California Regional Water Quality Control Board
Los Angeles Region

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Linda S. Adams
Cal/EPA Secretary

Arnold Schwarzenegger
Governor

September 13, 2010

Mr. Mark Sandoval
Parks, Recreation and Marine
City of Long Beach
205 Marina Drive
Long Beach, CA 90803

TENTATIVE WASTE DISCHARGE REQUIREMENTS
ALAMITOS BAY MARINA REHABILITATION (FILE NO. 10-010)

Dear Mr. Sandoval:

We have completed our review of your application to this Board for waste discharge requirements for your proposed discharge of wastes. Enclosed are copies of tentative waste discharge requirements and a receiving water monitoring program for dredging and disposal of dredged material from the Alamitos Bay Marina Rehabilitation Project in Long Beach, Los Angeles County. A copy of our Standard Provisions, General Monitoring and Reporting Requirements (Attachment N) also is enclosed.

In accordance with the California Water Code, this Board, at a public meeting to be held on November 4, 2010, at 9:00 a.m., Metropolitan Water District Board Room, 700 N. Alameda St., Los Angeles, California, will consider the enclosed tentative requirements and comments submitted in writing regarding any or all portions thereof. The Board will hear any testimony pertinent to these discharges and the tentative requirements. It is expected that the Board will take action at the hearing; however, as testimony indicates, the Board at its discretion may order further investigation.

Written comments and any exhibits must be submitted to the Executive Officer not later than **October 14, 2010**. Failure to comply with this requirement is grounds for the Regional Board to refuse to admit the proposed written comment or exhibit into evidence (Title 23 CCR Section 648.2). If materials are not submitted in a timely manner, the Regional Board may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of written testimony or exhibits not timely submitted, the Regional Board may refuse to admit it.

Should you have any questions, please telephone me at (213) 576-6718.

J. MICHAEL LYONS
Environmental Specialist IV

Enclosures

Cc: See attached mailing list

MAILING LIST

Bill Orme, Non-point Source Unit, SWRCB
Jennifer Fordyce, Office of Chief Counsel, SWRCB
Larry Simon, California Coastal Commission (San Francisco)
Bill Paznokas, California Department of Fish and Game (San Diego)
Kenneth Wong, U.S. Army Corps of Engineers (Los Angeles)
Daniel Swenson, U.S. Army Corps of Engineers (Los Angeles)
Theresa Stevens, U.S. Army Corps of Engineers (Ventura)
Allan Ota, U.S. Environmental Protection Agency (San Francisco)
Jorine Campopiano, U.S. Environmental Protection Agency (Los Angeles)
Ken Corey, U.S. Fish and Wildlife Service (Carlsbad)
Bryant Chesney, National Marine Fisheries Service (Long Beach)
Kirsten James, Heal the Bay
Susie Santilena, Heal the Bay
Janna Watanabe, Port of Long Beach
Matthew Arms, Port of Long Beach
Joshua Burnam, Anchor QEA

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2010-XXXX

WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF LONG BEACH
(ALAMITOS BAY MARINA REHABILITATION)
(FILE NO. 10-110)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

1. The City of Long Beach has filed an application for Waste Discharge Requirements for the planned Alamitos Bay Marina rehabilitation project, located in Alamitos Bay in Long Beach, Los Angeles County (Figures 1). The Alamitos Bay Marina opened nearly 60 years ago and now is in a deteriorated condition and in need of upgrades to make the marina consistent with current market demands. The overall purpose of the proposed project is to rehabilitate the Alamitos Bay Marina by repairing and replacing aged infrastructure, including maintenance dredging to remove shoaled materials that pose a hazard to navigation. The marina rehabilitation project is proposed to take place in 12 phases that will span 6 years.

2. The proposed project includes the following elements: 1) dredging marina basins 1-7 (basin 8 is excluded from dredging) to design depths; 2) replacing and/or upgrading 13 restrooms; 3) repairing the seawall, where necessary, to re-establish the rock revetment along the slope to the basin floor (no new fill will be discharged); 4) replacing docks and piles to accommodate an increased average slip length; 5) replacing and extending the long dock, located adjacent to the Long Beach Yacht Club at the southeast end of Basin 4; 6) replacing the pavement in the marina parking lots; 7) creation of an eelgrass habitat mitigation site in Marine Stadium, which will increase waters of the United States by 0.24 acres and provide 10,500 square feet of mitigation opportunity for this project and future projects.

   Currently there are 1,967 existing slips in Basins 1-7. The proposed project includes the removal and replacement of the existing docks with 1,646 new slips (a reduction of 321 slips). The dock replacement activities also would result in the replacement of 808 existing concrete piles with 620 new concrete piles to support the new dock system.

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September 7, 2010

As part of the proposed project, the Alamitos Bay Marina will be dredged to the original design depths. Basins 2-7 will be dredged to -10 feet mean lower low water, plus 2 feet of overdredge allowance, while Basin 1 will be dredged to -12 to -15 feet mean lower water plus 2 feet overdepth. A total of approximately 308,220 cubic yards of sediment will be dredged from the marina. The proposed volumes to be dredged from each basin are shown in Table 1. The locations of Basins 1-7 within the marina are shown in Figure 2. The areas to be dredged within each basin are shown in Figures 3-10.

Table 1. Design Depths and Volumes to be Dredged from Basins 1-7 in Alamitos Bay Marina.

Basin	Design Depth	Volume (including overdepth)
1	-12/-15 feet	74,800 cubic yards
2	-10 feet	89,900 cubic yards
3	-10 feet	55,900 cubic yards
4	-10 feet	65,300 cubic yards
5	-10 feet	3,870 cubic yards
6N	-10 feet	12,250 cubic yards
6S	-10 feet	4,100 cubic yards
7	-10 feet	2,100 cubic yards

Implementation of the project is anticipated to be accomplished in a 12-phase program, which will span 6 years. Each basin would be dredged after removal of docks and slips within that respective basin. Seawall repair would occur as necessary within each phase. Rehabilitation of the restroom facilities and replacement of the parking lot would be completed after installation of all dock facilities and related utilities. In order to accommodate operations within Alamitos Bay Marina, no more than 1 acre of parking lot pavement would be replaced at any one time. The eelgrass mitigation site would be constructed as part of Phase 1. The phases of the project and anticipated schedule for completion are summarized in Table 2.

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Table 2. Alamitos Bay Rehabilitation Project Phases and Schedule.

Phase	Months	Basin
1a	6	4
1b	1.5	Mitigation Site
2-3	12	1
4-7	4	2
8-11	24	3
12	6	5. 6N/6S, 7

3. A sediment characterization study was conducted in April 2007 to assess sediment quality within Basins 1-7 of the Alamitos Bay Marina. Supplemental sediment testing was conducted within Basin 1 in 2009 to identify areas with high mercury contamination.

   In 2007, five individual cores were collected within Basin 1 (figure 11) and combined into a single composite (designated as B1) for chemical analysis. Five individual cores were collected (core B2-3 could not be collected) within Basin 2 (figure 12) and combined into a single composite (designated as B2) for chemical analysis. Four individual cores were collected within Basin 3 (figure 13) and combined into a single composite (designated as B3) for chemical analysis. Five individual cores were collected within Basin 4 (figure 14) and combined into a single composite (designated as B4) for chemical analysis. Four individual cores were collected within Basin 5 (figure 15) and combined into a single composite (designated as B5) for chemical analysis. Five individual cores were collected within Basin 6 (figures 16 and 17) and combined into a single composite (designated as B6) for chemical analysis. Three individual cores were collected (core B7-4 could not be collected) within Basin 7 (figure 18) and combined into a single composite (designated as B7) for chemical analysis.

   In 2009, twelve cores were collected within Basin 1 for mercury analyses (figure 19). Each core was divided into three to six sections, representing different depth strata (usually one-foot intervals) within the core, for individual mercury analyses.

4. Results from the 2007 sediment characterization study are shown in Table 3. Sediments were predominately fine-grained, consisting of silts and clays (ranging from 51.5 to 80.6 percent silt-clay at the seven sites tested). Moderate levels of sediment contamination were present. Eight metals (arsenic, cadmium, chromium, copper, lead, nickel, silver, zinc) were below the level at which potential toxicity effects could occur (effects range-low, or ER-L, threshold) or moderately

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exceeded these levels, but none of these metals exceeded the level at which toxicity effects would be probable (effects range-median, or ER-M, threshold). However, mercury concentrations in sample B1 (representing the five cores collected from Basin 1) exceeded the level at which toxicity effects would be probable (ER-M threshold), although mercury concentrations in the other six composite samples were below or moderately exceeded the level at which potential toxicity effects could occur (ER-L threshold). The concentrations of total DDTs in all seven composite samples exceeded the level at which toxicity effects could occur (ER-L threshold), but were well below the level at which toxicity effects would be probable (ER-M threshold). The concentrations of total PCBs and total PAHs in all seven composite samples were well below the level at which toxicity effects could occur (ER-L threshold).

Results from the 2009 supplemental sediment sampling within Basin 1 to assess mercury contamination are shown in Table 4. Mercury concentrations exceeded the level at which toxicity effects would be probable (ER-M threshold) in some of the sub-sections of the sediment cores from stations 3-9.

Table 3. Sediment grain size and chemistry results for Alamitos Bay Marina from 2007 sediment characterization study.

Analyte	B1	B2	B3	B4	B5	B6	B7	ERL/ERM
Grain size (%)								
Sand	19.1	22.6	36.9	19.6	20.7	25.4	42.5	NA
Clay	30.1	22.2	17.3	22.2	26.7	27.4	24.2	NA
Silt	50.5	54.1	44.8	57.9	52.3	46.0	27.3	NA
Arsenic (ppm)	8.98	6.05	5.50	6.22	7.33	6.65	7.10	8.2/70.0
Cadmium (ppm)	0.664	0.747	0.601	0.855	0.901	1.13	0.558	1.2/9.6
Chromium (ppm	47.8	41.5	34.7	41.5	50.8	49.9	39.1	81.0/370
Copper (ppm)	60.1	49.2	44.3	52.3	56.0	76.2	54.6	34.0/270
Lead (ppm)	71.0	72.1	54.8	85.0	97.9	70.9	58.8	46.7/218
Mercury (ppm)	0.83	0.36	0.36	0.29	0.031	0.18	0.28	0.2/0.71
Nickel (ppm)	22.5	18.9	17.6	20.2	22.7	22.4	18.6	20.9/51.6
Silver (ppm)	0.33	0.34	0.23	0.35	0.46	0.58	0.50	1.0/3.7
Zinc (ppm)	148	135	102	204	155	213	136	150/410
Total PAHs (ppb)	<17.5	17.8	<14.5	46.4	42.1	<17.8	130	4022/ 44792
Total DDTs (ppb)	13.5	11.7	13.5	13.8	12.5	6.77	7.26	1.6/46.1
Total PCBs (ppb)	<4.09	<3.71	<3.39	<3.58	<4.13	<4.11	<3.93	22.7/180

ERL = Effects Range Low; ERM = Effects Range Median; NA = Not Available
ppm = parts per million; ppb = parts per billion
DDTs = dichloro-diphenyl-trichloroethane
PCBs = polychlorinated biphenyls
PAHs = polynuclear aromatic hydrocarbons

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Table 4. Sediment chemistry results for mercury for 2009 supplemental sediment chemistry study within Basin 1 of Alamitos Bay Marina.

Station ID Number	Range of Mercury Concentrations (parts per million)
ABM-CS-1	0 – 0.242
ABM-CS-2	0 - 0234
ABM-CS-3	0 – 1.42
ABM-CS-4	0 – 1.79
ABM-CS-5	0.0575 – 2.74
ABM-CS-6	0 – 2.38
ABM-CS-7	0 – 2.22
ABM-CS-8	0 – 2.19
ABM-CS-9	0.692 – 1.83
ABM-CS-10	0 – 0.205
ABM-CS-11	0.183 – 0.299
ABM-CS-12	0 – 0.458

5. The dredged material from Basins 2-7 (a total of 233,420 cubic yards) are deemed suitable for disposal at the United States Environmental Protection Agency's offshore disposal site LA-2. Based on the sediment characterization study results from 2007, the regulatory agency members of the Southern California Dredge Material Management Team (DMMT) determined that the material from Basins 2-7 was suitable for offshore disposal at a meeting on December 10, 2008, and United States Environmental Protection Agency (EPA) Region 9 staff concurred with this decision in a memorandum dated February 5, 2010. The material will be transported to the LA-2 offshore disposal site and discharged via a bottom-dump barge.

