for maintaining navigable depths in the channels and basins within Los Angeles and Long Beach Harbors. The Corps is also responsible for maintaining a navigable channel within the river to provide waterborne access to Queen's Way Marina. However, the presence of contaminants in the LAR and the lack of suitable disposal sites for contaminated dredged sediments has prohibited development of a routine maintenance dredging cycle for this area.*
>
> *Winter storms regularly cause shoaling in the Queen's Way Marina area. The water in this area at such times becomes extremely shallow, and can cause significant disruptions to boat traffic, which necessitates dredging. When shoaling occurs to the degree it did in 1995, the resultant temporary closure of the Marina area affects businesses in the Marina and on Catalina Island, which depend on tourist trade; particularly during the winter whale-watching season.*
>
> *The proposed maintenance dredging activities within the Los Angeles River Estuary will serve a three-fold purpose: (1) as a preventative measure to alleviate the need for emergency dredging of this area; while (2) assuring continued safe navigation for various commercial harbor crafts entering and traversing Queen's Way Marina; and, at the same time (3) avoiding or minimizing impacts to natural resources and the environment.*

The main boating activity in the Queen's Way Marina is the Catalina Ferry. Within the LA/LB Harbor complex, several major charter boat companies provide charter service to Avalon and Isthmus Cove on Santa Catalina Island, including Catalina Cruises in Queen's Way Marina. These recreation charters also serve specialized activities, including sportfishing, scuba diving, whale watching, and harbor touring. The proposed dredging will improve navigation within the Los Angeles River estuary, and thus support and protect recreational boating. Therefore, the Commission finds that the proposed project is consistent with the recreational boating policies of the California Coastal Management Program (CCMP; Sections 30220 and 30224 of the Coastal Act).

**B. Dredging and Filling**. Section 30233 of the Coastal Act provides the following in relevant part:

> *(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.*
>
> ...
>
> *(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.*
>
> ...

The proposed maintenance dredging and disposal project needs to be examined for consistency with Section 30233 of the Coastal Act. Under Section 30233, fill of open waters, including disposal of dredge materials, is limited to those cases where the proposed project is an allowable use, is the least damaging alternative, and where mitigation measures have been provided to minimize environmental impacts. The disposal of dredged materials from the maintenance of navigation channels is an allowable use under Section 30233(a)(2). The proposed disposal locations are an EPA-approved disposal site and a Commission-approved disposal site for contaminated sediments, and are the least damaging alternatives for disposal of the dredged materials (the dredged sediments are not suitable for beach replenishment due to grain site incompatibility). As discussed below, the project will have no significant impacts on coastal resources and no additional mitigation measures are necessary. Therefore, the Commission finds that the proposed project is consistent with the dredge and fill policies of the California Coastal Management Program (Section 30233 of the Coastal Act).

**C. Water Quality and Marine Resources**: Section 30230 of the Coastal Act states 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 states 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.*

The proposed project involves, in part, the disposal at LA-2 of approximately 390,000 cubic yards of clean dredged sediment from the Los Angeles River estuary. In analyzing the Corps' proposal for disposal at LA-2, the Commission will rely heavily on the findings it adopted in reviewing EPA's consistency determinations for the LA-2 site designation (CD-63-90 and CD-114-96). These findings are hereby incorporated by reference into the subject findings. Although LA-2 is located outside the state's coastal zone, an adverse effect on marine habitat from dredged material disposal could affect the coastal zone. The primary concern regarding ocean disposal of dredged material is the presence and level of contamination in the sediments, and the impacts that any contaminants present could have on marine resources.

The proposed dredge area was divided into three geographical areas, and sediment sampling and analysis was conducted to a depth of –31 feet mean lower low water (MLLW) in Areas 1 and 2, and to –25 feet MLLW in Area 3 (Exhibit 7). Sediment cores from Areas 1 and 2 were split vertically into top and bottom layers at –18 feet MLLW. A summary of the sediment test results is provided in Exhibit 8. Staff from USEPA reviewed the test results and provided the following determination of suitability for project sediments:

> *The dredge areas that failed the solid phase bioassay, and are therefore not suitable for ocean disposal or unconfined aquatic disposal, are Area 1 Top, Area 2 Top, and Area 1 Bottom. The dredge areas that passed the solid phase bioassay*

*(and the other testing criteria) and which are suitable for unconfined aquatic or ocean disposal, are Area 2 Bottom and Area 3.*

*Area 1 Bottom was a near miss for the solid phase bioassay (survival 23% reduced relative to reference) while passing all the other testing criteria. Given the that the bottom layer of Area 2 and Area 3 are suitable, EPA believes there are materials in Area 1 Bottom that would be suitable for unconfined aquatic or ocean disposal. EPA would concur on aquatic/ocean disposal of Area 1 Bottom if a minimum of a 0.5 meter buffer was included with the unsuitable Area 1 Top dredged materials. Under these conditions, Area 1 Top would include materials from the current bottom elevations down to at least -6.0 meters MLLW, instead of the -5.5 meters MLLW elevation evaluated in the sediment testing program. Area 1 Bottom would include materials from no higher than -6.0 meters MLLW to -9.6 meters.* ***Given this additional buffer, EPA believes the Area 1 Bottom sediments will be similar to the proposed dredged materials in Area 2 Bottom and Area 3 and suitable for unconfined aquatic and/or ocean disposal.***

Analysis of the sediments proposed for disposal at LA-2 (sediment from the bottom layers of Areas 1 and 2, and Area 3), including bioassay, bioaccumulation, and chemical tests, indicate that this material complies with the "Green Book" standards (Evaluation of Dredged Material Proposed for Ocean Disposal, Testing Manual, Environmental Protection Agency and the Corps of Engineers, February, 1991). The Commission staff and EPA have therefore agreed with the Corps that this material complies with the Green Book tests and is suitable for ocean disposal at LA-2.

