

California Regional Water Quality Control Board
Santa Ana Region
October 28, 2011

ITEM: *8

SUBJECT: Order No. R8-2011-0050, Waste Discharge Requirements (WDRs) for the United States Army Corps of Engineers, Lower Newport Bay Maintenance Dredging Project, Orange County

DISCUSSION:

Lower Newport Bay is renowned as a recreational boating harbor for the residents of the City of Newport Beach, surrounding locales and visitors. Over 10,000 recreational vessels moor in Lower Newport Bay, making it one of the largest harbors for these vessels in California. Excessive erosion in the Newport Bay Watershed has and continues to cause excess sediment deposition in Upper and Lower Newport Bay. This excess sediment must be dredged periodically in order to maintain the beneficial uses of Newport Bay, including navigation (Table 1).

Table 1: Beneficial Uses of Lower Newport Bay

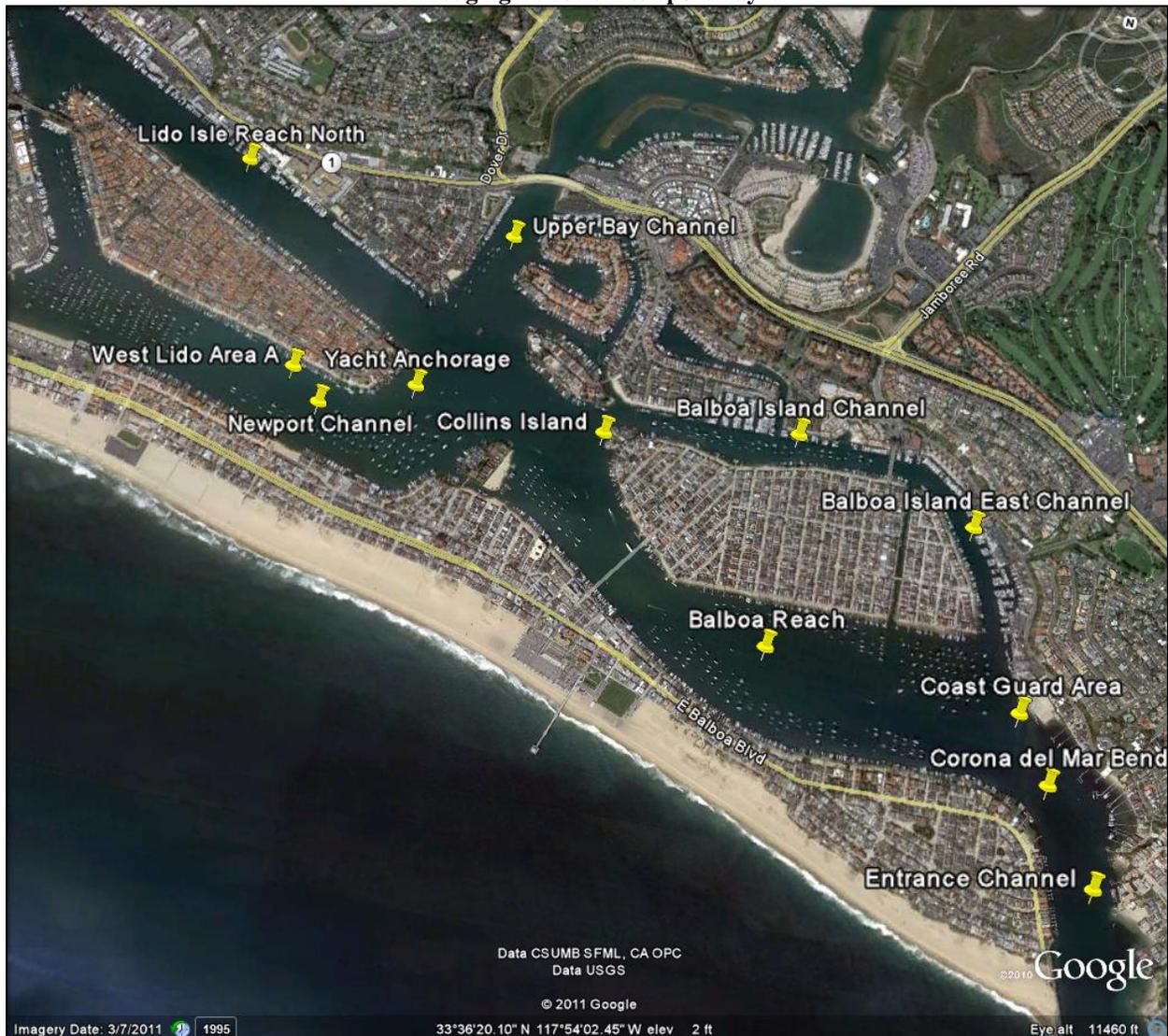
Beneficial Use	Description
REC1	Water contact recreation (e.g. swimming, wading, fishing)
REC2	Non-contact water recreation (e.g. sunbathing, boating, sightseeing)
COMM	Commercial sport fishing
WILD	Wildlife habitat
RARE	Rare, threatened, or endangered species habitat
SPWN	Habitat for reproduction and early development of fish and wildlife
MAR	Marine ecosystems
SHEL	Shellfish harvesting
NAV	Transportation by private, commercial or military vessels