   Due to elevated levels of mercury in portions of Basin 1, approximately 41,000 cubic yards of material from Basin 1 are unsuitable for unconfined ocean disposal and will be disposed of off-site, either barged for disposal within the Port of Long Beach's Middle Harbor Confined Disposal Facility (the preferred alternative) or trucked (after the material is dried on a barge or at a construction staging area) to Kettleman Hills Hazardous Waste Facility, a commercial chemical waste site located in Kings County, California. Approximately 33,800 cubic yards of material from Basin 1 are deemed suitable for disposal at the LA-2 offshore site. Based on the supplemental sediment characterization study results from 2009, the DMMT regulatory agency members supported these decisions and EPA Region 9 staff concurred in a memorandum dated February 5, 2010.

The City of Long Beach considered options for beneficial reuse of the dredged material according to the Los Angeles Contaminated Sediments Task Force's decision tree. For the dredged material deemed suitable for unconfined disposal, comprising most of the project volume, beneficial reuse for beach replenishment or construction material was found to be infeasible due to the high fines content (ranging from 50 to 90 percent silt/clay). Therefore, ocean disposal at LA-2 was chosen as the preferred alternative for most of the dredged material. The small volume of contaminated material to be dredged from Basin 1 is planned to be reused within a constructed fill site within the Port of Long Beach (Middle Harbor Confined Disposal Facility).

6. The City of Long Beach has identified a site adjacent to the northeast shore of Marine Stadium to convert to an underwater open space/habitat mitigation site. The total area available for eelgrass planting will be approximately 10,500 square feet (0.24 acres). The elevation of this site will be 2 to 3 feet below mean lower low water. This site will provide mitigation for the marina rehabilitation project's potential impacts, as well as to provide opportunity for future mitigation needs. Specific mitigation requirements and monitoring for the marina rehabilitation project will be subject to approval by the National Marine Fisheries Service.

7. The City of Long Beach has applied for a permit from the United States Army Corps of Engineers for the Alamitos Bay Marina Rehabilitation Project (public notice identification number SPL-2007-00348-KW). An Environmental Impact Report (SCH No. 2008041028) was certified by the City of Long Beach on February 2, 2010 for the Alamitos Bay Marina Rehabilitation Project in accordance with the requirements of the California Environmental Quality Act.

8. The Regional Board adopted a revised Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties on June 13, 1994. The Water Quality Control Plan contains water quality objectives for Alamitos Bay. The requirements contained in this Order as they are met will be in conformance with the goals of the Water Quality Control Plan.

9. The beneficial uses of Alamitos Bay are: industrial process supply, navigation, water contact recreation (potential), non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, wildlife habitat, wetland habitat, shellfish harvesting, and preservation of rare, threatened or endangered species.

10. With proper management of the dredging and disposal operations, the project is not expected to release significant levels of contaminants to the bay waters or other State waters nor adversely impact beneficial uses.

11. Dredging and disposal operations will be accomplished through the use of temporary equipment. The Waste Discharge Requirements imposed below will not result in any significant increase in energy consumption.

The Regional Board has notified Cerritos Bahia Marina and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that Cerritos Bahia Marina, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Requirements

1. The removal and placement of dredged/excavated material shall be managed such that the concentrations of toxic pollutants in the water column, sediments or biota shall not adversely affect beneficial uses.

2. Enclosed bay and estuarine communities and populations, including vertebrate, invertebrate and plant species, shall not be degraded as a result of the discharge of waste.

3. The natural taste and odor of fish, shellfish or other enclosed bay and estuarine resources used for human consumption shall not be impaired as a result of the discharge of waste.

4. Toxic pollutants shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.

5. There shall be no acute toxicity or chronic toxicity in ambient waters as a result of the discharge of waste.

6. Dredging, excavation or disposal of dredge spoils shall not cause any of the following conditions in the receiving waters:

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a. The formation of sludge banks or deposits of waste origin that would adversely affect the composition of the bottom fauna and flora, interfere with the fish propagation or deleteriously affect their habitat, or adversely change the physical or chemical nature of the bottom.

b. Turbidity that would cause substantial visible contrast with the natural appearance of the water outside the immediate area of operation.

c. Discoloration outside the immediate area of operation.

d. Visible material, including oil and grease, either floating on or suspended in the water or deposited on beaches, shores, or channel structures outside the immediate area of operation.

e. Objectionable odors emanating from the water surface.

f. Depression of dissolved oxygen concentrations below 5.0 mg/l at any time outside the immediate area of operation.

g. Any condition of pollution or nuisance.

B. Provisions

1. The Discharge Requirements specified above are valid only for dredging of a maximum of 308,220 cubic yards of sediment and disposal of a maximum of 267,220 cubic yards of clean sediment at the LA-2 offshore disposal site and a maximum of 41,000 cubic yards of contaminated sediment within the Port of Long Beach's Middle Harbor Confined Disposal Facility or at Kettleman Hills Hazardous Waste Facility, a commercial chemical waste site located in Kings County, California, as proposed by the City of Long Beach.

2. The City of Long Beach shall notify the Regional Board immediately by telephone of any adverse conditions in receiving waters or adjacent areas resulting from the removal of dredge materials, disposal operations; written confirmation shall follow within one week.

3. A copy of this Order shall be made available at all times to project construction personnel.

4. The City of Long Beach shall provide the following information to the Regional Board:

a. A copy of the final permit issued by the United States Corps of Engineers for the dredge and disposal operations.

b. The scheduled date of commencement of each dredging and disposal operation at least one week prior to initiation of dredging.

c. Notice of termination of dredging and disposal operations, within one week following the termination date.

5. The City of Long Beach shall submit, under penalty of perjury, technical reports to the Regional Board in accordance with specifications prepared by the Executive Officer.

6. In accordance with section 13260(c) of the Water Code, the City of Long Beach shall file a report of any material change or proposed change in the character, location, or volume of the waste.

7. These requirements do not exempt the City of Long Beach from compliance with any other laws, regulations, or ordinances which may be applicable: they do not legalize this waste discharge, and they leave unaffected any further restraint on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

8. In accordance with Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the State are privileges, not rights.

9. This Order includes Attachment N: "Standard Provisions, General Monitoring and Reporting Requirements" ("Standard Provisions") and the attached Monitoring and Reporting Requirements, both of which are incorporated herein by reference. If there is any conflict between provisions stated hereinbefore and said "Standard Provisions", those provisions stated hereinbefore prevail. If there is any conflict between requirements stated in the attached Monitoring and Reporting Program and said "Standard Provisions", the former shall prevail.

10. This Order fulfills the requirements for a Clean Water Act Section 401 Water Quality Certification for the proposed project. Pursuant to section 3860 of title 23 of the California Code of Regulations (23 CCR), the following three standard conditions shall apply to this project:

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a. this certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and Article 6 (commencing with 23 CCR section 3867);

b. this certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought;

c. this certification is conditioned upon total payment of any fee required pursuant to 23 CCR division 3, chapter 28, and owed by the applicant.

11. This Order shall expire on October 31, 2015.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on November 4, 2010.

SAMUEL UNGER, P.E.
Executive Officer

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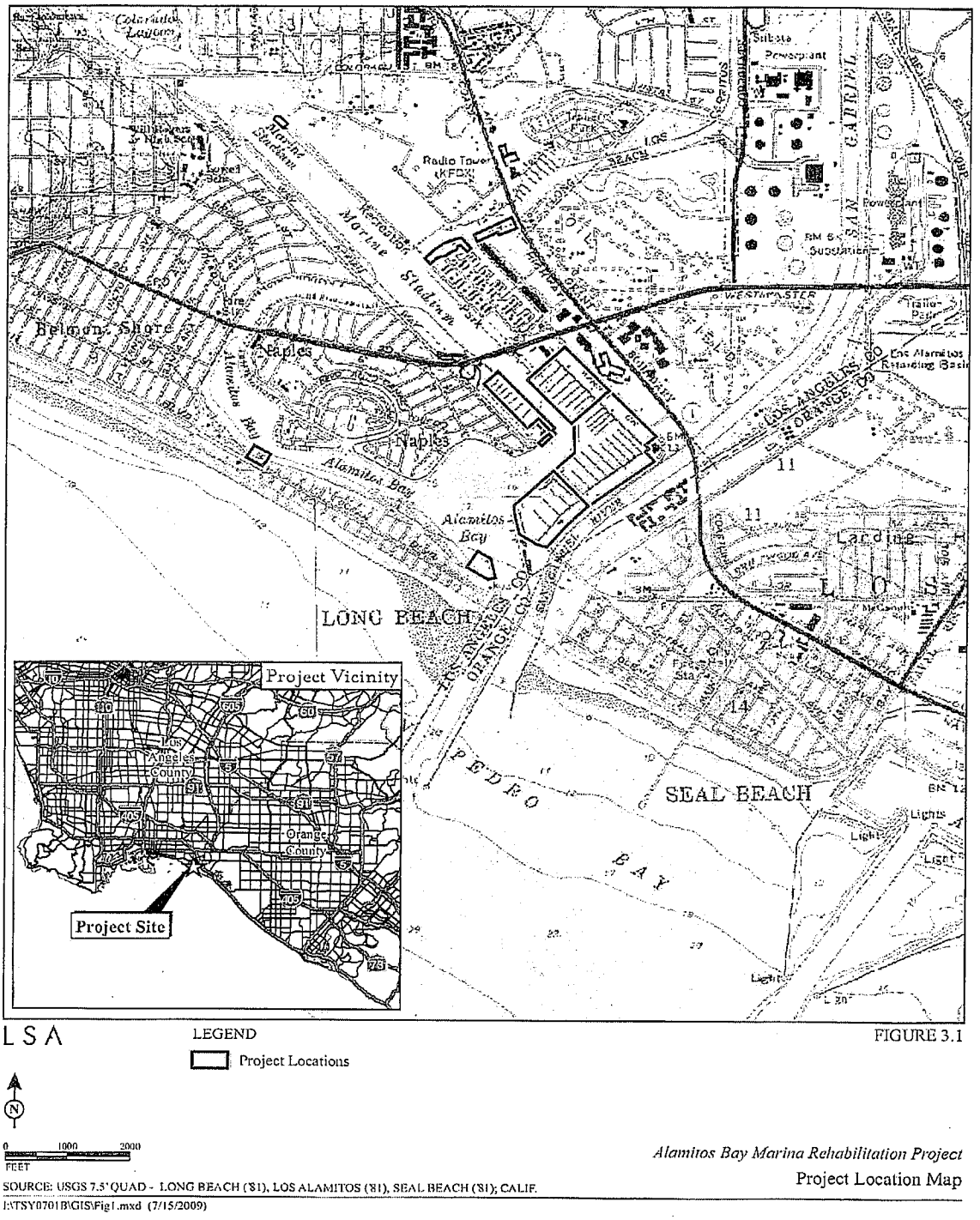

Figure 1. Location of Alamitos Bay Marina Rehabilitation Project.