While the disposal will result in minor, short-term impacts to existing benthic habitat, the disposal area will recolonize over several years. Turbidity increases will be localized and short-term. The Commission previously found that these types of impacts are not significant when it concurred with other dredge material disposal operations at LA-2 and at other southern California EPA-designated ocean disposal sites. In conclusion, the proposed disposal of clean dredge materials at LA-2 will not significantly affect coastal marine resources. Therefore, the Commission finds that the proposed project is consistent with the marine resources and water quality protection policies of the California Coastal Management Program (Sections 30230 and 30231 of the Coastal Act).

The proposed project also includes the dredging and disposal of 195,000 cubic yards of contaminated sediment from the top layers of sampling Areas 1 and 2. After testing of sediment chemistry, suspended particulate phase bioassays, solid phase bioassays, and tissue bioaccumulation, the Corps (and EPA) determined these materials to be unsuitable for ocean or other unconfined aquatic disposal. The Corps proposes to place these sediments within the proposed Pier E/Slip 2 landfill in the Port of Long Beach. In reviewing CDP 5-96-231-A1 (October 1998) and Port Master Plan Amendment No. 12 (November 1998), the Commission approved the designation of the Pier E/Slip 2 landfill as a site for the placement of contaminated dredged sediments.

The proposed landfill disposal would allow contaminated dredge material to be beneficially re-used. The use of this material will not have significant environmental effects. The placement of contaminants will be adequately isolated from the marine environment by the rock dike closing off the slip, by the 100-foot buffer between the dike and the contaminants, and by the existing upland on the remaining three sides of the slip. In conclusion, this element of the project will minimize environmental effects by ensuring the removal of contaminated sediments from the marine environment and the permanent isolation of those sediments in the Pier E/Slip 2 landfill. The Commission therefore concludes that the proposed dredging and disposal of contaminated sediments from the Los Angeles River estuary is consistent with the water quality and marine resource policies of the CCMP (Sections 30230 and 30231 of the Coastal Act).

**D. 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 several federally listed species. These species include California brown pelican (Pelecanus occidentalis californicus), California least tern (Sterna antillarum browni), peregrine falcon (Falco peregrinus), marbled murrelet (Brachyramphus marmoratus), and the western snowy plover (Charadrius alexandrinus nivosus). Several species of marine mammals and sea turtles may be transient visitors to the harbor and the LA-2 disposal site, but the project will not affect these species. In its environmental assessment, the Corps describes the habitat needs of the federally listed species as follows:

> *1. **California Brown Pelican.** California brown pelicans (Pelecanus occidentalis californicus) frequent San Pedro Bay, and have been observed resting and feeding within the harbor complex. Pelicans occur year-round in the project area, although their numbers fluctuate seasonally due to an influx of post-breeding birds in the summer. The highest densities of brown pelicans occur between July and November. Brown pelicans primarily forage on surface-feeding fish in nearshore waters. This species is considered to be very tolerant of human activity near its daytime roosts, and readily utilizes various man-made shoreline structures (i.e., piers, breakwaters, groins, marine vessels, buoys) as roosting sites. The California brown pelican has been designated as endangered by the U.S. Department of Interior and the State of California because of reproduction failures caused by the collapse of thin-shelled*

*eggs during incubation. These thin-walled eggs have been attributed to food chain accumulation of DDT. Breeding areas are on Islas Coronados (Coronado Islands), Anacapa Island, Santa Barbara Island and Scorpion Rock off Santa Cruz Island.*

*2.* ***California Least Tern.*** *The Federally- and State-listed endangered California least tern (Sterna antillarum browni) is a migratory bird that frequents the southern California coast from April to mid-September. The birds breed in open, unvegetated sandy areas, and forage on small fish such as topsmelt and anchovy in nearshore waters near their breeding colonies. Breeding adults catch and deliver small fish to the newly hatched flightless young. Reproductive success is closely related to the availability of undisturbed nest sites and nearby waters with adequate supplies of prey. The least tern is endangered because most of its breeding areas have been disturbed by human use of beaches and by predation on nests from cats, foxes, and other predators.*

*The tern in known to forage along the banks of the LAR, but no suitable habitat is located in this area for nesting. Of the three tern colonies in the region, the closest one is located on Terminal Island, approximately 4 miles from the proposed dredging and disposal areas. This site was located in the southeastern corner of Pier 300 in 1987 but was then moved northward, near the Seaplane Anchorage. A permanent relocation of the colony away from areas to be developed is still being considered. The other two colonies are located at Seal Beach National Wildlife Refuge and the Bolsa Chica State Ecological Reserve. Terminal Island is sometimes used as a re-nesting site for least terns from other colonies and occasionally serves as a post-breeding congregation area (Massey and Atwood 1985).*

*3.* ***Peregrine Falcon.*** *Peregrine falcons, which are listed on both Federal and State of California endangered species lists, forage in the project area. Since 1987, peregrines have nested in the City of Long Beach. Three or four pairs nest within one mile of Los Angeles Harbor. The nesting season for peregrine falcons extends from January to July. Falcons maintain distinct territories, and forage over vast areas in both wetland and upland locations. They are primarily hunters of birds. DDT-caused eggshell thinning remains a problem for the peregrine falcon. Other mortality factors include collisions with power lines, shootings, and poaching.*

*4.* ***Marbled Murrelet.*** *This small seabird, listed as threatened by the USFWS, occasionally winters in southern California, but is not known to nest south of Santa Cruz (USFWS, 57 FR 45328, 10/1/92). Its habitat includes coastal waters and bays, where it feeds on fish and invertebrates.*

*It breeds inland on mountains near the coast, mainly high on limbs of mossy conifers. The marbled murrelet is threatened by the loss and modification of its nesting habitat, primarily due to commercial timber harvesting. Mortality associated with oil spills and gill-net fisheries (in Washington) are lesser threats adversely affecting the marbled murrelet. This bird is not expected to be affected by this project.*

