California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2003-0006

Waste Discharge Requirements and
Technically Conditioned Water Quality Standards Certification
For

U.S. Army Corps of Engineers
Lower Newport Bay Maintenance Dredging Project
Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Board), finds that:

1. The U.S. Army Corps of Engineers (hereinafter, discharger) proposes to conduct maintenance dredging activities within Lower Newport Bay in order to obtain authorized depths in federal navigational channels, and thereby assure safe navigability for recreational and commercial boats.

2. Dredging projects have the potential to affect the quality of waters of the State. Consequently, on December 3, 2002, the discharger filed a report of waste discharge in accordance with Section 13260 of the California Water Code.

3. The discharger proposes to dredge approximately 982,000 cubic yards of sediments from federal channels in the harbor south of the Pacific Coast Highway Bridge (Lower Newport Bay). The channels include the Entrance Channel, Corona del Mar Bend, and Balboa Reach (Composite Area 1); Harbor Island Reach, Lido Isle Reach, and Turning Basin (Composite Area 2); Yacht Anchorage, Mooring Area and Newport Channel (Composite Area 3); and Balboa Island North Channel (Composite Area 4). Approximately 65,450 cubic yards of the sediments are expected to be suitable for placement on beaches and nearshore locations. It is expected that the remainder will be transported to the U.S. EPA-authorized LA-3 offshore disposal site. Dredging operations are expected to commence upon receipt of all requisite project approvals, which include concurrence from the U.S. Environmental Protection Agency and the California Coastal Commission that the dredged sediments are suitable for offshore disposal. The dredging operations are expected to be complete within approximately 150 days of commencement. Dredging will utilize both clamshell (cranes on barges) and hopper (split-hull) dredges.

4. A Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan identifies water quality objectives and beneficial uses of waters in the Santa Ana Region. The requirements contained in this Order are necessary to implement the Basin Plan.

5. The beneficial uses of Lower Newport Bay include:

   a. Water contact recreation,
   b. Non-contact water recreation,
   c. Commercial and sport fishing,
   d. Navigation,
   e. Wildlife habitat,
   f. Rare, threatened, or endangered species habitat,
   g. Spawning, reproduction, and development of fish and wildlife,
   h. Marine habitat, and
   i. Shellfish harvesting.

6. The dredging activities will result in impacts to the biota, including removal of the benthic community currently inhabiting the sediments to be dredged. The benthic community is expected to reestablish once the dredging activities are completed. Thus, this impact is considered temporary. The dredging activities are also expected to create some degree of turbidity and may depress ambient dissolved oxygen on a temporary basis in the immediate vicinity of the dredging area. This could result in short-term adverse effects on fish and wildlife, including foraging avian species. The dredging activities may extend into the nesting season (April 15 – September 15) of the least tern, a state and federally listed endangered avian species. Increased turbidity as the result of the dredging activities could adversely affect foraging by this species. The dredging activities could also result in adverse impacts to eelgrass beds, which provide important nursery and forage habitat for fish. The City of Newport Beach completed a survey of eelgrass beds in Lower Newport Bay in September 2002. Placement of dredged materials on beaches could adversely affect spawning by the California grunion, a recreationally and ecologically important nearshore fish species. Finally, dredging activities could contribute to the spread of the invasive algae *Caulerpa taxifolia*, if the algae is present in the Lower Bay. A *Caulerpa* survey of the Lower Bay was completed in September 2002 and no *Caulerpa* was found. However, the "*Caulerpa* Control Protocol", developed by the National Oceanic and Atmospheric Administration Fisheries and the California Department of Fish and Game, requires that surveys be conducted 30-90 days prior to the dredging activity. This Order includes requirements intended to address these potential impacts to beneficial uses. In part, these requirements directly reflect the commitments made by the discharger in the November 2002 "Draft Environmental Assessment for Lower Newport Bay Maintenance Dredging Project", and subsequent commitments needed to secure requisite approval by other agencies, including the California Coastal Commission.