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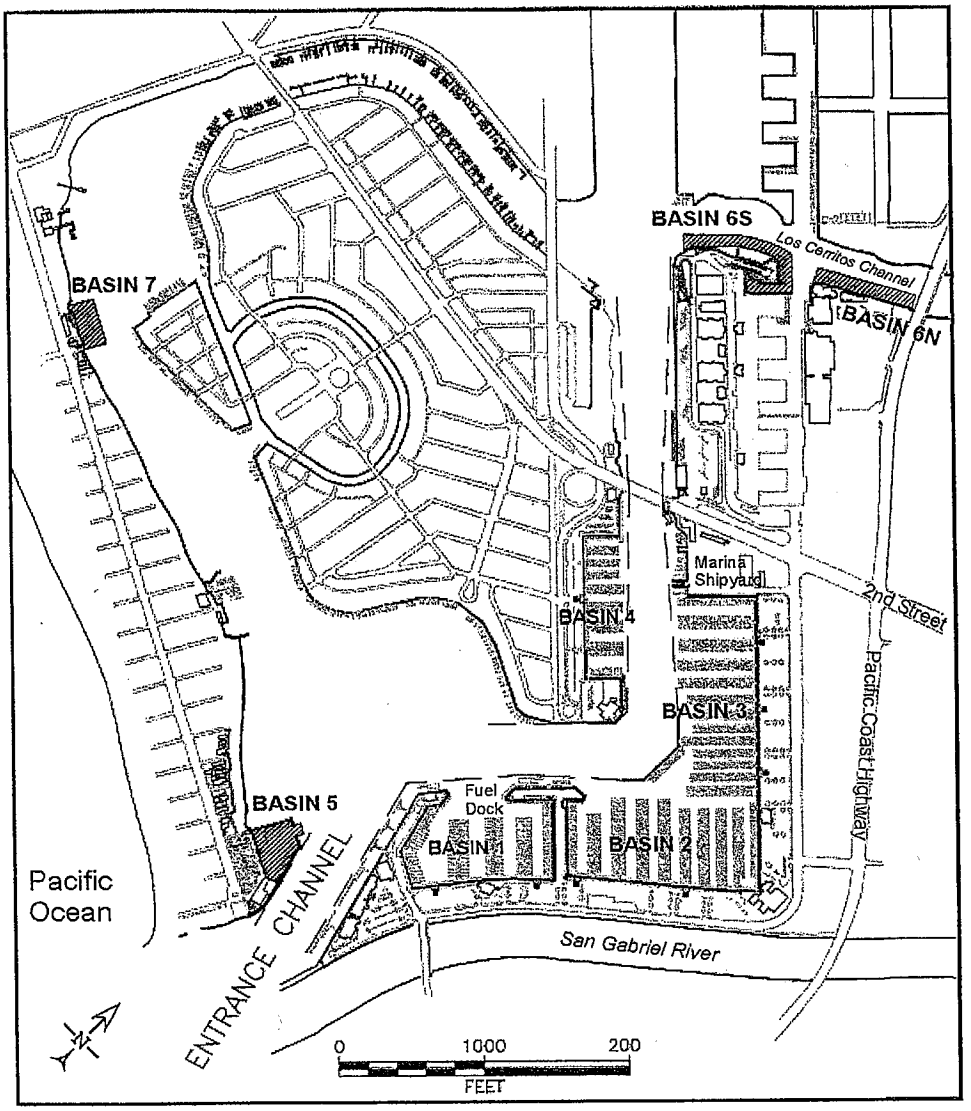

Figure 2. Project Area: Alamitos Bay Marina Docking Basins

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Figure 2. Overview of areas to be dredged within Alamitos Bay Marina.

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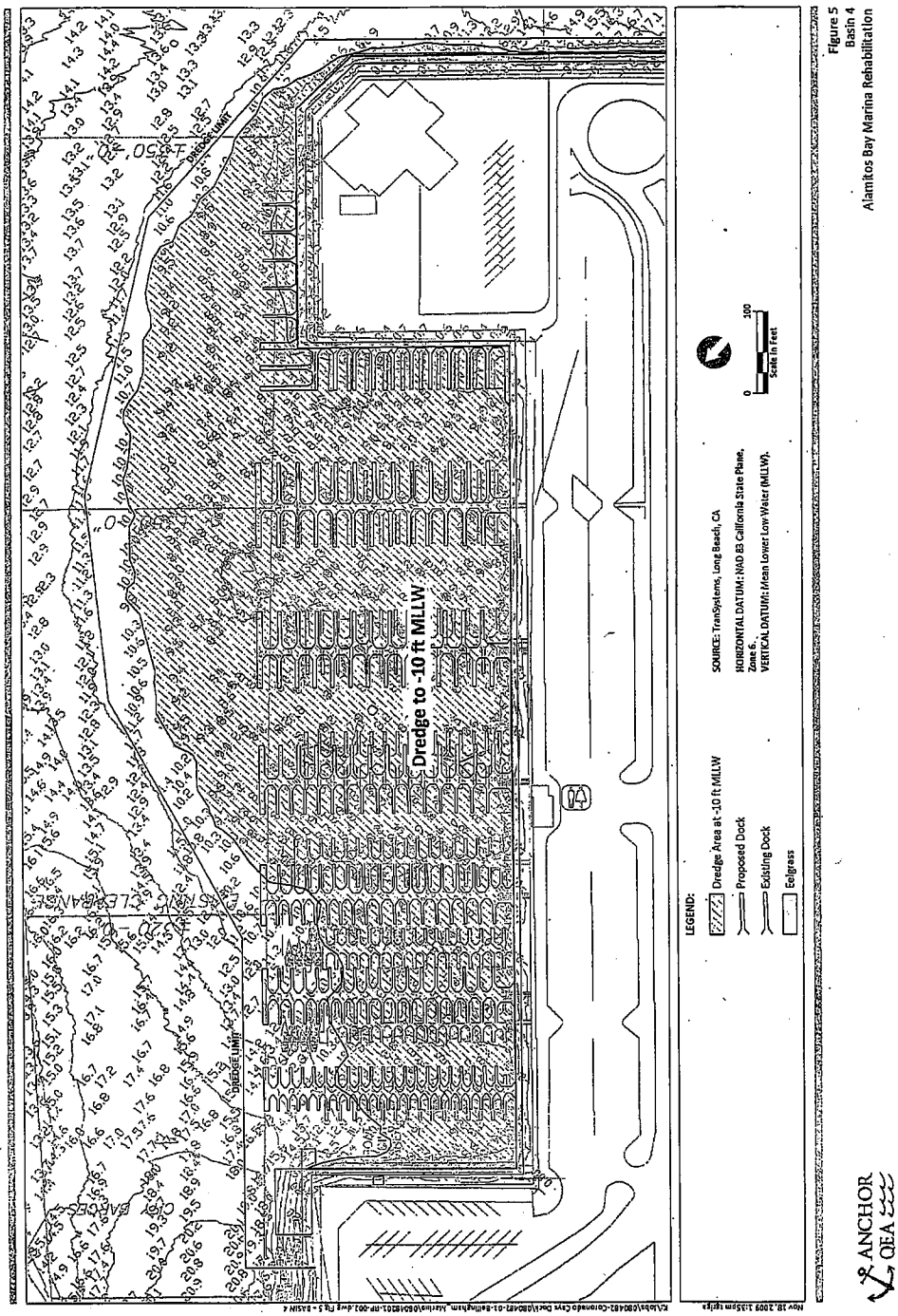

Figure 3. Area to be dredged within Basin 4 during Phase 1.

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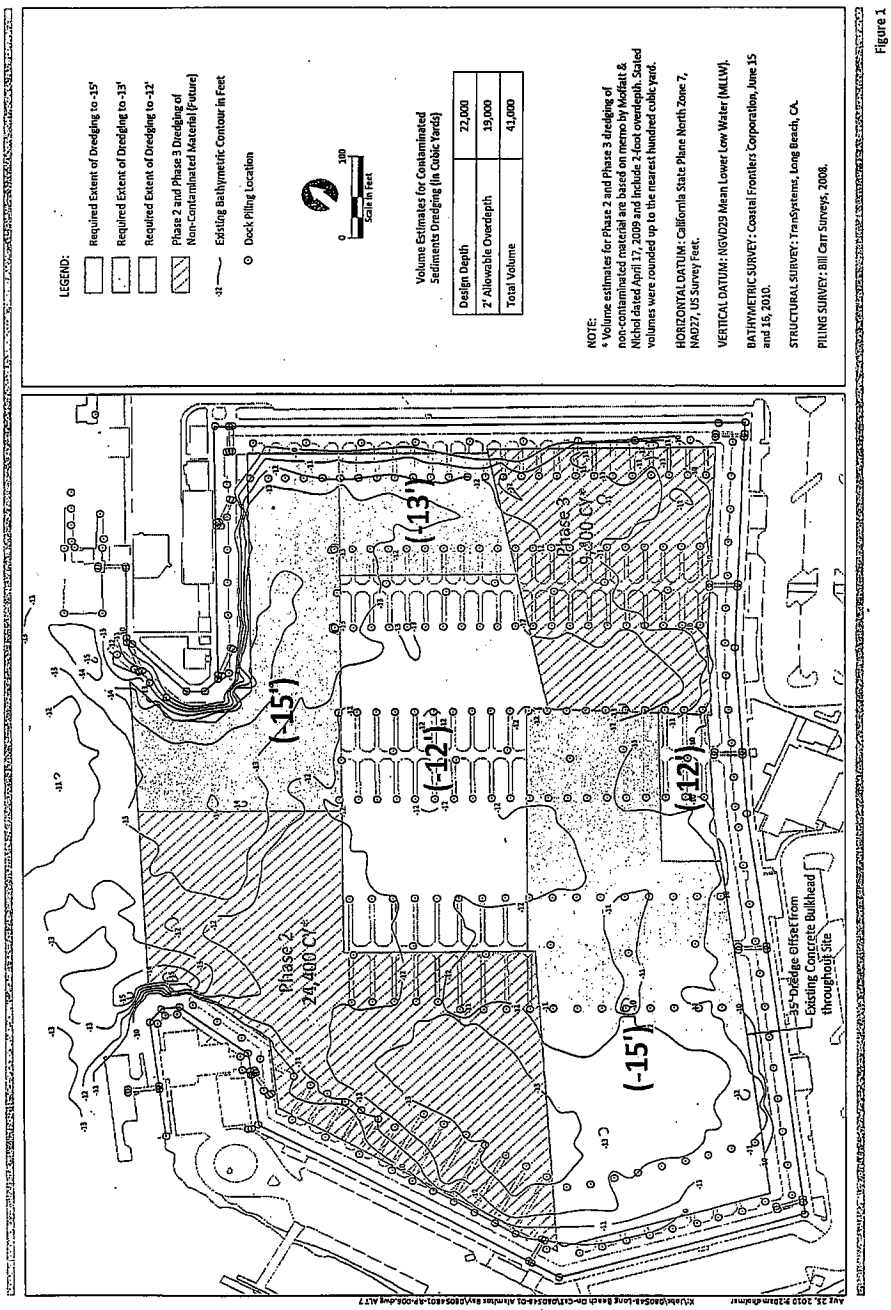

Figure 4. Areas to be dredged within Basin 1 during Phases 2 and 3.