*5.* ***Western Snowy Plover****. The western snowy plover is listed as threatened by the USFWS (U.S. Department of the Interior, 1993). Nest sites typically occur in flat, open areas with sandy or saline substrates. Vegetation and driftwood are usually sparse or absent. Nest site selection and pair bond formation occur from early to mid-March, and eggs of the first clutch are usually laid by early April. Snowy plovers forage on invertebrates in the wet sand and amongst surf-cast kelp within the intertidal zone; in dry, sandy areas above the high tide; on salt pans; and along the edges of salt marshes and salt ponds.*

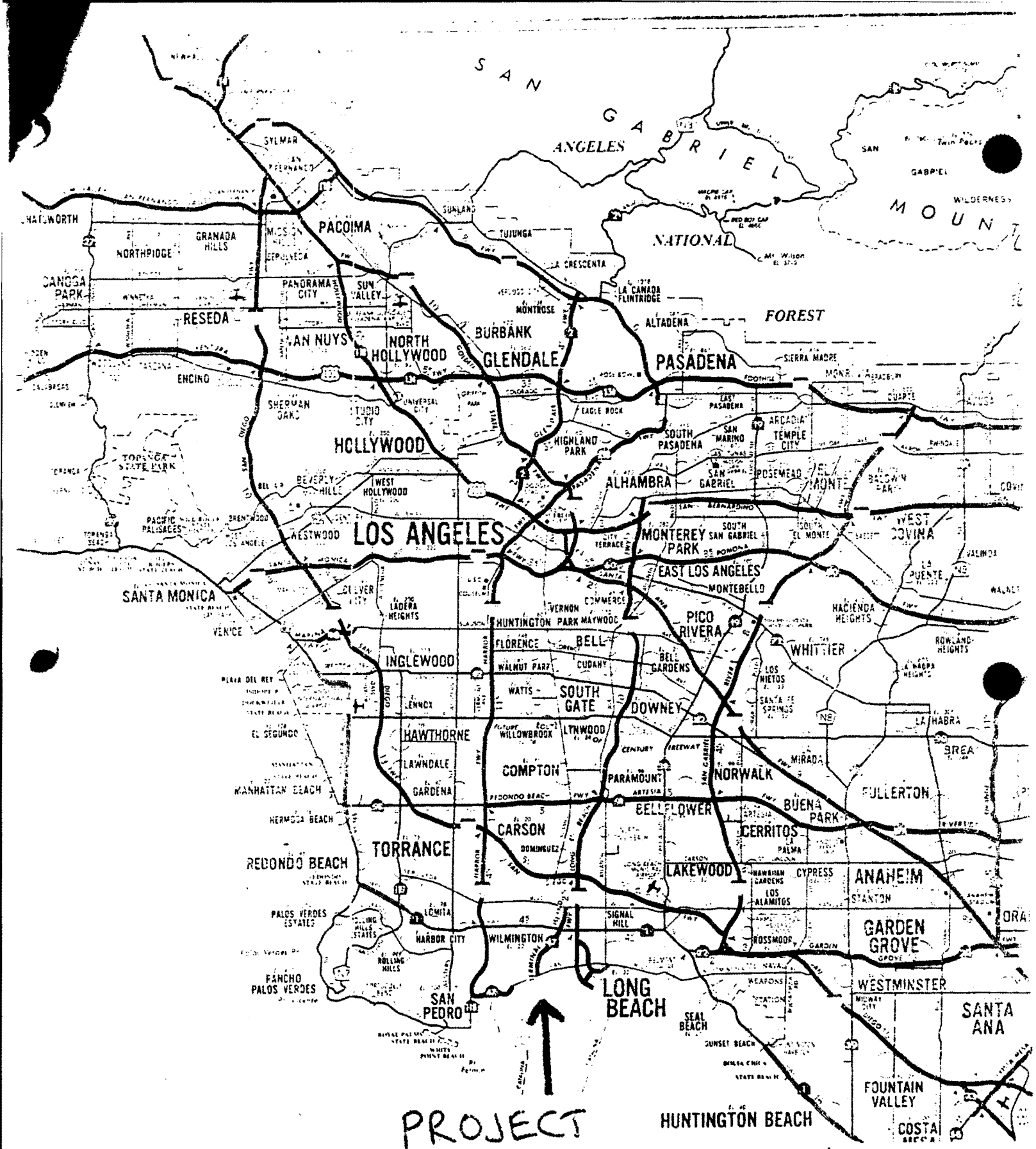
*Studies in California, Oregon, and Washington indicate that the coastal breeding population has declined significantly in recent years (Page and Stenzel 1981; Wilson 1984). Fewer than 1500 birds, and 28 nesting sites, remain in the three states. The subspecies of plover has disappeared as a breeding bird from most of California beaches in and south of Los Angeles. Development has eliminated the plover as a breeding species from many other coastal areas, as well. No nesting has been documented in the project area, although small numbers of wintering or migrant birds may occur in the vicinity (Chambers Group, 1996). Dune stabilization by introduced beach grass has also modified much formerly open coastal sand flat habitat. Evidence exists that human activity (i.e. recreation, beach cleaning), is responsible for some of the coastal decline, as well as predation by pet dogs, crows, foxes, skunks, and other animals (Federal Register Vol. 57, January 14, 1992).*

The two species most likely affected by the proposed project are the California least tern and the California brown pelican. Both of these species forage in the Los Angeles River estuary and could be affected by increases in turbidity and resuspension of contaminated sediment. Because the Corps intends to begin dredging in December and complete operations before the beginning of the tern nesting season on April 1, the potential for significant adverse effects on pelicans or least terns will be minimized. Pelicans may be temporarily displaced from their roosting and feeding areas due to dredging, but they easily find other such areas adjacent to the Los Angeles River estuary. Likewise, Least terns should not be adversely affected by the project since all dredging operations (and the resulting turbidity plumes from resuspended sediments) will terminate prior to the start of the nesting season on April 1. Therefore, the Commission finds that the proposed project is consistent with the environmentally sensitive habitat protection policies of the California Coastal Management Program (Section 30240 of the Coastal Act).