7. The discharger has conducted testing of the composited sediment samples from the four areas of Lower Newport Bay proposed for dredging. Elevated levels of total DDT have been reported for all four sampling areas, while elevated levels of heavy metals were found in Composite Areas 2, 3 and 4. All sampled quadrants had total DDT concentrations in sediments that exceeded numeric target values set forth in the TMDL for toxics (3.89 μg/kg dw), established by the U.S. Environmental Protection Agency on June 14, 2002. These pollutants are known to bioaccumulate within the food web and/or cause reproductive or other impairments in sensitive organisms. The dredging activities will result in the temporary resuspension of some of these sediments in the water column, which may result in short-term adverse impacts on the biota. It is likely that the removal of these contaminated sediments will benefit Lower Newport Bay in the long-term. However, it is possible that the sediments remaining after the project is completed will be of poorer quality than those removed and that there could be remobilization of pollutants from those sediments. To evaluate this potential impact, this Order requires the discharger to conduct post-project sampling and analysis of Lower Newport Bay sediments. The results of this analysis will be used in the development of an appropriate TMDL implementation plan(s). This Order also requires the discharger to contribute to an investigation of food web impacts of toxic substances, including DDT, in Newport Bay. This investigation will be conducted by the Southern California Coastal Water Research Project (SCCWRP) under contract to the Regional Board.

8. The issuance of waste discharge requirements for this maintenance dredging project is categorically exempt from the California Environmental Quality Act (CEQA)(Public Resources Code, Section 21100 *et seq.*) in accordance with Section 15304(g), Chapter 3, Title 14, California Code of Regulations. This finding results in compliance with CEQA for the purposes of CWA Section 401 water quality standards certification.

9. This Order serves, in part, as a technically conditioned certification of the project pursuant to CWA Section 401 (33 USC 1341).

10. The Regional Board has considered antidegradation pursuant to State Board Resolution No. 68-16 and finds that the discharge is consistent with those provisions.

11. The Board has notified the discharger and other interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for public hearing and opportunity to submit their written views and recommendations.

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

IT IS HEREBY ORDERED that the discharger shall comply with the following:

A. Discharge Specifications

1. No activities associated with the dredging project, including the transport of dredged materials to the offshore disposal site, shall cause or threaten to cause a nuisance or pollution as defined in Section 13050 of the California Water Code.

2. The discharge of any substance in concentrations toxic to animal or plant life is prohibited.

3. No activities associated with the dredging project, including the transport of dredged materials to the offshore disposal site, shall cause the background natural turbidity (in Nephelometric Turbidity Units, NTUs) in the receiving waters to be increased by values greater than the following Basin Plan objectives at a distance of 100 feet from the activity:

Natural Turbidity	Maximum Increase
0--50 NTU	20%
50-100 NTU	10 NTU
Greater than 100 NTU	10%

4. No activity associated with the dredging project, including the transport of dredged materials to the offshore disposal site, shall cause the dissolved oxygen in the receiving waters to be depressed below 5.0 mg/l. When natural dissolved oxygen concentrations are less than 5.0 mg/l, the discharge shall not cause a further depression.

B. Receiving Water Limitations

No activity associated with the dredging project, including the transport of dredged materials to the offshore disposal site, shall cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board, as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board may revise this Order in accordance with such more stringent standards.

C. Provisions

1. The discharger shall comply with Monitoring and Reporting Program No. R8-2003-0006 as issued by the Executive Officer. The monitoring and reporting program may be revised at any time during the term of this Order, and may include a reduction or an increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

2. The discharger shall implement the following to identify and mitigate the impacts of the project on eelgrass (*Zostera marina)* beds in Lower Newport Bay:

   a. The discharger shall avoid dredging in all existing eelgrass vegetated areas. A setback of at least 15m (50 feet) from eelgrass vegetated areas shall be maintained for dredging. The discharger shall take all practicable steps to minimize the indirect effects of dredging activities on eelgrass vegetated areas outside the dredged area.

   b. The discharger shall complete a post-project eelgrass survey in the Lower Bay to assess the effects of the project. Any impacts to eelgrass shall be mitigated in accordance with the current Southern California Eelgrass Mitigation Policy[1].

3. Prior to commencement of dredging activities, the discharger shall complete a survey of the proposed dredge area for the presence of the invasive algae *Caulerpa taxifolia*. The survey shall be completed and reported in accordance with the "*Caulerpa* Control Protocol" (Protocol)[2] developed by the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the California Department of Fish and Game (CDFG)[3]. If *Caulerpa* is found during the survey or at any other time prior to, during or within 120 days after completion of the dredging project, then NOAA Fisheries and CDFG shall be notified within 24 hours of the finding, pursuant to the Protocol. In addition, the Regional Board shall also be notified within 24 hours. Dredging shall not commence or continue until appropriate control measures, as specified in the Protocol, have been implemented to the satisfaction of NOAA Fisheries and CDFG. Eradication and removal of *Caulerpa taxifolia* shall be conducted in accordance with the Protocol.

4. Beach disposal of dredged material shall not occur during the California grunion (*Leuresthes tenuis)* spawning season (March through August).