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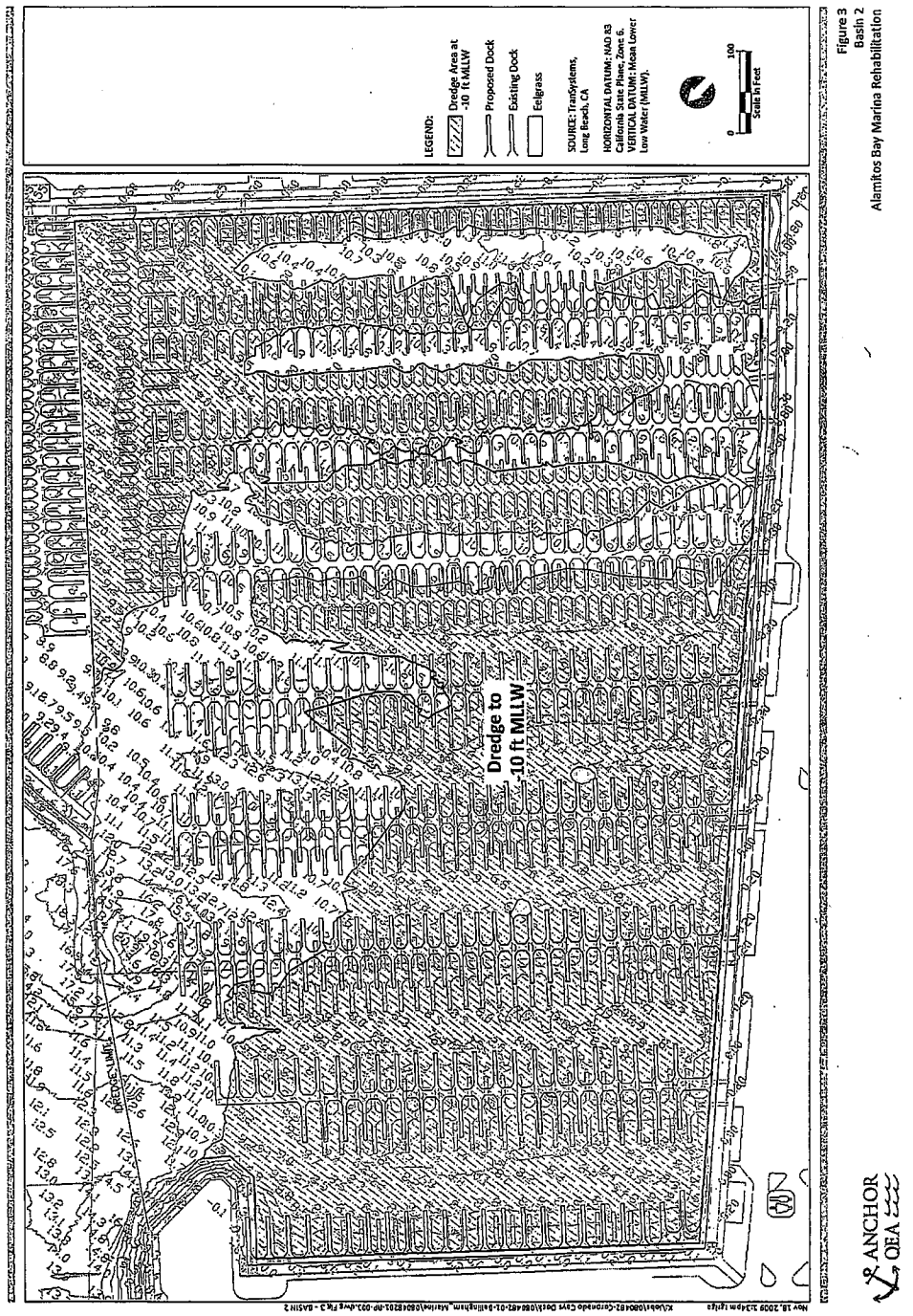

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Figure 5. Areas to be dredged within Basin 2 during Phases 4-7.

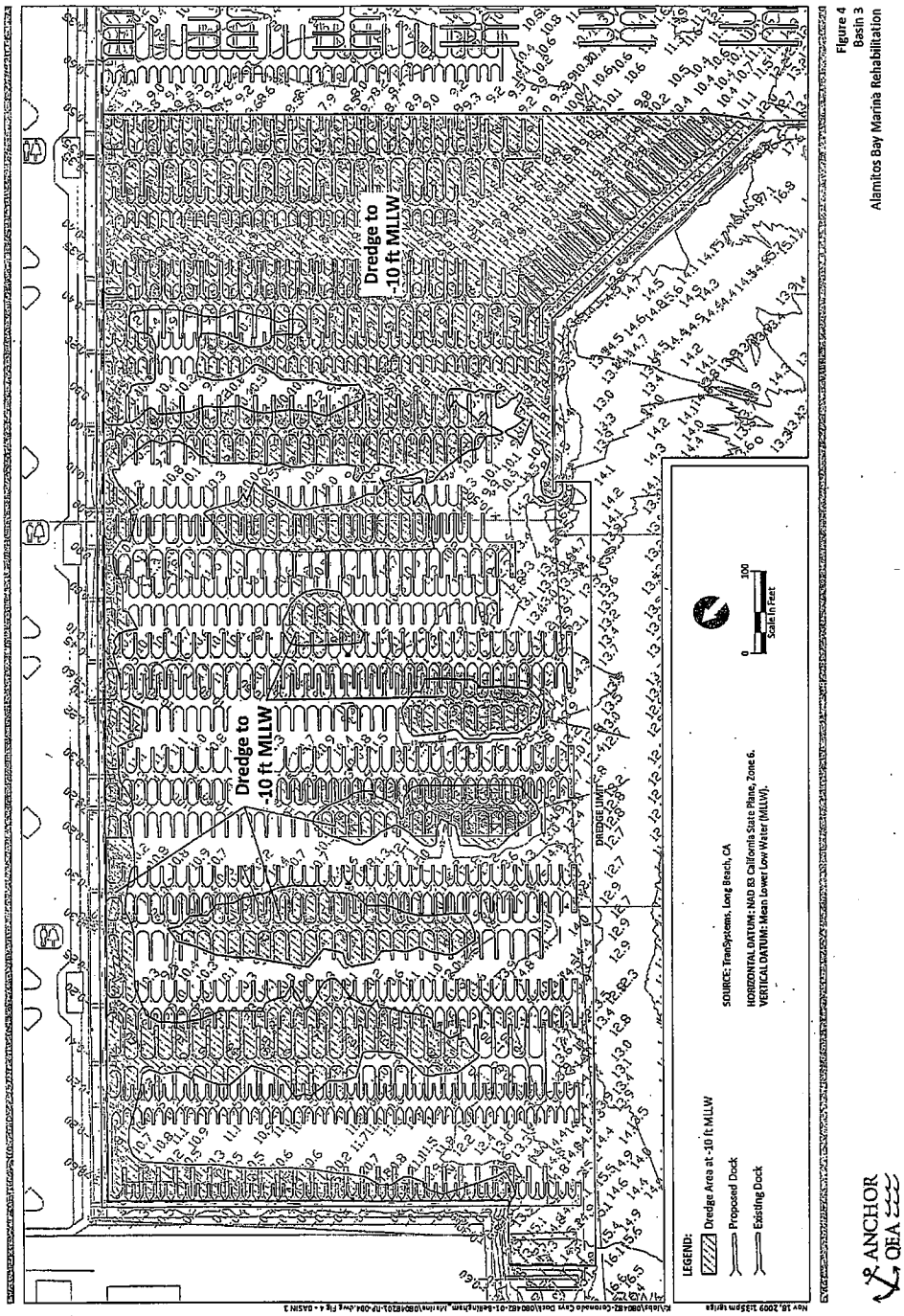

Figure 6. Areas to be dredged within Basin 3 in Phases 8-11.

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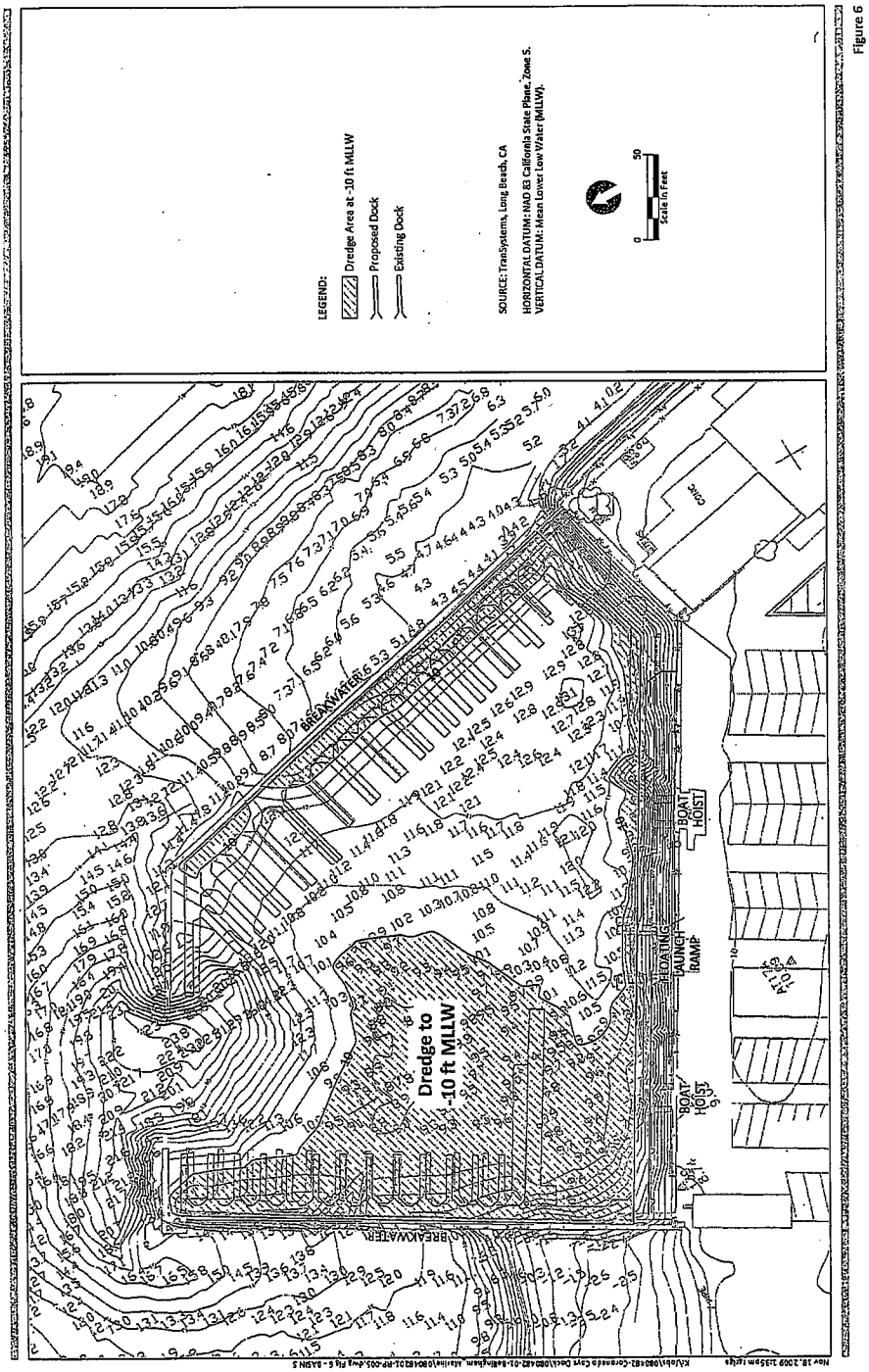

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Figure 7. Areas to be dredged within Basin 5 in Phase 12.