**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.*

The Corps of Engineers proposes to dispose approximately 390,000 cubic yards of clean dredged material at LA-2, an EPA-approved ocean dredge material disposal site seven miles offshore from Long Beach. Material placed at this site would not be available for beach replenishment. Grain size analysis indicates that the proposed dredge material is not suitable for beach replenishment due to the predominately small grain size of the clean material. Wave energy would move this fine material off the beach and out of the littoral system if the material were placed on the beach or in the nearshore zone. Therefore, the Commission finds that the clean dredged sediments are not suitable for beach replenishment and that the proposed disposal at LA-2 is consistent with the sand supply policies of the CCMP (Section 30233 of the Coastal Act).




| EXHIBIT NO. |
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| APPLICATION NO. |
| CD-94-98 |
| California Coastal Commission |

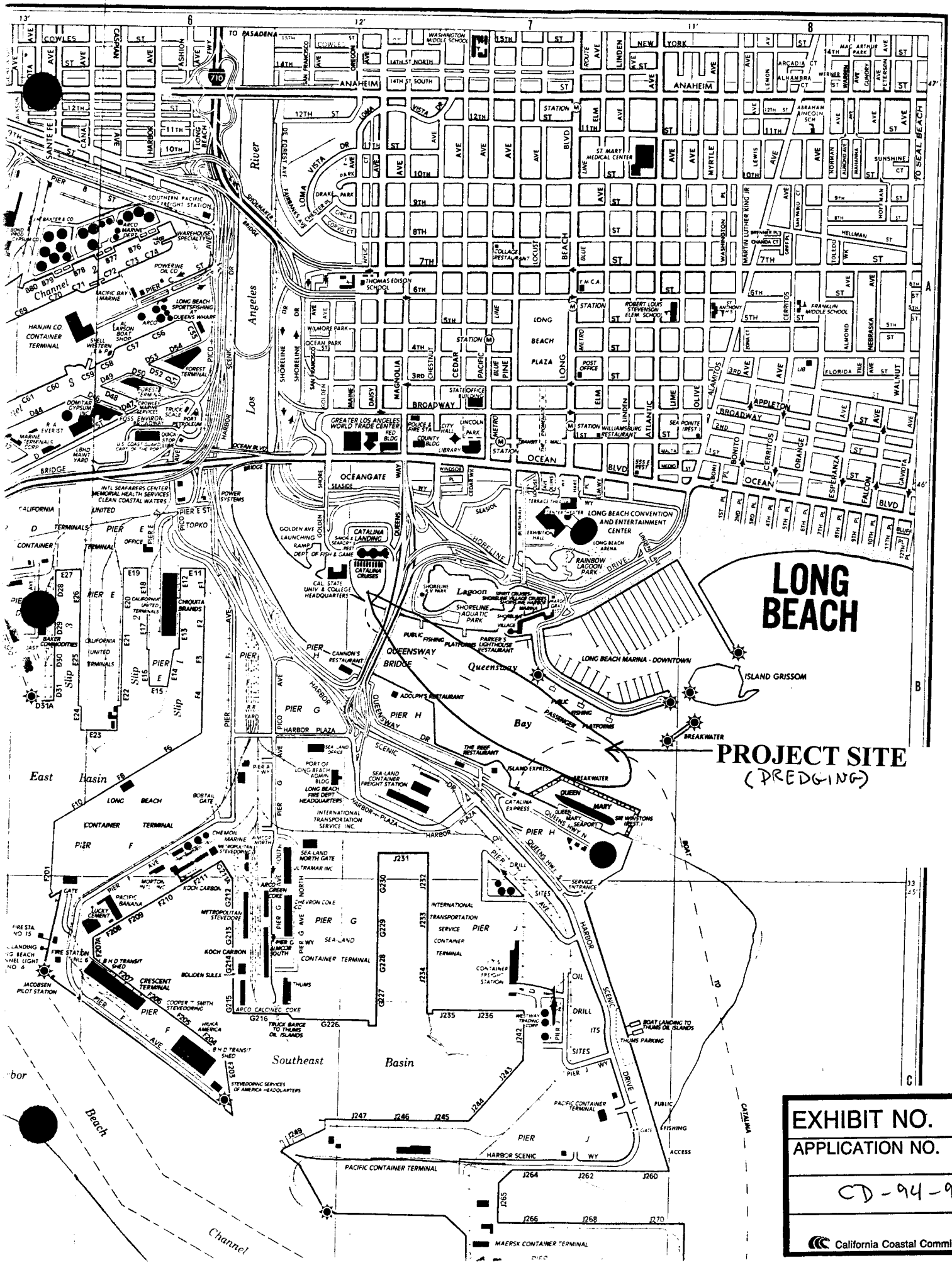



EXHIBIT NO. 2

APPLICATION NO.