The most recent maintenance dredging projects conducted by the U.S. Army Corps of Engineers (Corps) in Lower Newport Bay occurred in 1998-99 and in 2003. In 1998-99, approximately 270,000 cubic yards of sediment were dredged from the Main Channel and the Upper Bay Channel. In 2003, approximately 27,000 cubic yards of sediment were dredged from the Entrance Channel, Corona del Mar Bend, and Balboa Island East Channel (Figure 1).

In June 2011, the Corps proposed to dredge approximately 1.3 million cubic yards of sediment from Lower Newport Bay. The Corps subsequently reduced the scope of its project to match the available funds and provided Regional Board staff with a revised project scope on October 9, 2011. The Corps now proposes to dredge approximately 402,000 - 511,000 cubic yards of sediment from federal channels and anchorages that were not dredged in 1998-99 or 2003. Table 2 summarizes the proposed project (Project), which is divided into eleven areas. The dredge volumes shown account for the expected "over-dredging" in order to ensure that Project depths are achieved. Dredging volumes discussed below refer to the total including over-dredging.

The original goal of the Corps project was to achieve authorized depths in all of the federal navigational channels and anchorages of Lower Newport Bay (Bay) to allow continued safe navigation for recreational and commercial watercraft. The authorized depths are shown in Table 2 "Original Proposal". However, given reductions in funding and the nature of vessels that typically navigate in the Bay, the modified Project entails dredging to reduced depths (i.e., not to the authorized depth) in five of the eleven dredge areas. Table 2 ("Current Project") identifies the dredging depths that are now proposed. Figure 1 indicates the approximate locations of the areas listed in Table 2.

Figure 1: Approximate Locations of Areas Dredged in 1998-99 and 2003, and Areas Currently Proposed for Dredging in Lower Newport Bay



Samples collected by the Corps indicate that the sediment in all areas proposed for dredging contains too much silt and clay to be suitable for disposal at beaches or near-shore locations. Approximately 346,000 cubic yards (including overdredging) is suitable for disposal at the LA-3 Ocean Dredged Material Disposal Site, which is located

approximately five miles southwest of the entrance to Newport Harbor. Budget constraints may further reduce this volume by 87,000 cubic yards to a total of 259,000 cubic yards. Approximately 165,000 cubic yards is too contaminated for disposal at LA-3. This sediment will be used by the Port of Long Beach as fill material for the Middle Harbor Redevelopment Project. However, the Port of Long Beach can accept no more than 143,000 cubic yards of sediment from the Project. Thus, the full volume of 165,000 cubic yards indicated on Table 2 for POLB will not be achieved. The Corps is currently unable to identify the locations where these reductions (totaling 22,000 cubic yards) will occur.