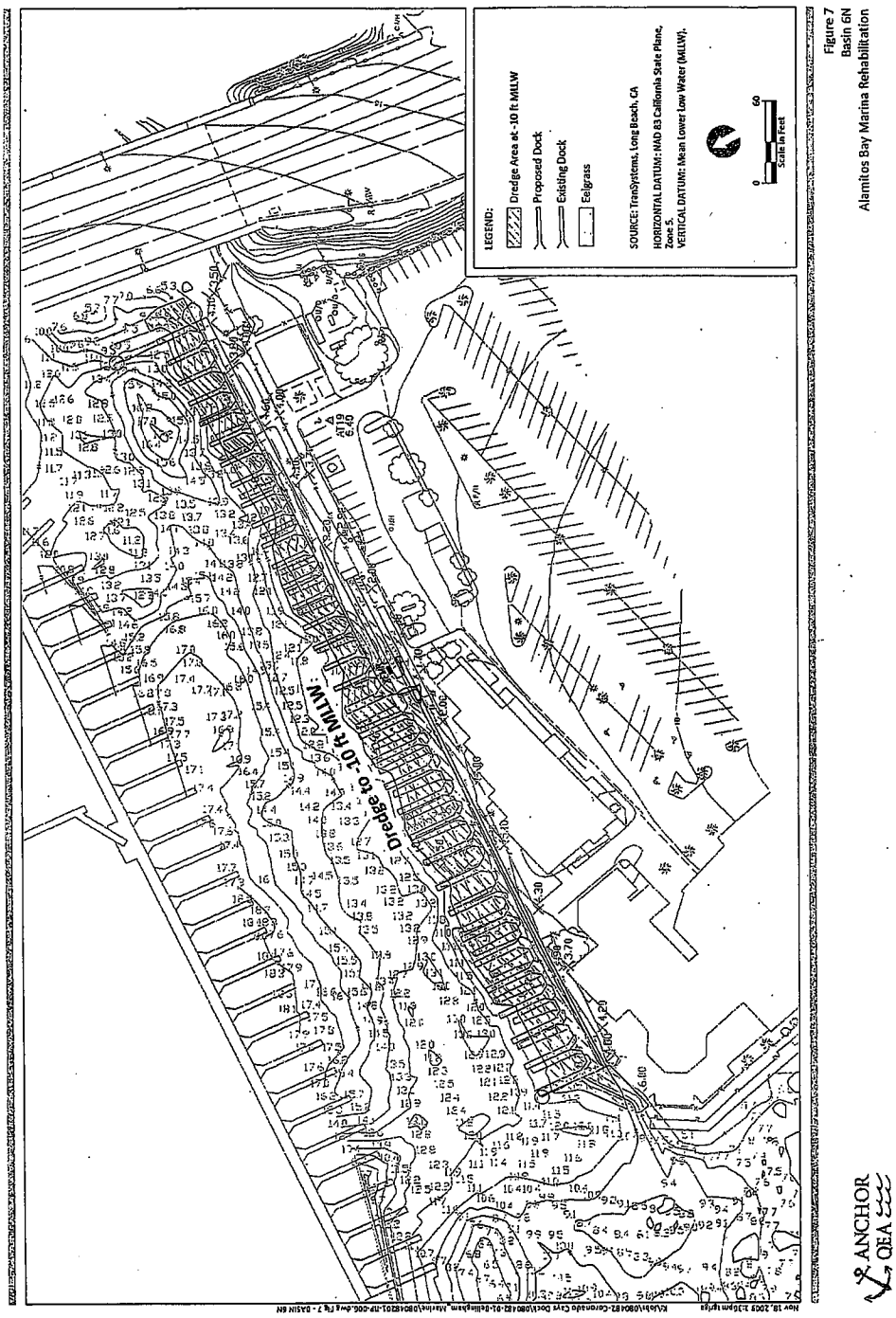

Figure 8. Areas to be dredged within Basin 6N in Phase 12.

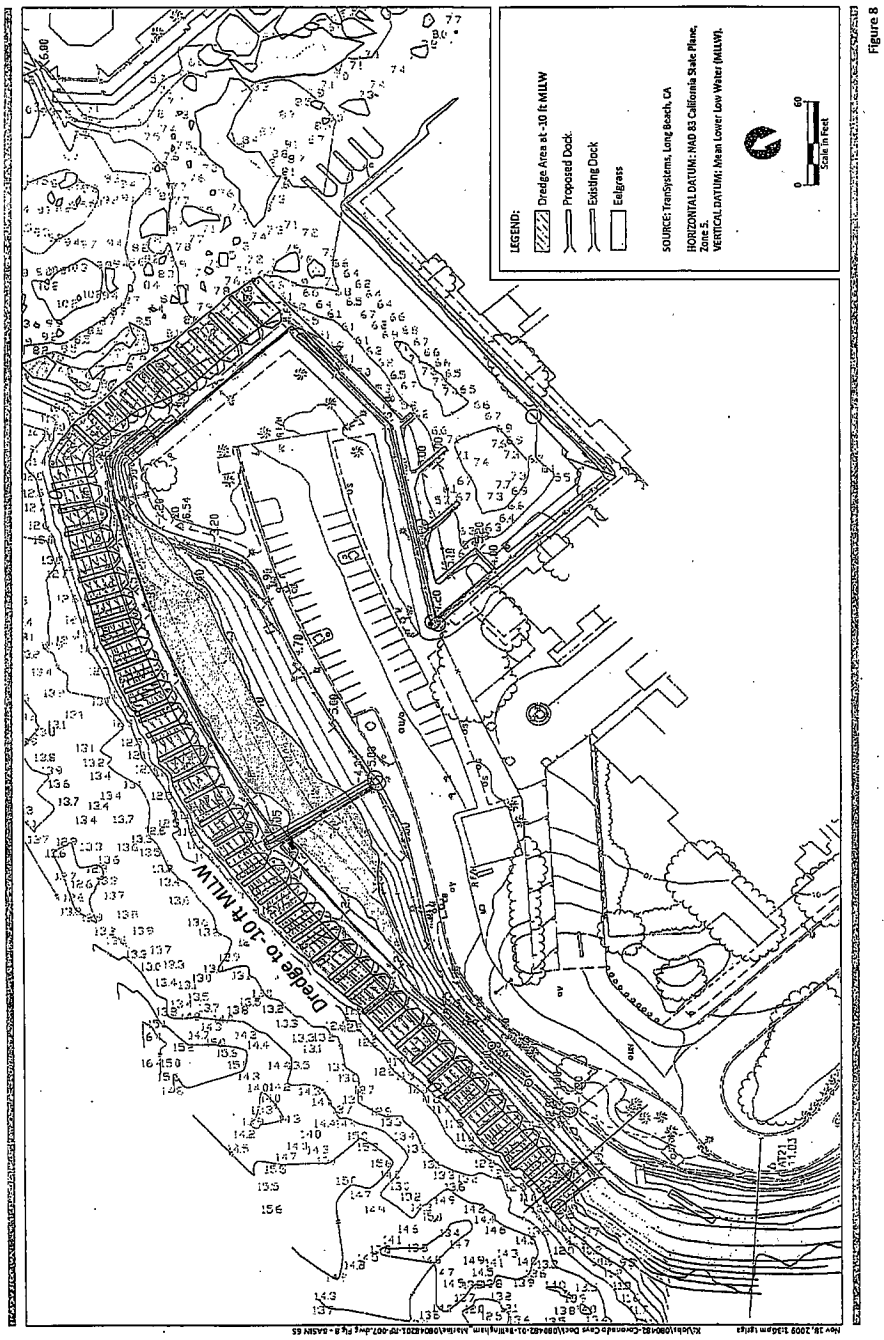

Figure 8
Basin 6S
Alamitos Bay Marina Rehabilitation

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Figure 9. Areas to be dredged within Basin 6S in Phase 12.

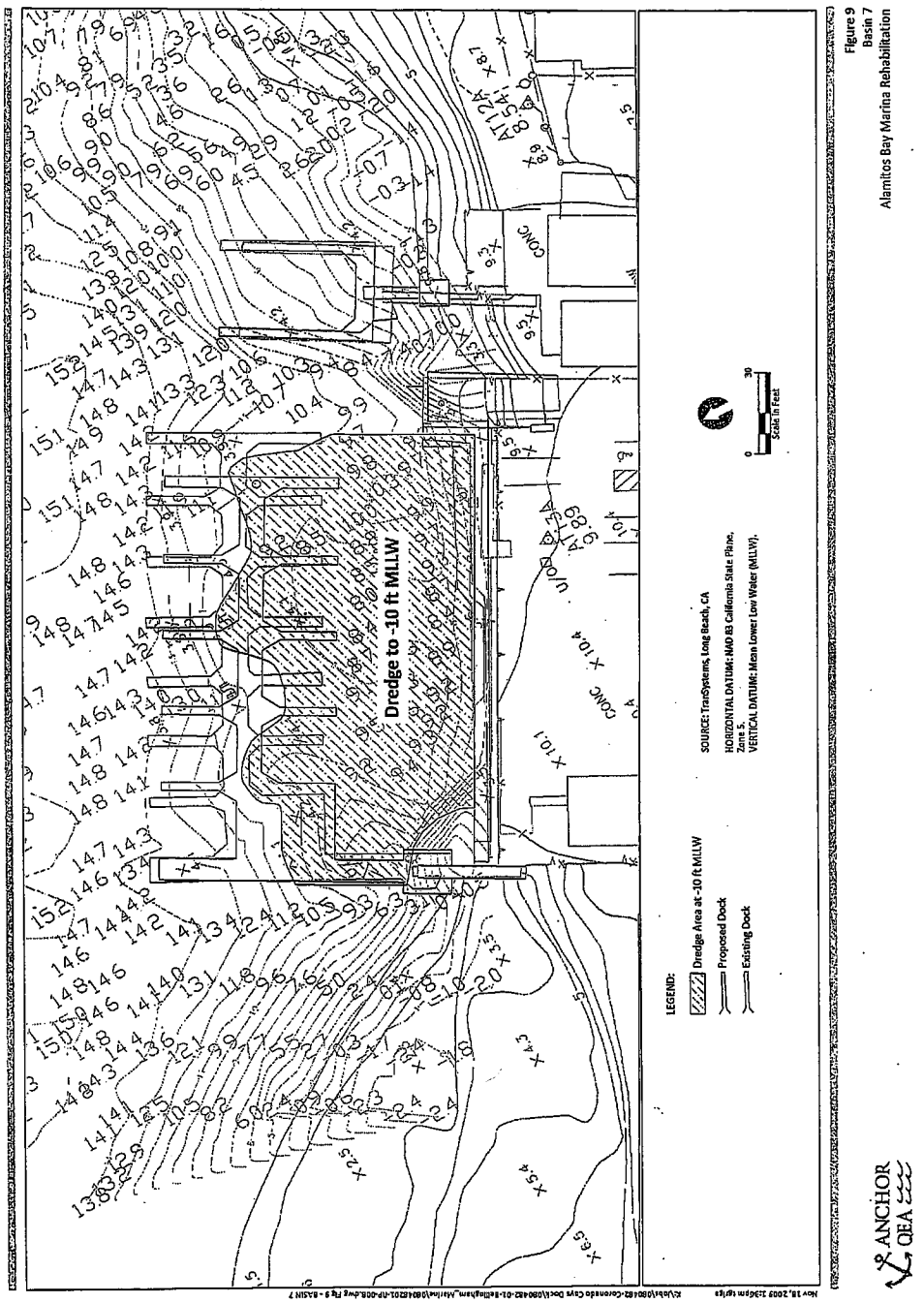

Figure 10. Areas to be dredged within Basin 7 in Phase 12.