CD-94-98

California Coastal Commission

# PROPOSED (REVISED) DREDGE LIMITS

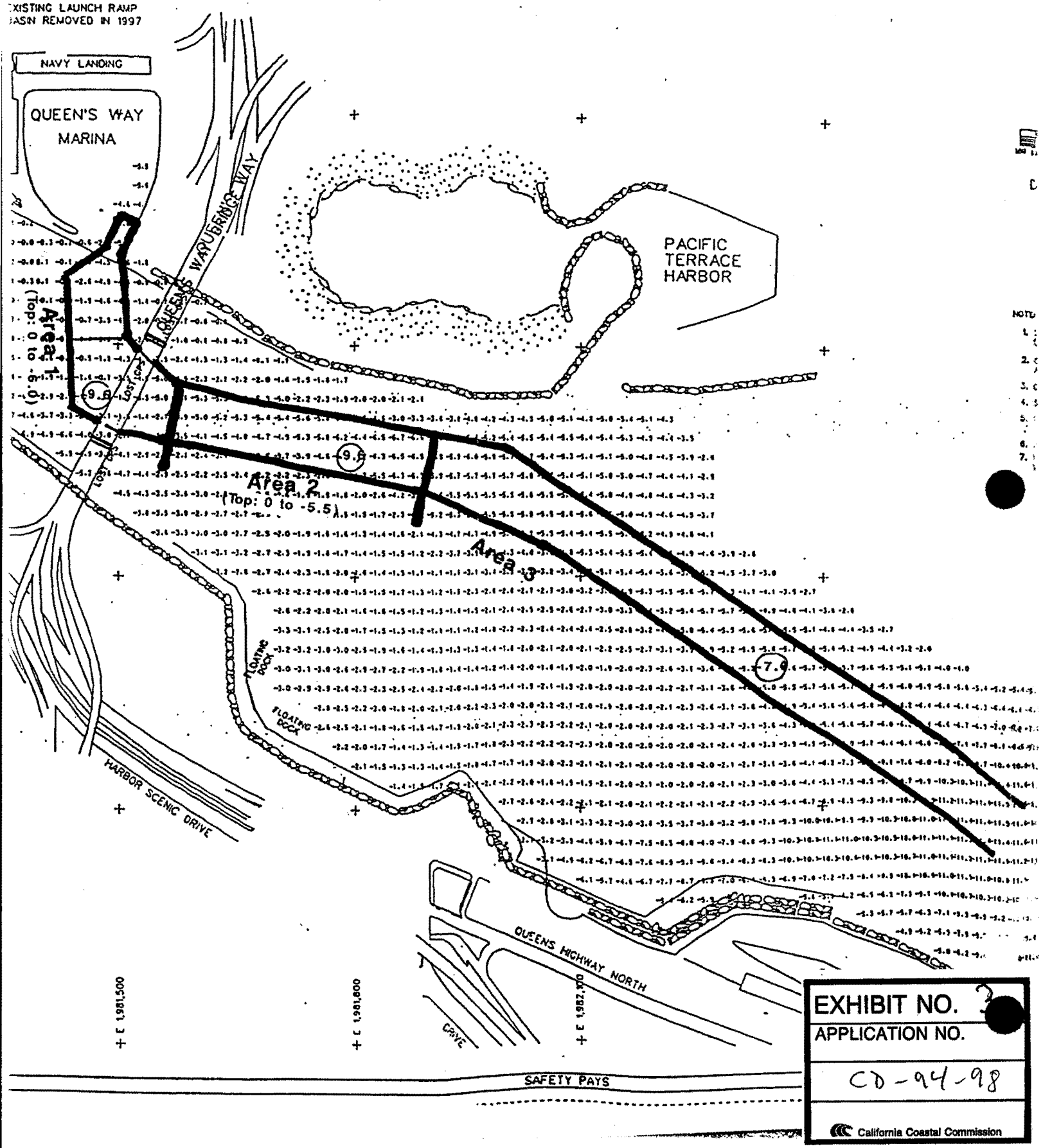



EXHIBIT NO. 3