5. The discharger shall contribute $22,500 to the investigation of food web impacts of toxic substances that will be conducted by the Southern California Coastal Water Research Project (SCCWRP) under contract to the Regional Board.

6. If dredging activities are not completed by April 15, the discharger shall assess any potential impacts of continuing these activities on the least tern (*Sterna antillarum brownii*). Dredging activities shall cease on April 15, unless the U.S. Fish and Wildlife Service approves their continuance. Dredging after April 15 shall be in conformance with any terms and conditions imposed by the U.S. Fish and Wildlife Service.

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1 This Policy may be accessed at http://swr.ucsd.edu/hcd/eelpol.htm

2 Version 1.2, adopted November 22, 2002, or as it may be amended.

3 In addition to submittal of reports to NOAA Fisheries and CDFG, copies of all reports shall be submitted to the Regional Board.

7. The discharger shall report any discharge of waste that may endanger health or the environment. Such information shall be provided to the Executive Officer (909-782-4130) and the Office of Emergency Services (800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five (5) days of the time the discharger becomes aware of the circumstances and shall contain a description of the discharge and its cause; the period of discharge, including exact dates and times and, if the discharge has not been corrected, the anticipated time to reduce, eliminate, and prevent recurrence of the discharge.

8. The discharger shall report promptly to the Board any material change in the character, location, and/or volume of the discharge.

9. The Regional Board and other authorized representatives shall be allowed:

   a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the requirements of this Order;

   b. Access to copy any records that are kept under the requirements of this Order;

   c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

   d. To photograph, sample and monitor for the purpose of assuring compliance with this Order.

D. Standard Certification Conditions

1. The following conditions are required for all water quality standards certifications pursuant to 23 California Code of Regulations Section 3860:

   (A) Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the Water Code and Article 6 (commencing with Section 3867) of this Chapter.

   (B) Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Subsection 3855(b) of this Chapter and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

   (C) Certification is conditioned upon total payment of any fee required under this Chapter and owed by the applicant.

I, Gerard J. Thibeault, 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, Santa Ana Region, on January 17, 2003.

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2003-0006

for
U.S. Army Corps of Engineers
Lower Newport Bay Maintenance Dredging Project
Orange County

A. General Monitoring Requirements

1. This monitoring program shall be implemented with the initiation of the dredging project.

2. The volumes of excavated material shall be estimated and recorded on a weekly basis.

3. Weekly, at a minimum, the following sample locations shall be monitored in the water around each active dredging operation:

   a. At locations approximately 100 feet upcurrent and downcurrent of the operation (two locations), when the dredge system is operating and discharging. Samples shall be obtained from a depth of three feet below the water surface and, where possible, three feet above the bottom of the channel or bay.

   b. At locations approximately 100 feet upstream and downstream from a moving barge or scow loaded with sediment from the dredge, while it is in transit within Lower Newport Bay. Any noted representative turbidity plume around a moving barge/scow should be sampled as part of the weekly requirement.

4. If conditions at the time of sampling do not allow for sampling at each location and depth, then another alternate, appropriate location shall be used to obtain the necessary samples.

5. The sampling locations, as well as the depths at which they were taken, shall be recorded in a permanent log. Locations shall be recorded on a map.

6. The collected samples shall be analyzed for turbidity and dissolved oxygen. The turbidity samples shall be analyzed by a certified laboratory. For dissolved oxygen, determination shall be made onsite. In addition, once each month, a sample shall be submitted for laboratory determination.

7. Daily, during dredging operations, visual observations shall be made for turbidity plumes on all sides of the dredge and on all sides of moving, loaded barges/scows within Lower Newport Bay. Visual observations shall be recorded in a logbook.

B. Post-Project Sediment Monitoring

1. By March 15, 2002, the discharger shall submit a proposed Monitoring Plan for post-project sampling and analysis of sediments in all dredged quadrants of Lower Newport Bay. The Plan shall include, at a minimum, all sample locations and analytes included in the discharger's pre-project sediment sampling and analysis program, as reported in Appendix H ("Sediment Chemistry Results") to the November 2002 Draft Environmental Assessment for the Lower Newport Bay Maintenance Dredging Project. Selenium shall be added to the constituents to be analyzed. The Monitoring Plan shall provide a description of analytical methods to be used, QA/QC, detection limits, and any other information necessary to evaluate adequacy of said monitoring plan. The discharger shall implement the plan, upon the Regional Board Executive Officer's approval, no later than 30 days from the completion of the dredging project.