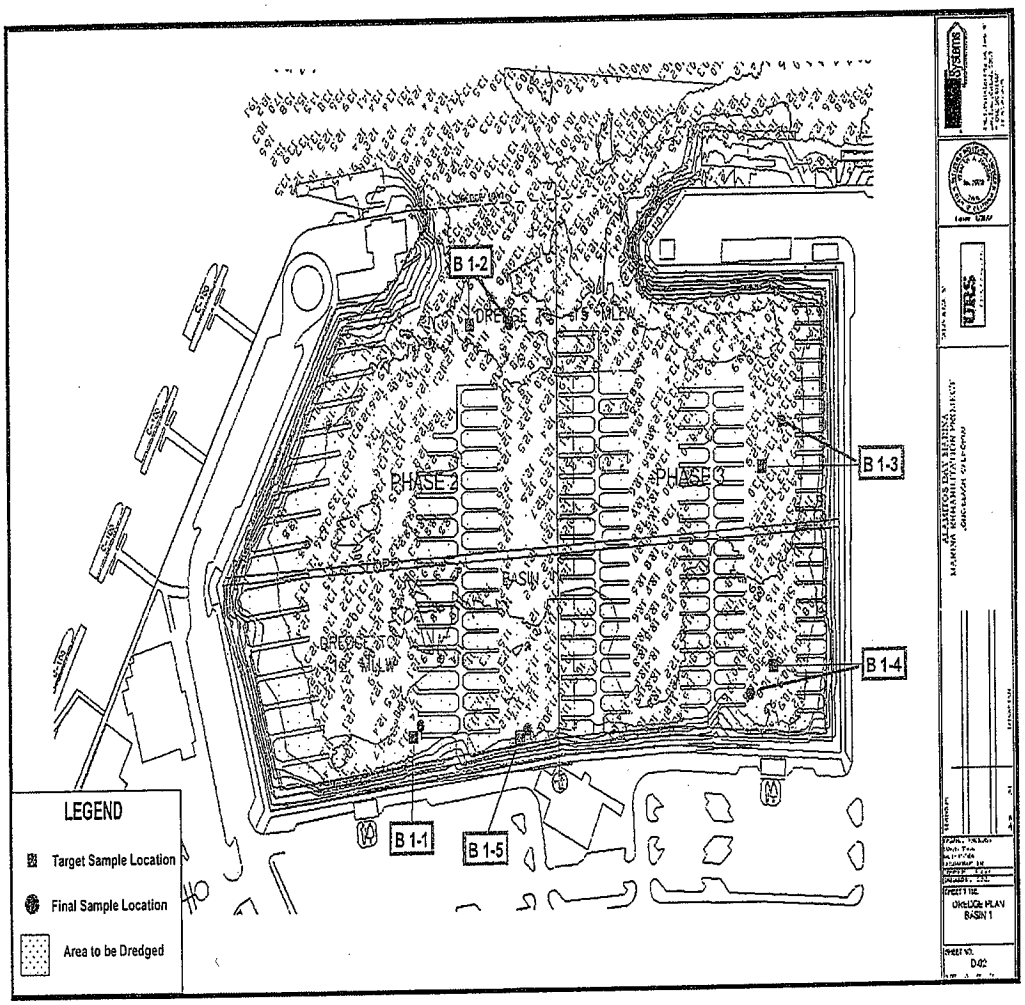

Figure 3a. Sample Locations Basin 1: Alamitos Bay Marina 2007

Figure 11. Sediment core sampling locations within Basin 1 for 2007 sediment characterization study.

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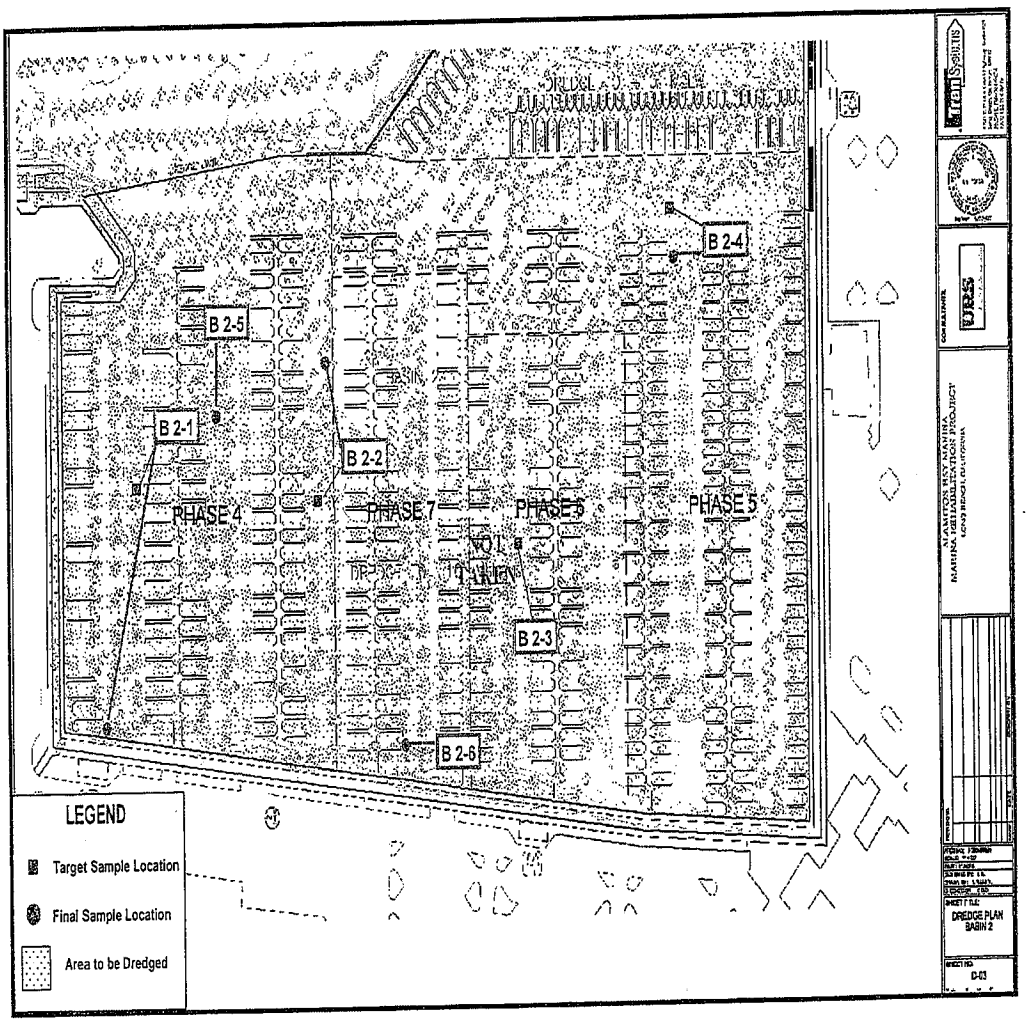

Figure 3b. Sample Locations Basin 2: Alamitos Bay Marina 2007

Figure 12. Sediment core sampling locations within Basin 2

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for 2007 sediment characterization study.

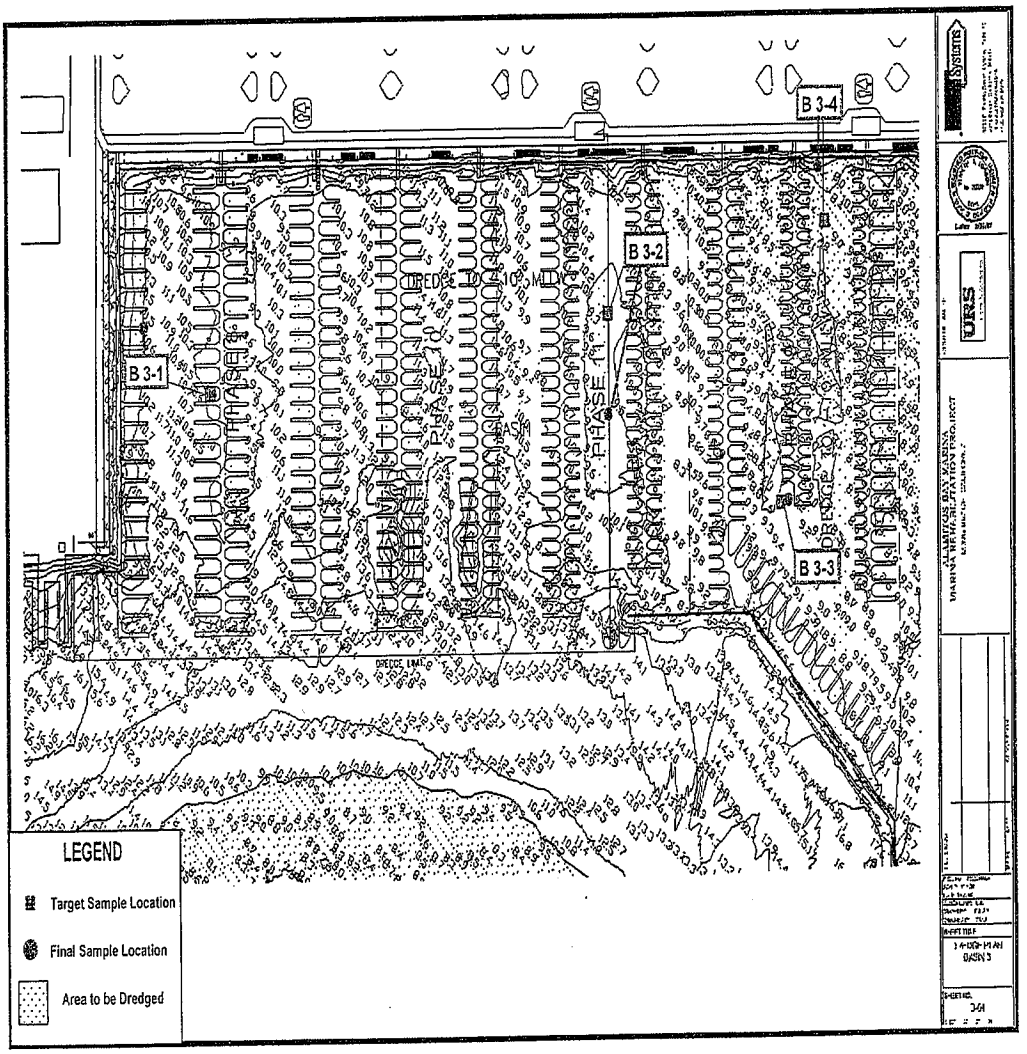

Figure 3c. Sample Locations Basin 3: Alamitos Bay Marina 2007

Figure 13. Sediment core sampling locations within Basin 3

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for 2007 sediment characterization study.

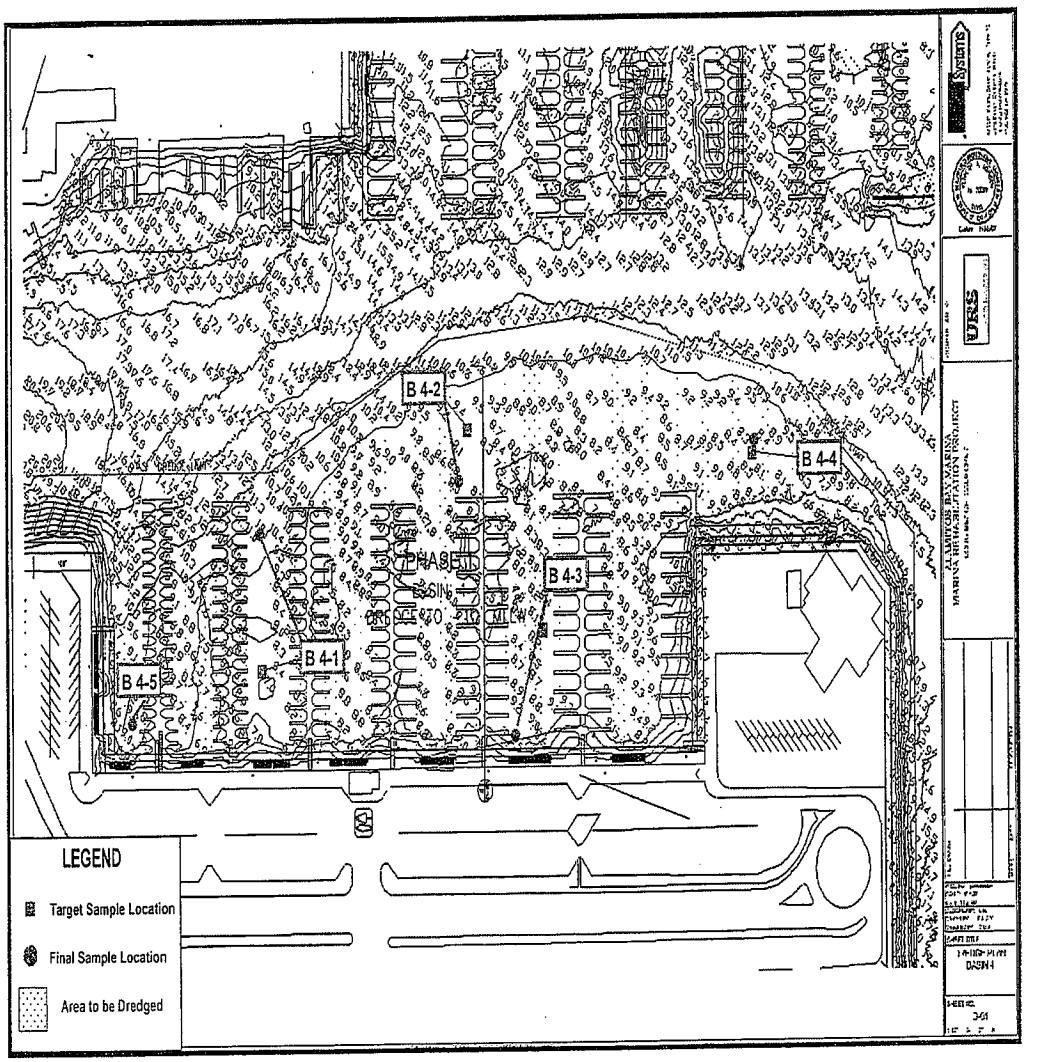

Figure 3d. Sample Locations Basin 4: Alamitos Bay Marina 2007

Figure 14. Sediment core sampling locations within Basin 4

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for 2007 sediment characterization study.