Table 2: Summary of Proposed Lower Newport Bay Maintenance Dredging Project

Location	Depths (ft MLLW)		Dredge Volumes (thousand yd3)			Area (acres)	
	Original Proposal	Current Project	To Project Depth	Overdredge ¹			Total with Overdredge
				Paid	Unpaid		
Balboa Island Channel	-10	-10	19	13	11	43	6.9
Balboa Reach	-20	-17	12	9	9	30	5.8
Collins Island	-10	-10	11	14	16	41	10.8
Lido Isle Reach North	-20	-17	31	12	12	55	7.8
Yacht Anchorage Area 1	-15	-11	38	26	26	90	15.9
Yacht Anchorage Area 2	-15	-11	49	19	19	87	11.8
Subtotal for Disposal at LA-3			160	93	93	346	59.0
Balboa Island Channel	-10	-10	5	6	9	20	3.1
Coast Guard Area	-10	-10	2	2	0	4	1.2
Lido Isle Reach North	-20	-17	10	9	9	28	5.8
Newport Channel	-10	-10	20	18	20	58	12.8
West Lido Area A	-10	-10	18	19	18	55	11.9
Subtotal for Disposal at POLB			55	54	56	165	34.8
Total			215	147	149	511	93.8
Likely Total (minus Yacht Anchorage Area 2 and reducing POLB total by 22,000 yd3)						402	82.0

MLLW = Mean Lower Low Water

LA-3 = U.S. EPA Ocean Dredged Material Disposal Site

POLB = Port of Long Beach

¹The dredging contractor will be paid for volumes excavated from one foot deeper than the Project depths. A further foot of overdredging is allowed but will not be compensated.

The dredging is expected to be performed by a clamshell dredge or barge-mounted excavator. The dredging operations are expected to begin in December 2011 and last approximately 3 to 4 months.

On June 13, 2011, the Regional Water Board received an application from the Corps for Clean Water Act (CWA) Section 401 Water Quality Certification (CWA 401 Certification) for this Project. The proposed Order will serve, in part as a technically conditioned certification of the Project pursuant to CWA Section 401 (33 USC 1341) In addition, the Regional Water Board is required to prescribe WDRs for the proposed or existing

discharge of waste by an activity, unless WDRs can be waived pursuant to the Regional Board's adopted WDR waiver resolution. The proposed Order will fulfill this requirement.

The California Coastal Commission has issued a consistency determination that the Project is consistent, to the maximum extent practicable, with the Coastal Zone Management Act of 1972 and with enforceable policies of the California Coastal Management Plan. The U.S. Environmental Protection Agency (U.S. EPA) has agreed that a portion of the dredged sediments is suitable for disposal at the LA-3 disposal site. As stated above, some dredged sediments will be disposed of in Slip 1 at the Port of Long Beach's Middle Harbor Redevelopment Project. The Los Angeles Regional Water Quality Control Board has issued WDRs and CWA 401 Certification to the Port of Long Beach Middle Harbor Redevelopment Project (Order No. R4-2010-0020).

Potential Impacts to Beneficial Uses: The Corps' original project envisioned dredging each channel/anchorage to the authorized depth. This would have removed all sediment deposited since the 1920s, including the most contaminated intervals, likely resulting in exposure of cleaner, native sediments. The revised project entails only partial dredging for five of the eleven areas that are included within the Project. This may result in the exposure of sediment that is more contaminated than current surface sediment. Increased contaminant concentrations in surface sediments could result in increased bioaccumulation and toxicity. Toxic contaminants identified in the U.S. EPA's Total Maximum Daily Loads (TMDLs) for Lower Newport Bay are of special concern (Table 3).

Table 3: Lower Newport Bay TMDL Constituents

Metals	Organics	Nutrients
Copper	Chlordane	Nitrogen
Lead	Dieldrin	Phosphorus
Selenium	DDT	
Zinc	PCBs	

Dredging activities will result in temporary increases in turbidity and suspended and dissolved contaminants, and decreases in dissolved oxygen. These effects will, in turn, result in short-term adverse impacts on beneficial uses. The impacts may be categorized as follows:

1. Benthic community impacts: 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 re-colonize the dredged area once the Project is complete.
2. Impacts to fish: Decreases in dissolved oxygen as the result of dredging activities could directly threaten the survival of fish species. Extended periods of increased turbidity could cause larval mortality and reduced feeding ability.
3. Impacts to foraging birds: Increased turbidity could adversely affect wildlife, including the least tern, a state and federally listed endangered avian species. The least tern nests in the adjacent Upper Newport Bay Ecological Reserve and

forages throughout Newport Bay. Dredging activities may extend into the least tern's nesting season (April 15 – September 15) and reduce Lower Newport Bay's availability as a foraging area.