APPLICATION NO.
CD-94-98
California Coastal Commission

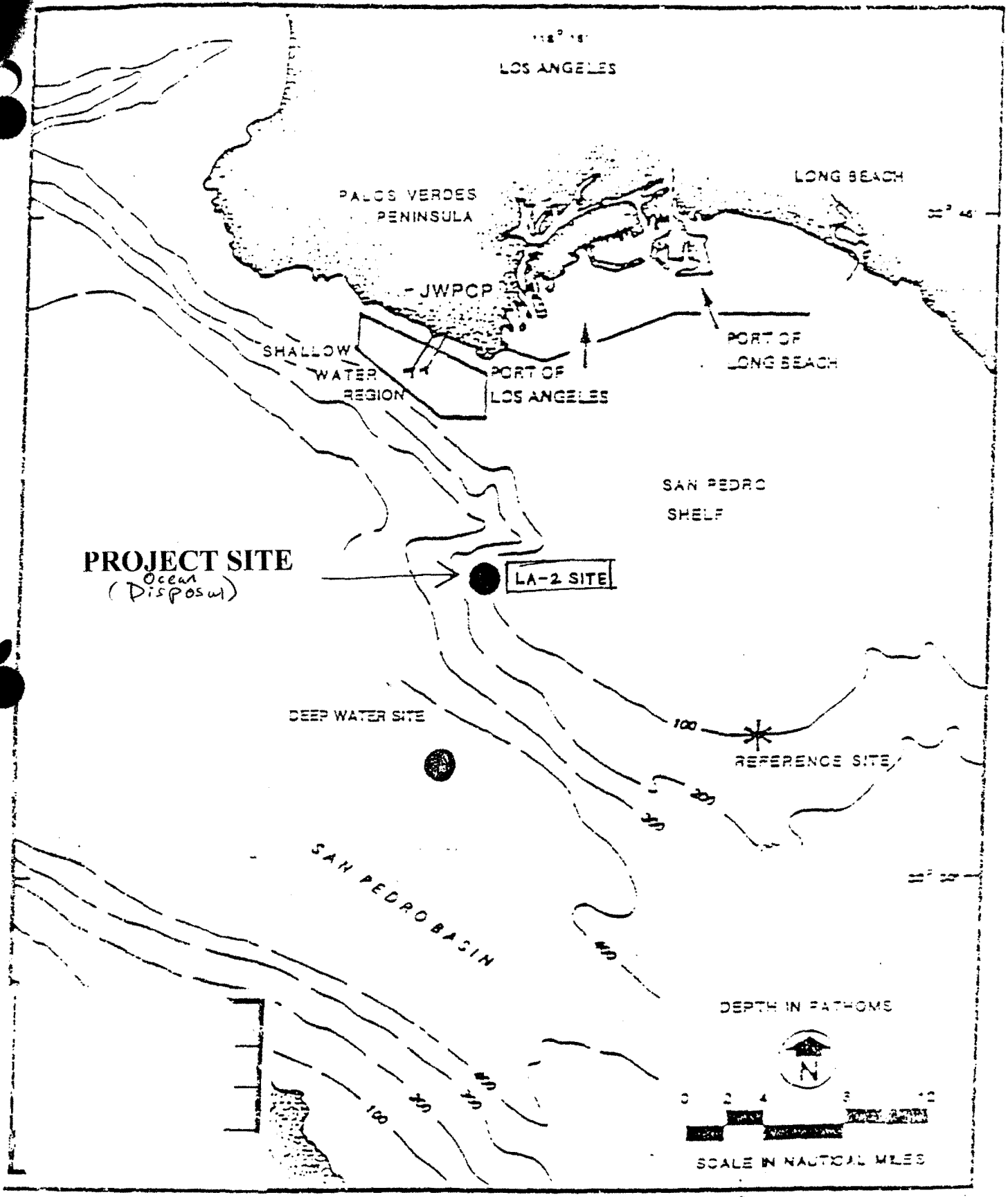
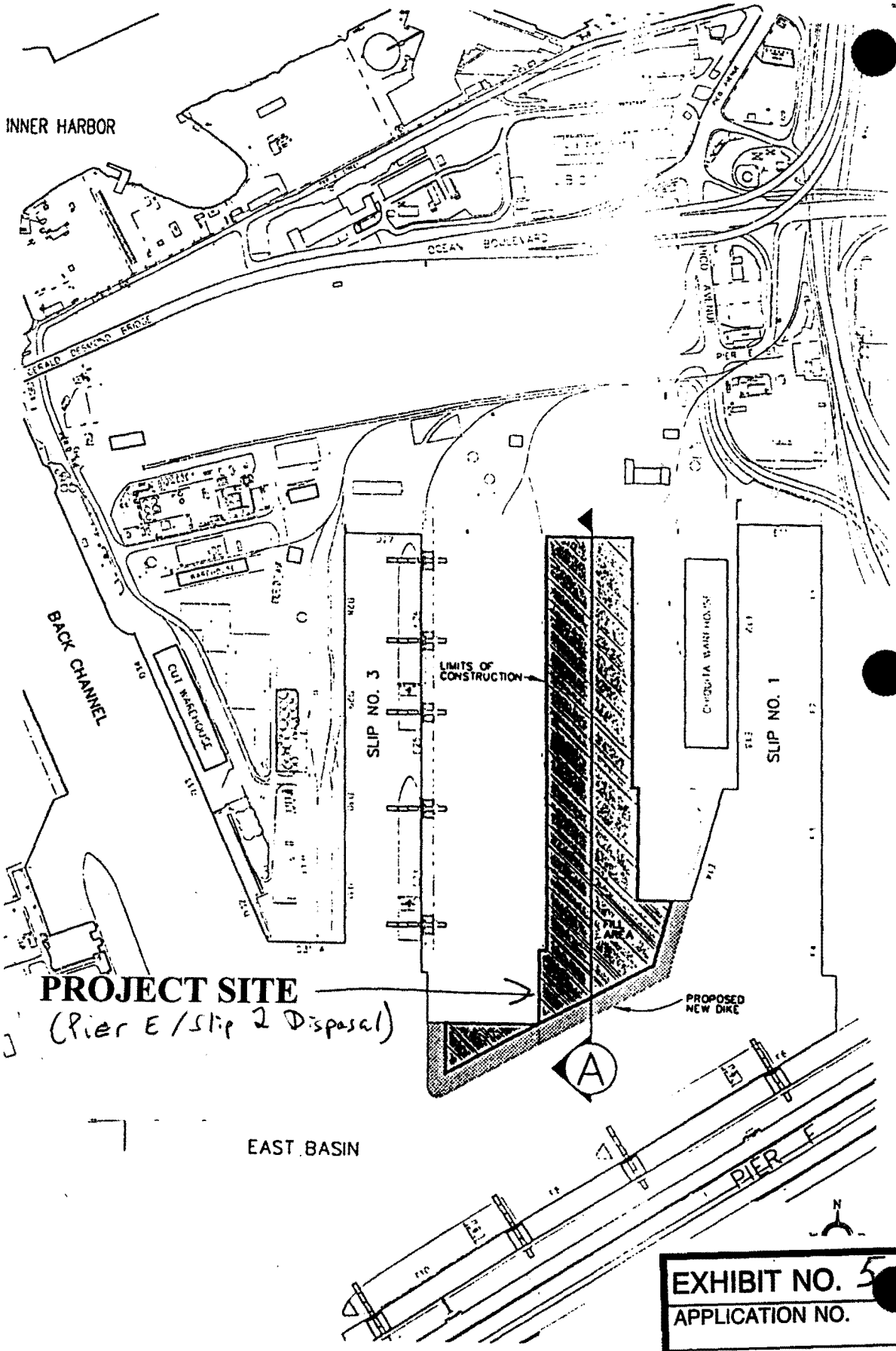