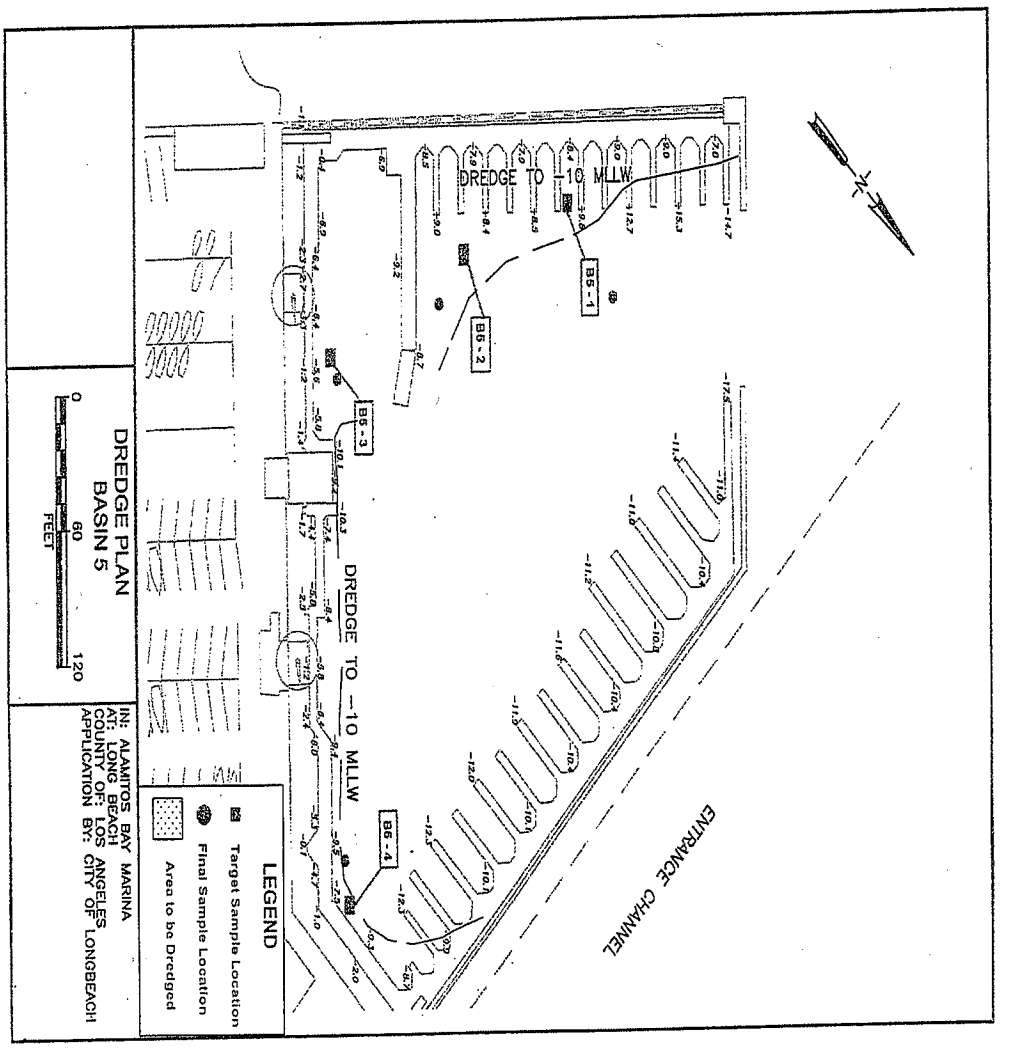

Figure 3e. Sample Locations Basin 5: Alamitos Bay Marina 2007

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Figure 15. Sediment core sampling locations within Basin 5
for 2007 sediment characterization study.

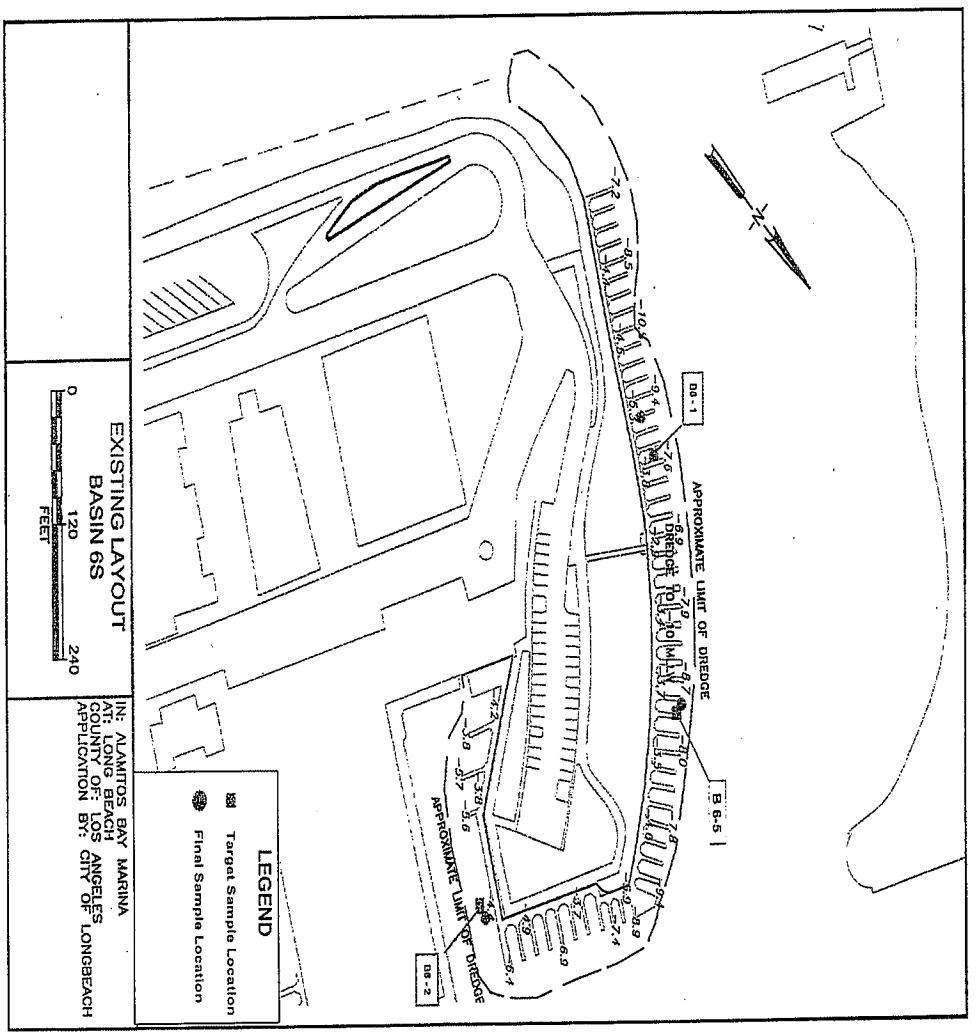

Figure 3f. Sample Locations Basin 6S: Alamitos Bay Marina 2007

Figure 16. Sediment core sampling locations within Basin 6S for 2007 sediment characterization study.

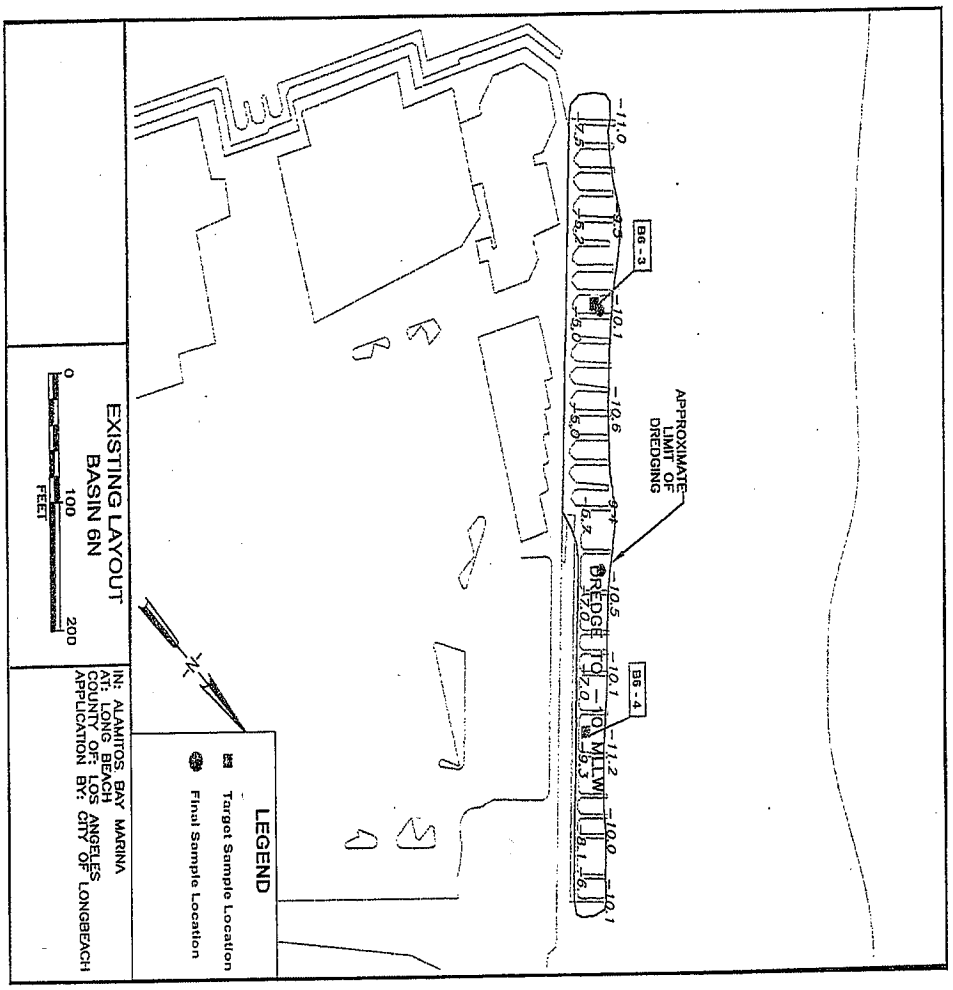

Figure 3g. Sample Locations Basin 6N: Alamitos Bay Marina 2007

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Figure 17. Sediment core sampling locations within Basin 6N

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for 2007 sediment characterization study.