4. Impacts to Eelgrass: Dredging activities could result in adverse impacts to eelgrass beds, which provide important nursery and forage habitat for fish. Surveys conducted by the City of Newport Beach during 2002-2009 indicate that a large fraction of the eelgrass acreage in Lower Newport Bay is in an unstable state and subject to periodic declines in response to environmental stress. Dredging could impact eelgrass beds through direct removal or contact with dredging equipment, failure of adjacent slopes, burial from re-suspended sediment, and reduction in light availability due to increased turbidity.
5. Invasive algae: Dredging could cause or contribute to the spread of the invasive algae *Caulerpa taxifolia*, if it is present in the proposed dredge area.
6. Contaminant Mobilization: The Corps collected sediment samples and benthic invertebrate tissue samples from all areas proposed for dredging. Concentrations of total DDT and mercury in most sediment samples were elevated relative to sediment quality guidelines published by the National Oceanic and Atmospheric Administration (NOAA). The benthic invertebrate tissue samples also indicated uptake of DDD, DDE and mercury at concentrations elevated above reference or background levels. Although removal of these contaminated sediments will be a long-term benefit, the dredging activities will result in temporary resuspension of fine sediments and potential remobilization of sediment-associated pollutants in the water column.

Minimization of Impacts to Beneficial Uses: The proposed Order includes requirements intended to address the potential impacts to beneficial uses. These requirements implement the Basin Plan.

1. Dissolved Oxygen: The proposed Order requires that dredging operations do not result in the reduction of dissolved oxygen levels below 5 mg/L. If background dissolved oxygen levels are already below 5 mg/L, the Order requires that dredging activities not cause a further reduction in dissolved oxygen levels.
2. Turbidity: The proposed Order places limitations on the degree to which changes in turbidity can occur as a result of dredging activities. The proposed Order requires daily turbidity monitoring and reporting to ensure that excessive turbidity levels are rapidly identified and addressed through operational controls or use of BMPs. To address potential reductions in the foraging range of the least tern as a result of increased turbidity, the Order requires the discharger to cease dredging activities on April 15, unless continuance beyond that date is approved by the U. S. Fish and Wildlife Service. Detrimental impacts to eelgrass as a result of increased turbidity are discussed below.

3. Eelgrass: The proposed Order requires the Corps to avoid dredging in eelgrass vegetated areas of the Lower Bay and to maintain a dredging setback of at least 75 feet from eelgrass beds. The Corps is required to conduct pre- and post-Project eelgrass surveys to identify the impacts of the Project on eelgrass and to mitigate those impacts in accordance with the Southern California Eelgrass Mitigation Policy. Implementation of the Corps' commitments to the California Coastal Commission regarding eelgrass protection is also included as a requirement of the proposed Order.
4. Caulerpa: The proposed Order requires the Corps to complete a pre-Project *Caulerpa* survey of the Lower Bay, in accordance with the "*Caulerpa* Control Protocol", and to notify Regional Board staff if *Caulerpa* is found. The Order requires the Corps to cease dredging activities in areas where *Caulerpa* is found until given authorization from Regional Board staff to proceed.
5. Contaminant Mobilization: To minimize potential contaminant mobilization, the proposed Order requires the Corps to implement appropriate best management practices to limit turbidity and resuspension of sediment. The proposed Order also includes monitoring requirements (including post-dredge monitoring) for sediment contaminants that are identified in Total Maximum Daily Loads established by U.S. EPA for Lower Newport Bay.
6. Monitoring and Reporting: The proposed Order contains a monitoring and reporting plan that specifies monitoring constituents, frequency of monitoring, and a schedule for reporting monitoring results and other Project-related information.

The requirements contained in this proposed Order and summarized above should be adequate to protect the beneficial uses of Newport Bay.

RECOMMENDATION:

Adopt Order No. R8-2011-0050 as presented.