FIGURE 1-1. MAP OF THE PROJECT AREA

JWPCP: LOS ANGELES COUNTY JOINT WATER POLLUTION CONTROL PROJECT (T WHITE

EXHIBIT NO. 4
APPLICATION NO.
CD-94-98
California Coastal Commission

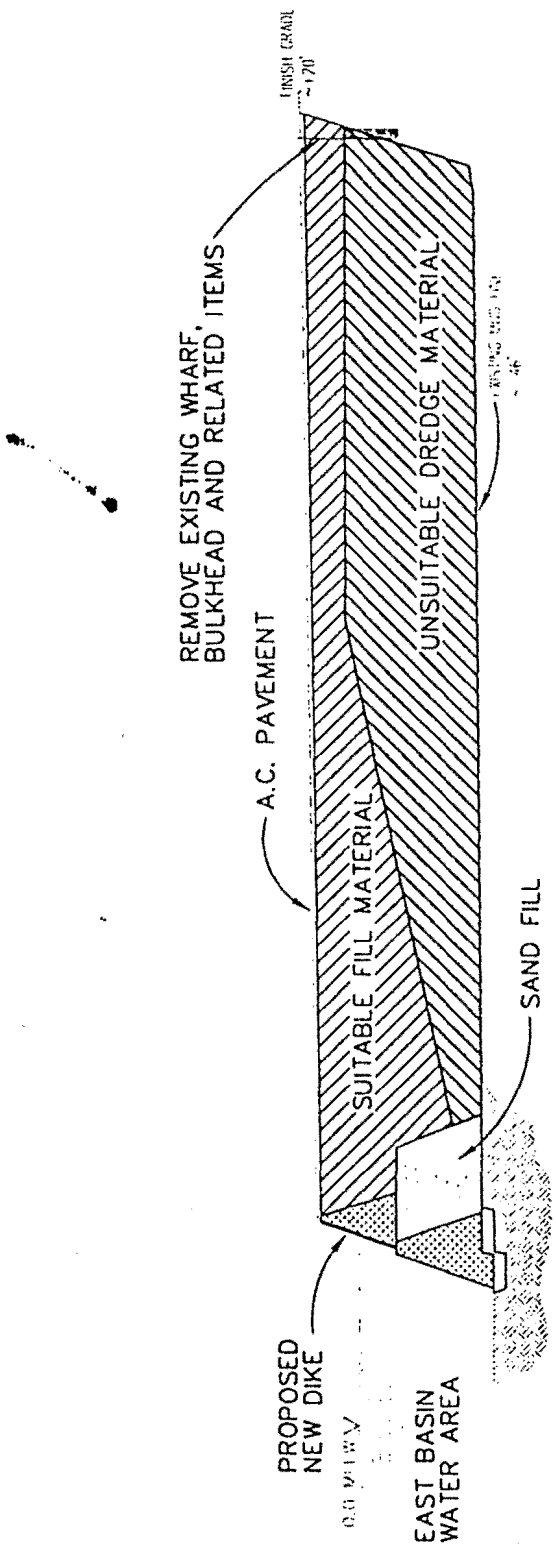
FIGURE 4




THE PORT OF LONG BEACH

EXHIBIT NO. 5
APPLICATION NO.
CD-94-98
California Coastal Commission

FIGURE 5




THE PORT OF LONG BEACH

EXHIBIT NO. 6
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CD-94-98
California Coastal Commission

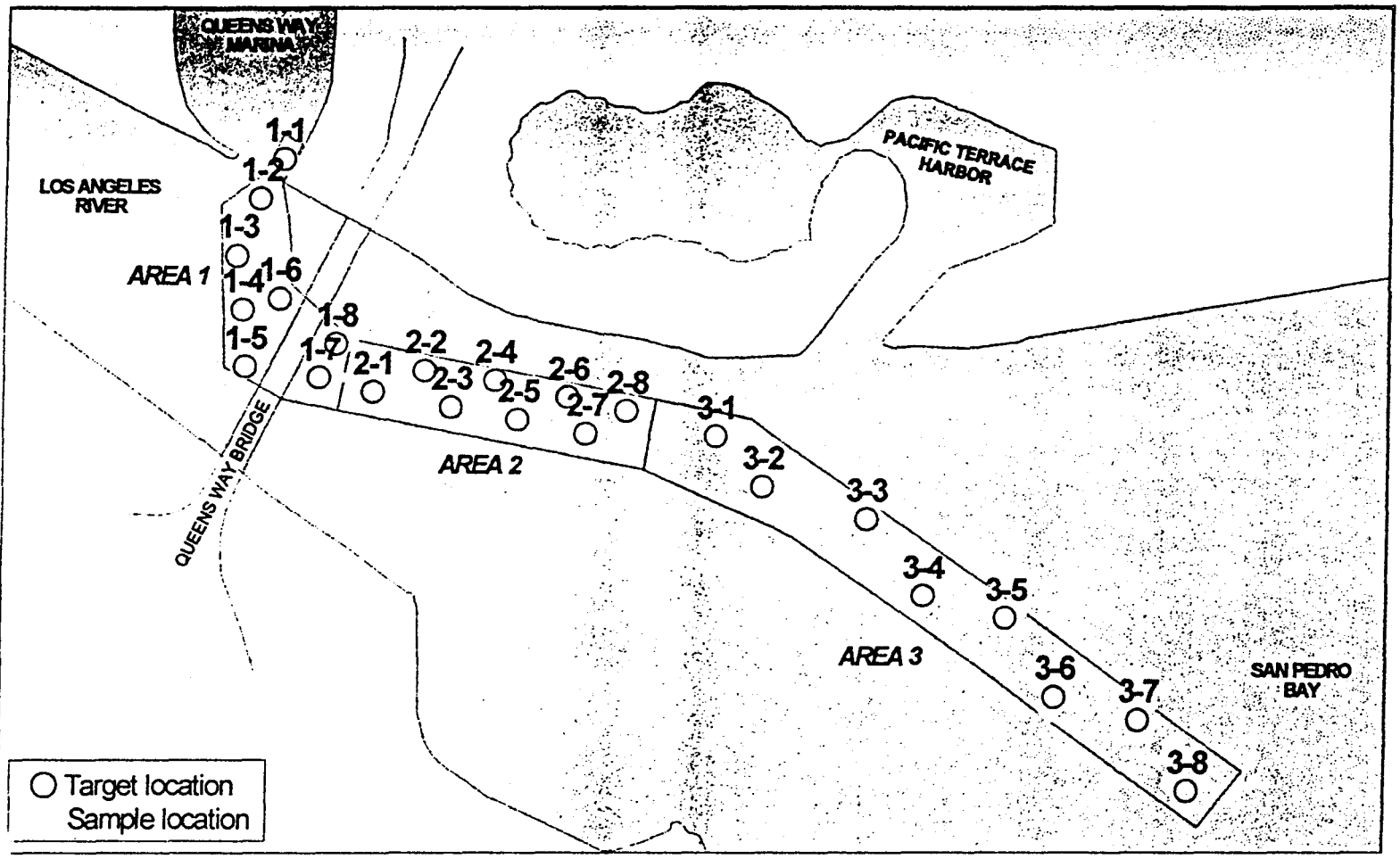


**Figure 2. Site map with sample locations in the Los Angeles River Estuary.**

ENCLOSURE

**Sediment Testing**

The full sediment testing report, previously sent to your office, is summarized as follows:

Sample Locations: Core sample locations are presented in Figure 2. The federal navigation channel was divided into three geographic sections (Areas 1-3). Sampling and analysis was conducted to a depth of -9.6 m MLLW in Areas 1 and 2, and to -7.6 m MLLW in Area 3. Sediment cores collected from Areas 1 and 2 were split vertically into top and bottom layers at -5.5 m MLLW. Reference sediment was collected from the designated LA-2 disposal site.