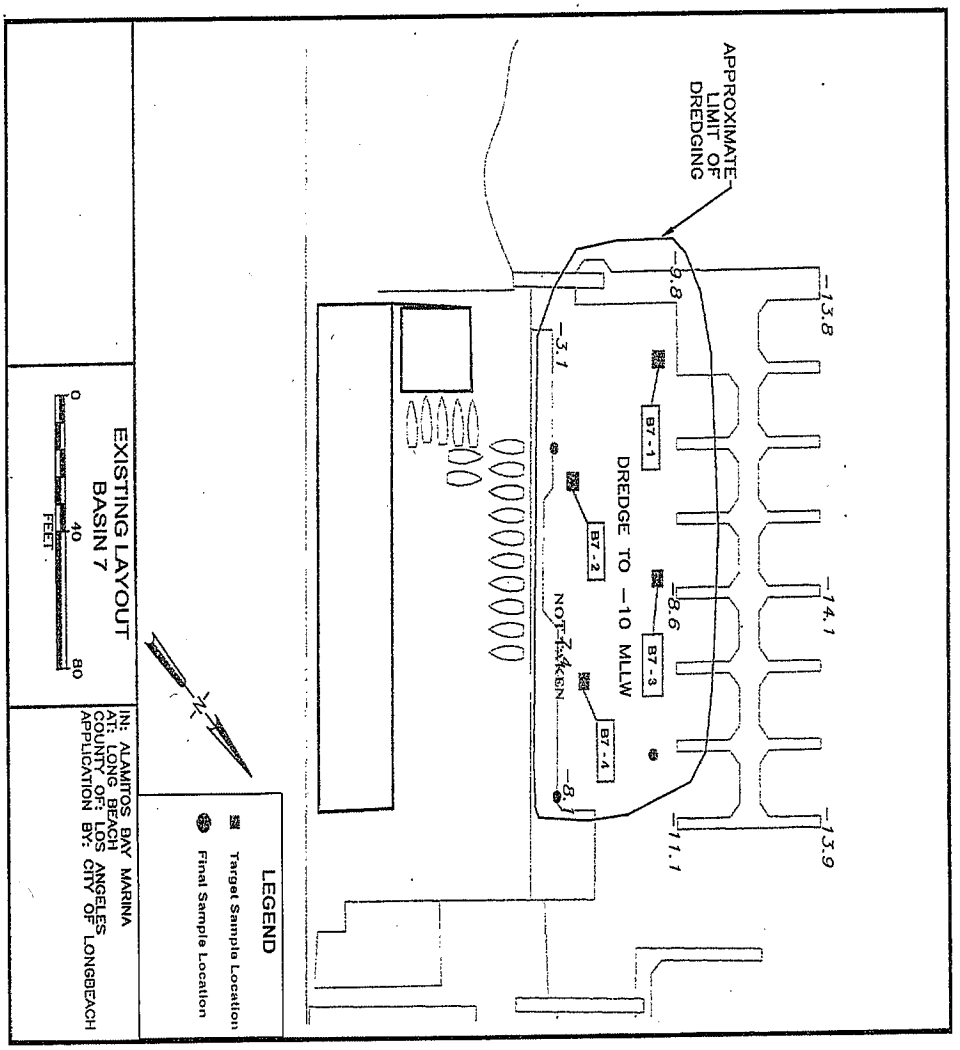

Figure 3h. Sample Locations Basin 7: Alamitos Bay Marina 2007

JULY 2007 Tier III Sediment Characterization, Alamitos Bay Marina

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Figure 18. Sediment core sampling locations within Basin 7 for 2007 sediment characterization study.

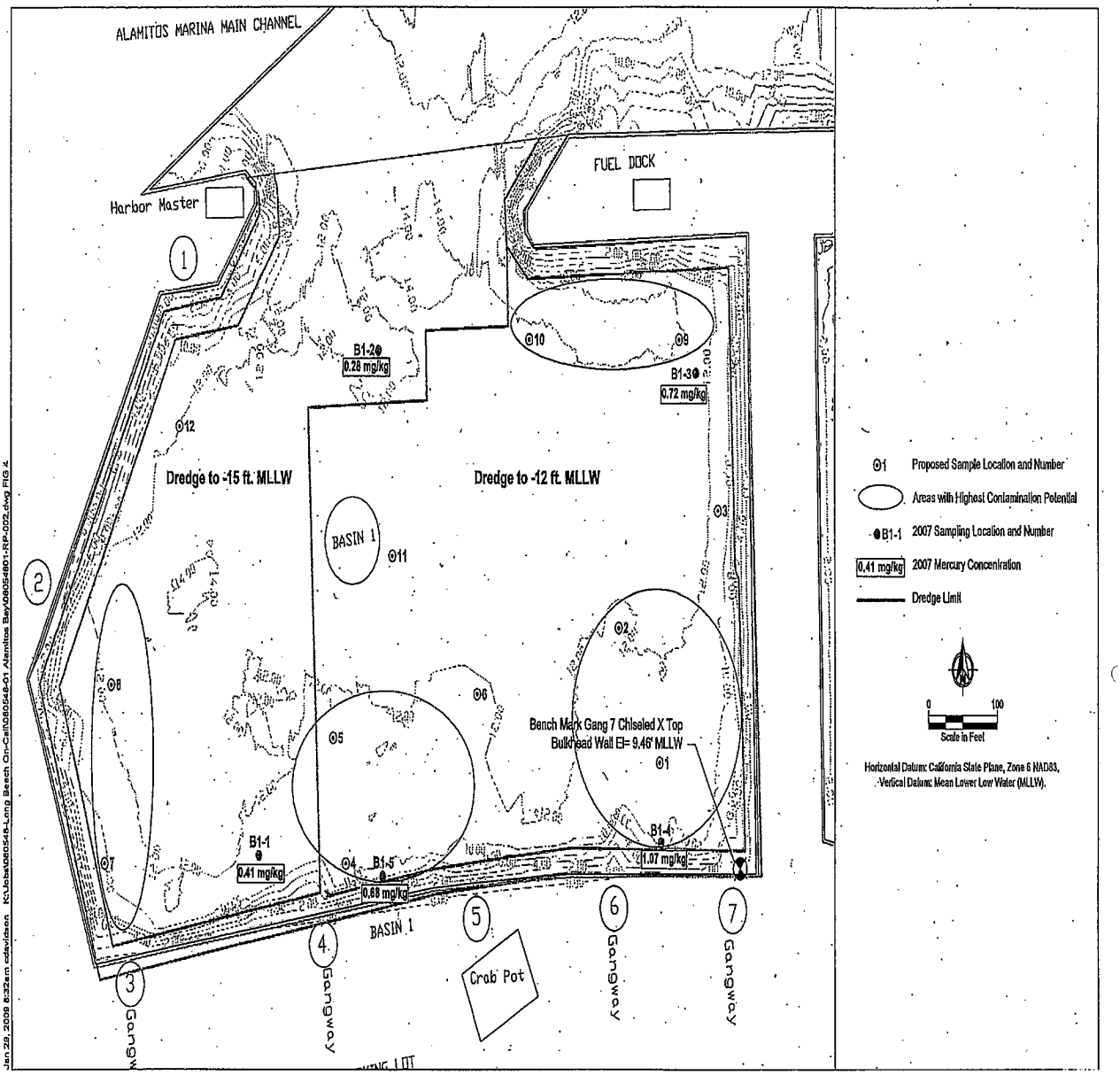

Figure 19. Sediment sampling locations within Basin 1 for 2009 supplemental sediment characterization.

TENTATIVE

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. xxxx
FOR
CITY OF LONG BEACH
(ALAMITOS BAY MARINA REHABILITATION)
(FILE NO. 10-110)

1. Receiving Water Monitoring

The following sampling protocol shall be undertaken by the City of Long Beach during the proposed dredging project. Sampling for the receiving water monitoring shall commence at least one week prior to the start of the dredging and fill operations and continue at least one week following the completion of all such operations. Sampling shall be conducted a minimum of once a week during dredging operations. Sampling shall be conducted down current of the dredge sites at least one hour after the start of dredging operations. All receiving water monitoring data shall be obtained via grab samples or remote electronic detection equipment. Receiving water samples shall be taken at the following stations:

Station	Description
A	30.5 meters (100 feet) up current of the dredging operations, safety permitting.
B	30.5 meters (100 feet) down current of the dredging operations, safety permitting.
C	91.5 meters (300 feet) down current of the dredging operations.
D	Control site (area not affected by dredging operations).
E	15.2 meters (50 feet) from the return water discharge point.

The following shall constitute the receiving water monitoring program:

Water Column Monitoring

Parameters	Units	Station	Frequency
Dissolved oxygen[1]	mg/l	A-E	Weekly[2]
Light transmittance[1]	% Transmittance	" "	"
pH[1]	pH units	" "	"
Suspended solids[3]	mg/l	" "	"

[1]Measurements shall be taken throughout the water column (at a minimum, at 2-meter increments).
[2]During the first two weeks of dredging, stations shall be sampled two times per week.
[3]Mid-depth shall be sampled.

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Water column light transmittance values from Stations C and D, as well as from Stations E and D, shall be compared for the near surface (1 meter below the surface), for mid-water (averaged values throughout the water column, excluding the near surface and bottom) and for the bottom (1 meter above the bottom). If the difference in % light transmittance between stations C and D, or between stations E and D, for the near surface or mid-water or bottom is 30% or greater, water samples shall be collected at mid-depth (or the depth at which the maximum turbidity occurs) and analyzed for trace metals, DDTs, PCBs and PAHs. At a minimum, one set of water samples shall be collected and analyzed for these chemical constituents during the maintenance dredging operation.

In the event that the water column light transmittance values from Stations C and D, or from Stations E and D, exceed the 30% trigger described above, the City of Long Beach shall conduct the standard water quality monitoring described above for three consecutive days following the date of exceedance. The City of Long Beach shall notify the Regional Board, the California Coastal Commission, the United States Environmental Protection Agency and the United States Army Corps of Engineers within 24 hours following observance of the transmissivity exceedance. The City of Long Beach shall investigate whether the exceedance is due to obvious dredging operational problems and can be corrected easily and quickly. However, if the turbidity problem persists or recurs, the City of Long Beach shall look for other causes of the problem and evaluate whether additional, more aggressive best management practices are required to eliminate the exceedances; this evaluation shall be performed in consultation with the four regulatory agencies listed above.

Color photographs shall be taken at the time of sampling to record the presence and extent of visible effects of dredging operations. These photographs shall be submitted with the receiving water monitoring reports.

The City of Long Beach shall provide Regional Board staff with a receiving water monitoring program field schedule at least one week prior to initiating the program. Regional Board staff shall be notified of any changes in the field schedule at least 48 hours in advance.

2. Observations

The following receiving water observations shall be made and logged daily during dredging or excavating operations:

a. Date and time;
b. Direction and estimated speed of currents;
c. General weather conditions and wind velocity;
d. Tide stage;
e. Appearance of trash, floatable material, grease, oil or oily slick, or other objectionable materials;
f. Discoloration and/or turbidity;

g. Odors;
h. Depth of dredge operations during previous day;
i. Amount of material dredged the previous day;
j. Cumulative total amount of material dredged to date.

3. General Provisions

All sampling, sample preservation, and analyses shall be performed in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" promulgated by the United States Environmental Protection Agency.

All chemical analyses shall be conducted at a laboratory certified for such analysis by the California Department of Public Health, Environmental Laboratory Accreditation Program (ELAP), or approved by the Executive Officer.

The City of Long Beach shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to insure accuracy of measurements, or shall insure that both activities will be conducted by third parties under City of Long Beach supervision.

A grab sample is defined as an individual sample collected in fewer than 15 minutes. All samples shall be representative of the waste discharge under normal operating conditions.

5. Reporting

Monitoring reports shall be submitted within 10 days following each weekly sampling period. In reporting, the City of Long Beach shall arrange the monitoring data in tabular form so that dates, time, parameters, test data, and observations are readily discernible. The data shall be summarized to demonstrate compliance with the waste discharge requirements. A final report, summarizing the results of the weekly monitoring and reporting the total volume discharged, shall be submitted within one month of completion of the project.

Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

Each monitoring report must affirm in writing that:

> All analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current EPA guidelines or as specified in the Monitoring Program.

For any analysis preformed for which no procedure is specified in the EPA guidelines or in the Monitoring Program, the constituent or parameter analyzed and the method or procedure used must be specified in the report.

6. General Provisions for Reporting

For every item where the requirements are not met, the City of Long Beach shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.

Each report shall contain the following completed declaration:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Executed on the_____day of_____, 20___,
at _____.

_____(Signature)

_____(Title)"

These records and reports are public documents and shall be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by:

_____
Samuel Unger, P.E.
Executive Officer

Date: November 4, 2010