COMMENT SOLICITATION:

Comments were solicited from the discharger and the following organizations:

State Agencies:

State Water Resources Control Board, Office of the Chief Counsel – David Rice
State Water Resources Control Board, Division of Water Quality – Jim Maughan
Regional Water Quality Control Board, Los Angeles – Michael Lyons
State Lands Commission – Christopher Huitt
California Department of Fish and Game, San Diego – Loni Adams
California Coastal Commission – Larry Simon

Federal Agencies:

U.S. Environmental Protection Agency – Allan Ota
National Marine Fisheries Service, Long Beach – Eric Chavez
U.S. Fish and Wildlife Service, Carlsbad – William Miller

County Departments:

Orange County Public Works – Chris Crompton
Orange County Health Care Agency – Larry Honeybourne

Cities:

City of Newport Beach, Marine Environmental Division – Chris Miller

Non-Governmental Organizations:

Orange County Coastkeeper – Ray Hiemstra
Defend the Bay – Bob Caustin
Natural Resources Defense Council – Noah Garrison
Newport Bay Conservancy – Roger Mallet
Randy Seton
SPON – Jack Skinner

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ORDER NO. R8-2011-0050

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 following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1: Discharger Information

Discharger/Operator	U. S. Army Corps of Engineers Ms. Josephine R. Axt Chief, Planning Division U.S. Army Corps of Engineers ATTN: Mr. Larry Smith, CESPL-PD-RN P.O. Box 532711 Los Angeles, California 90053-2325
Name of Project	Lower Newport Bay Maintenance Dredging Project
Project Address	Lower Newport Bay, Newport Beach, Orange County, CA

The project by the U. S. Army Corps of Engineers, summarized below in Table 2, is subject to waste discharge requirements as set forth in this Order:

Table 2: Project Location

Discharge Point	Project Description	Discharge Point (Latitude)	Discharge Point (Longitude)	Receiving Water
Federal Navigational Channels and Anchorages of Lower Newport Bay	1. Dredging of sediment from navigational channels 2. Transport via barge to off-site disposal areas (LA-3 and Port of Long Beach) 3. Disposal at LA-3 and Port of Long Beach	Within vicinity of 33°36'26"N	Within vicinity of 117°54'29"W	Lower Newport Bay

Table 3: Administrative Information

This Order was adopted by the Regional Water Board on:	October 28, 2011
This Order shall become effective on:	October 28, 2011

I, Kurt V. Berchtold, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on October 28, 2011.

Kurt V. Berchtold, Executive Officer

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I. PROJECT INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4: Project Information

Discharger/Operator	United States Army Corps of Engineers
Name of Project	Lower Newport Bay Maintenance Dredging
Project Location	Lower Newport Bay, City of Newport Beach
	County of Orange
Project Contact, Title and Phone	Larry Smith, Project Environmental Coordinator 213-452-3846
	Josephine R. Axt, Chief, Planning Division 213-452-3783
Mailing/Billing Address	U.S. Army Corps of Engineers, Los Angeles District 915 Wilshire Boulevard Los Angeles, California 90018
Project Type	Dredge and Fill

II. FINDINGS

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

- A. Background.** The U. S. Army Corps of Engineers (hereinafter Discharger) proposes to conduct maintenance dredging within the navigational channels of Lower Newport Bay. The purpose of the project is to maintain authorized depths in federal navigational channels of Lower Newport Bay to allow continued safe navigation for recreational and commercial watercraft.
- B. Project Description.** The Discharger proposes to dredge approximately 402,000-511,000 cubic yards of sediment from federal navigational channels and anchorages in Lower Newport Bay (the 'Project'). The dredging is expected to be performed by a clamshell dredge or barge-mounted excavator. The Project is expected to last approximately 3-4 months. None of the dredged sediment is suitable for disposal at beaches or near-shore locations. Approximately 143,000 cubic yards is expected to be used as fill at the Port of Long Beach's Middle Harbor Redevelopment Project. The remainder of the dredged sediments is expected to be disposed of at the U.S. Environmental Protection Agency's LA-3 Ocean Dredged Material Disposal Site, which is located offshore, approximately five miles southwest of the entrance to Newport Harbor.
- C. Legal Authorities.** Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste other than to a community sewer system, that could affect

the quality of the waters of the State, file a report of waste discharge (ROWD). Pursuant to Article 4, the Regional Water Board is required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. On November 19, 2003, the State Water Resources Control Board (State Water Board) adopted Order No. 2003-0017-DWQ issuing General Waste Discharge Requirements for dredged or fill discharges that have received State water quality certification. Finding 13 of Order No. 2003-0017-DWQ states that the Regional Water Quality Control Boards retain discretion to impose individual WDRs in lieu of these General WDRs whenever they deem it appropriate. The Regional Water Board finds it appropriate to issue individual WDRs for this Project in order to more effectively ensure protection of beneficial uses. This Order fulfills the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are also regulated under the State's Clean Water Act Section 401 authority.