C. Reporting

1. Monitoring reports shall be submitted on the 30th day of each month and shall include all information collected in accordance with this monitoring and reporting program for the previous month, including:

    a. The estimated volume of material, in cubic yards, excavated during the previous month. The report shall differentiate the volume suitable for placement on the beach, the volume suitable for placement in nearshore areas, and the volume towed away. If no material is dredged during the reporting period, a report to that effect shall be submitted in lieu of a monitoring report.

    b. A copy of the log of observations, sampling locations, and depths, along with a sampling location map. A statement regarding the use of any alternate sampling locations shall be included in the report along with a map of alternate locations.

    c. Copies of the analytical results of the tests for turbidity, dissolved oxygen, and water column chemistry. The results of any analyses of samples taken more frequently than required shall be reported to the Board.

    d. For every item where the requirements and turbidity/dissolved oxygen objectives are not met, the discharger 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.

    e. A report detailing results of post-project sediment monitoring shall be submitted within 90 days of project completion.

2. All reports shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by _____
Gerard J. Thibeault
Executive Officer

January 17, 2003

California Regional Water Quality Control Board
Santa Ana Region

January 17, 2003

ITEM NO. 6

SUBJECT: Waste Discharge Requirements for the U.S. Army Corps of Engineers - Lower Newport Bay Dredging Project, Orange County - Order No. R8-2003-0006

DISCUSSION:

Significant amounts of sand, silt, and other materials are introduced from Upper Newport Bay into Lower Newport Bay, the small craft harbor south of the Pacific Coast Highway Bridge. These deposits change the bottom topography and the federally authorized channel configuration of Lower Newport Bay. Maintenance dredging activities are necessary to obtain authorized depths in the federal navigational channels and, thereby, to assure safe navigability for recreational and commercial boats.

The last maintenance dredging in Lower Newport Bay occurred in 1998-99, when approximately 206,000 cubic meters (270,000 cubic yards) of sediment were removed from the Main Channel and the Upper Bay Channel. The U.S. Army Corps of Engineers (discharger) now proposes to remove approximately 982,000 cubic yards of sediments from federal channels throughout Lower Newport Bay. The channels include the Entrance Channel, Corona del Mar Bend, Balboa Reach, Harbor Island Reach, Lido Isle Reach, Balboa Channel, Newport Channel, and the Turning Basin. Approximately 65,450 cubic yards of the sediments are expected to be suitable for placement on beaches and nearshore locations. It is expected that the remainder will be transported to the EPA-authorized LA-3 offshore disposal site.

Since this proposed project will result in the discharge of wastes to waters of the State, the discharger filed a report of waste discharge in accordance with Section 13260 of the California Water Code on December 3, 2002. The dredging is expected to be performed using both hopper (split-hull) dredges and mechanical or clamshell dredges (barge-mounted cranes with clamshells). Hydraulic cutterhead or suction dredges will not be used.

Dredging operations are expected to commence upon receipt of all requisite project approvals, which include concurrence from the U.S. Environmental Protection Agency and the California Coastal Commission that the dredged sediments are suitable for offshore disposal. The dredging operations are expected to be complete within approximately 150 days of commencement.

Dredging activities will result in temporary increases in turbidity, nutrients, suspended and dissolved contaminants, and decreases in dissolved oxygen. These effects will, in turn, result in short-term adverse impacts on beneficial uses, particularly wildlife uses. Depending on the period over which the dredging takes place, temporary adverse impacts on recreational uses of the Bay may also result. The project will result in the removal of the benthic community inhabiting the sediments to be dredged; however, this effect is considered temporary since the community is expected to recolonize the dredged area once the project is complete. Increases in turbidity and decreases in dissolved oxygen as the result of dredging activities could adversely affect fish and wildlife, including the least tern, a state and federally listed endangered avian

species. The dredging activities may extend into the nesting season (April 15 – September 15) of the least tern. Increased turbidity as the result of the dredging activities could adversely affect foraging by this species. The dredging activities could also result in adverse impacts to eelgrass beds, which provide important nursery and forage habitat for fish. The City of Newport Beach completed a survey of eelgrass beds in Lower Newport Bay in September 2002. Placement of dredged materials on beaches could adversely affect spawning by the California grunion, a recreationally and ecologically important nearshore fish species. Finally, the dredging could cause or contribute to the spread of the invasive algae *Caulerpa taxifolia*, if it is present in the proposed dredge area. A *Caulerpa* survey of the Lower Bay was completed in September 2002 and no *Caulerpa* was found. However, "*Caulerpa* Control Protocol", developed by the National Oceanic and Atmospheric Administration Fisheries and the California Department of Fish and Game, requires that surveys be completed not earlier than 90 days (and not later than 30 days) prior to the dredging activity.