Sediment Chemistry: The objectives of the sediment chemistry analysis were to characterize the dredge site and to provide a selection of analytical targets for the tissue bioaccumulation tests. Sediment chemistry data indicated elevations of contaminants in proposed dredge sediments relative to LA-2 reference sediments (see Table 1). TOC concentrations in the LARE sediments were similar to previously reported concentrations, whereas TRPH concentrations and total sulfide concentrations were less than previous results. Concentrations of metals were detected in the LARE sediments above the method reporting limit. The highest concentration of metals were found in Area-2 bottom. Concentrations that exceeded LA-2 reference sediment were arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc.

Organotins were detected in several samples, with dibutyltin detected in Area-1 top and tributyltin detected in Area-1 bottom, Area-2 bottom, and Area-3. PAH's were detected in the sediment with total concentrations ranging from 419 ug/kg (Area-1 top) to 2,579 ug/kg (Area-2 bottom). Chlordane and derivatives detected in the 1997 study (Coastal Frontiers Corporation 1997) were not found in the LARE samples above method reporting limits. The PCB Arochlor 1260, however, was detected both in the 1997 study and in these sediment samples (Area-1 bottom, Area-2 top, Area-2 bottom, and Area-3). Multiple phthalates were detected in all 5 sediment composite samples.

Suspended Particulate Phase (SPP) Bioassays: SPP bioassay tests were performed to estimate the potential impact of ocean disposal on organisms that live in the water column. A summary of suspended particulate phase bioassay test results may be found in Table 2. Results of the SPP tests conducted with *Mysidopsis bahia, Menidia beryllina,* and *Mytilus edulis* did not exceed the Limiting Permissible Concentrations (LPC) for any of the sediments tested, indicating that the LARE sediment would not result in unacceptable water column impacts.

Solid Phase (SP) Bioassays: Solid phase bioassays were performed to estimate the potential impact of ocean disposal on benthic organisms that attempt to re-colonize the disposal area. A summary of solid phase bioassay test results may be found in Table 3. Results of the SP bioassay test with the amphipod *Eohaustorius estuarius* indicated significant toxicity in animals exposed to Area-1 top, Area-1 bottom, and Area-2 top sediments. Survival in amphipods exposed to these

sediments was statistically different ($p>0.05$) and more than 20% reduced relative to the LA-2 reference indicating that these sediments, *as composited*, are not suitable for ocean disposal. Survival in SP tests with the polychaete worm *N. arenaceodentata* was not adversely affected by any of the LARE sediments.

Tissue Bioaccumulation: Tissue analysis is performed to assess the potential availability of sediment contaminants to be taken up into the tested organisms. In bioaccumulation studies with the clam *M. nasuta* and the polychaete *N. caecoides*, all five LARE sediments showed some elevated tissue concentrations for selected contaminants relative to animals exposed to the LA-2 reference sediment (see Tables 4-6). The metals lead, nickel, and selenium, organotins and the phthalates bis(2-ethylhexyl)phthalate and di-n-butylphthalate were elevated in the clam at one or more of the five LARE areas. For the worm, the metals cadmium, chromium, copper, selenium, zinc, and tributyltin were greater than reference at one or more of the LARE areas. The elevated tissue residues were generally within a factor of 2-3 of reference organisms tissue residues which, in turn, were at or near detection limits. Elevated residue concentrations measured in LARE exposed test organisms were below relevant effect levels reported in the USACE/USEPA "Environmental Residue Effect Database." Moreover, the compounds elevated above reference do not have a propensity to biomagnify. Consequently, exposed organisms are unlikely to affect higher trophic organisms via contaminant transfer through the food chain.

Mr. Steven John of the Environmental Protection Agency reviewed the sediment test results and provided the following determination of suitability for LARE sediments (from an October 30, 1998 memorandum):

> *The dredge areas that failed the solid phase bioassay, and are therefore not suitable for ocean disposal or unconfined aquatic disposal, are Area 1 Top, Area 2 Top, and Area 1 Bottom. The dredge areas that passed the solid phase bioassay (and the other testing criteria) and which are suitable for unconfined aquatic or ocean disposal, are Area 2 Bottom and Area 3.*
>
> *Area 1 Bottom was a near miss for the solid phase bioassay (survival 23% reduced relative to reference) while passing all the other testing criteria. Given the that the bottom layer of Area 2 and Area 3 are suitable, EPA believes there are materials in Area 1 Bottom that would be suitable for unconfined aquatic or ocean disposal. EPA would concur on aquatic/ocean disposal of Area 1 Bottom if a minimum of a 0.5 meter buffer was included with the unsuitable Area 1 Top dredged materials. Under these conditions, Area 1 Top would include materials from the current bottom elevations down to at least -6.0 meters MLLW, instead of the -5.5 meters MLLW elevation evaluated in the sediment testing program. Area 1 Bottom would include materials from no higher than -6.0 meters MLLW to -9.6 meters.* ***Given this additional buffer, EPA believes the Area 1 Bottom sediments will be similar to the proposed dredged materials in Area 2 Bottom and Area 3 and suitable for unconfined aquatic and/or ocean disposal.***



EXHIBIT 8, p 2.