- D. Background and Rationale for Requirements.** The Discharger submitted a draft Environmental Assessment (EA) and a Clean Water Act Section 401 Water Quality Standards Certification (CWA 401 Certification) application on June 13, 2011. Regional Water Board staff provided comments on the draft EA and the CWA 401 Application to the Discharger on July 11, 2011. Regional Water Board staff received the final EA and response to comments on September 26, 2011. On October 12, 2011 the Discharger provided Regional Water Board staff with a revised Project scope, significantly reducing the proposed dredge volumes and altering the dredging depths. The requirements in this Order are based on information submitted as part of the EA and CWA 401 Certification application, the revised Project Scope and data from monitoring and reporting programs, as well as other available information. Dredging activities generally result in temporary increases in turbidity and suspended and dissolved contaminants, and decreases in dissolved oxygen. These effects may lead to temporary adverse impacts on beneficial uses. Potential impacts include disturbance of benthic community species and habitat, degradation of fish habitat, reduction in foraging area for piscivorous birds, damage to eelgrass beds and reduction in eelgrass habitat quality, spread of invasive algae (if present), and mobilization of sediment contaminants. In addition to these temporary impacts, the revised Project proposed by the Discharger may have longer term effects due to potential exposure of sediments with higher contaminant levels than are currently present in surface sediments. Under the Discharger's original Project, full dredging to authorized depths would likely have removed the most contaminated sediments. The receiving water limitations and specifications, and other requirements contained in this Order are intended to minimize these potential impacts.
- E. National Environmental Policy Act (NEPA).** In compliance with the National Environmental Policy Act (NEPA), the Discharger conducted an Environmental Assessment of the proposed Project and a number of alternatives, including reduced dredge volume alternatives. The Discharger issued a Finding of No Significant Impact (FONSI) on September 19, 2011 upon completion of the Environmental Assessment.
- F. California Environmental Quality Act (CEQA).** 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. A Categorical Exemption Notice will be filed with the State Clearinghouse.

G. Clean Water Act Section 401 Certification. This Order serves, in part, as a technically conditioned water quality standards certification of the Project pursuant to CWA Section 401 (33 USC 1341).

H. Water Quality Control Plans. The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the Basin Plan.

The following table indicates beneficial uses applicable to the receiving waters where the Project is located:

Table 5: Basin Plan Beneficial Uses

Discharge Locations	Receiving Water	Beneficial Uses Present or Potential
Balboa Reach Lido Isle Reach West Lido Area Yacht Anchorage Bay Island Anchorage/Collins Island Balboa Island Channel Newport Channel Coast Guard Area	Lower Newport Bay	a. Navigation b. Water contact water recreation c. Non-contact water recreation d. Commercial and sportfishing e. Wildlife habitat f. Rare, threatened or endangered species habitat g. Spawning, reproduction, and development h. Marine habitat i. Shellfish harvesting

The requirements of this Order implement the Basin Plan.

- 1. Antidegradation Policy.** The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the antidegradation provisions of State Water Board Resolution No. 68-16.
- 2. Monitoring and Reporting.** Water Code section 13267 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment A.

- 3. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the mailing of the tentative order to persons and agencies known to have an interest in the discharge, as well as the posting of the tentative order on the Regional Water Board website.
- 4. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The public hearing was conducted at the Regional Water Board's regularly scheduled meeting held on October 28, 2011 at the City Council Chambers in the City of Loma Linda.

IT IS HEREBY ORDERED that the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A.** The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.
- B.** The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

V. RECEIVING WATER LIMITATIONS AND SPECIFICATIONS

The discharge of waste shall not cause any surface waters to be degraded, cause water quality objectives to be exceeded, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

- 1. Turbidity.** The Discharger shall ensure that Project-related activities do not cause the turbidity 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:
 - If natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), the maximum increase must not exceed 20% of the measured natural turbidity.
 - If natural turbidity is 50 to 100 NTU, the increase must not exceed 10 NTU.
 - If natural turbidity is greater than 100 NTU, the maximum increase must not exceed 10% of the measured natural turbidity.
- 2. Dissolved Oxygen.** The Discharger shall ensure that the dissolved oxygen of the receiving water is not depressed below 5 mg/l as a result of Project activities.