This Order includes requirements intended to address these potential impacts to beneficial uses. In part, these requirements directly reflect the commitments made by the discharger in the November 2002 "Draft Environmental Assessment for Lower Newport Bay Maintenance Dredging Project", and subsequent commitments needed to obtain requisite approvals from other agencies, including the California Coastal Commission. This Order places limitations on the degree to which changes in turbidity and dissolved oxygen can occur as a result of dredging activities. Routine monitoring of the Bay waters around the activities is required to measure compliance with these limits. To address potential impacts to the least tern, the Order requires the discharger to cease dredging activities on April 15, unless continuance is approved by the U. S. Fish and Wildlife Service and conducted in accordance with the terms and conditions specified by the Service. This Order requires the discharger to avoid dredging in eelgrass vegetated areas of the Lower Bay and to maintain a dredging setback of at least 50 feet from eelgrass beds outside the dredged area. The discharger is required to conduct a post-project eelgrass survey to identify the impacts of the project and to mitigate those impacts in accordance with the current Southern California Eelgrass Mitigation Policy. The Order prohibits the beach disposal of dredged material during the California grunion spawning season (March through August). The proposed Order also requires the discharger to complete a pre-project *Caulerpa* survey of the Lower Bay, in accordance with the "*Caulerpa* Control Protocol".

The discharger analyzed composite samples of the sediments to be dredged and found elevated concentrations of total DDT and some heavy metals. These pollutants are known to bioaccumulate within the food web and/or cause reproductive or other impairments in sensitive organisms. The dredging activities will result in the temporary resuspension of fine sediments and remobilization of sediment-associated pollutants in the water column, which may result in short-term adverse impacts on the biota. This Order requires the discharger to contribute to an investigation of food web impacts of toxic substances, including DDT, in Newport Bay. This investigation will be conducted by the Southern California Coastal Water Research Project (SCCWRP) under contract to the Regional Board.

On June 14, 2002, the U.S. Environmental Protection Agency established total maximum daily loads (TMDLs) for toxic pollutants for San Diego Creek and Newport Bay, including the Lower Bay. This includes a TMDL for DDT, based largely on analysis of available sediment and tissue data. All areas of the Lower Bay sampled by the discharger had total DDT concentrations in

sediments that exceeded the numeric target value (3.89 μg/kg dw) set forth in the U.S. EPA TMDL. Removal of these sediments is likely to be a long-term benefit to the Lower Bay and to assist with compliance with the TMDL. However, the potential exists that the sediments remaining after the project is completed are of poorer quality than those removed and that there could be remobilization of pollutants from those sediments. To evaluate this potential impact, this Order requires the discharger to conduct post-project sampling and analysis of Lower Newport Bay sediments. The results of this analysis will be used in the development of an appropriate TMDL implementation plan(s).

The requirements contained in the proposed Order are intended to protect the beneficial uses of Newport Bay. The beneficial uses of Newport Bay in the area of this project include water contact recreation; non-contact water recreation; commercial and sport fishing; navigation; wildlife habitat; rare, threatened, or endangered species habitat; spawning, reproduction, and development of fish and wildlife; marine habitat; and shellfish harvesting. The proposed waste discharge requirements should be adequate to protect the beneficial uses of Newport Bay.

RECOMMENDATION:

Adopt Order No. R8-2003-0006 as presented.

Comments were solicited from the discharger and the following agencies and parties:

U.S. Environmental Protection Agency, Permits Issuance Section – Terry Oda (WTR-5)
U.S. Environmental Protection Agency, Wetlands and Sediment Management Section
National Marine Fisheries Service, Long Beach – Rodney McInnis
U.S. Fish and Wildlife Service, Carlsbad – John Hanlon
U.S. Coast Guard, MSO-LAB – Lt. Cmdr. Phil Daniels
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – Jim Maughan
State Department of Health Services, Santa Ana
State Lands Commission – Jane Smith
California Department of Fish and Game, San Diego – Marilyn Fluharty
California Coastal Conservancy – Reed Holderman
California Coastal Commission – Steve Rynas
Orange County Sheriffs Department, Harbor Patrol
Orange County Public Resources and Facilities, Environmental Resources Division – Chris Crompton
Orange County Public Resources and Facilities, Beaches and Parks – Robert Fisher
Orange County Health Care Agency – Larry Honeybourne
Orange County Sanitation District – James Colston
City of Newport Beach, City Manager
Defend the Bay – Robert Caustin
SPON – Jack Skinner, M.D.
Natural Resources Defense Council- Heather Hoercherl