3. **pH.** Project activities must not raise the pH above 8.6 or lower pH below 7.0 as the result of controllable water quality factors; ambient pH levels must not be changed by more than 0.2 units.

Table 6: Summary of Receiving Water Limitations

Parameter	Units	Limitations
		(Individual Grab Samples)
Turbidity	NTU	dependent on background turbidity (see V.1 above)
Dissolved Oxygen	mg/L	≥ 5
pH		Between 7 and 8.6 (also see V.3 above)

VI. PROVISIONS

A. Standard Provisions

1. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Project, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
2. In the event the Discharger does not comply or will be unable to comply for any reason with any prohibition, discharge limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone at (951) 782-4130 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing, unless the Regional Water Board waives confirmation or requires, orally or in writing, a written notification within five business days. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation.
3. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.
4. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.

5. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.
 - a. Violation of any terms or conditions of this Order;
 - b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.
6. The Discharger shall file with the Regional Water Board a Report of Waste Discharge at least 30 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:
 - a. Increasing the dredge volumes significantly beyond that specified in this Order
 - b. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.
 - c. Significantly changing the target depth of dredging in each location proposed for dredging, i.e., decreasing or increasing by one foot or more the depth of dredging at a discharge location.
7. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
8. The Discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.
9. The Regional Water 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 conditions of this Order;
 - b. Access to copy any records that are kept under the conditions of the 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, or as otherwise authorized by the Water Code.

B. Monitoring and Reporting Program Requirements (MRP)

The Discharger shall comply with the MRP and future revisions thereto, in Attachment A of this Order. This monitoring and reporting program may be modified by the Executive Officer 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 the monitoring or the number and size of samples to be collected. Any increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of

samples to be collected may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

C. Special Provisions

1. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. Caulerpa Survey: 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)¹ developed by the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the California Department of Fish and Game (CDFG)².
- b. Eelgrass Surveys: The Discharger shall complete a pre-project and post-project eelgrass survey in Lower Newport Bay to identify sensitive areas and assess the effects of the Project.

2. Best Management Practices (BMPs) and Pollution Prevention

1. 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. An eelgrass survey must be conducted prior to initiation of the Project and must encompass, at a minimum, all areas where eelgrass was found in surveys conducted over the past ten years, or, all areas within 100 feet of the Project area. A similar survey must be conducted within 30 days after completion of the Project. The results of these surveys must be reported promptly to the Regional Water Board.
 - b. The Discharger shall avoid dredging in all existing eelgrass vegetated areas. The Discharger shall take all practicable steps to minimize the indirect effects of dredging activities on eelgrass vegetated areas outside the dredged area.
 - c. A setback of 75 feet, measured from the top of the dredge slope, shall be employed when dredging adjacent to areas where eelgrass is present.

¹ *Caulerpa Control Protocol, Version 4, adopted November 25, 2008, or as it may be amended. The Protocol may be accessed at: <http://swr.nmfs.noaa.gov/hcd/caulerpa/ccp.pdf>*

² *In addition to submittal of reports to NOAA Fisheries and CDFG, copies of all reports shall be submitted to the Regional Water Board as soon as they are available.*

- d. Silt curtains or equally or more effective devices and/or best management practices (BMPs) to minimize dispersal of suspended solids shall be employed when dredging adjacent to areas where eelgrass is present.
 - e. Based on the eelgrass surveys and water quality data, impacts to eelgrass must be compensated for according to the National Marine Fisheries Service's Southern California Eelgrass Mitigation Policy³, including the creation of eelgrass beds. Any deficiencies in the mitigation effort must be addressed according to the Policy and according to the Discharger's commitments to the California Coastal Commission as specified below.
 - f. The Discharger will implement its commitments to the California Coastal Commission (Commission) as specified in the Commission's concurrence letter to the Discharger. Specifically, the Discharger will implement the following: Based on the pre-project eelgrass survey, the actual Project budget, and the actual channel segments that will be dredged, the Discharger will calculate the area, if any, of eelgrass beds that are expected to be adversely affected by Project dredging; this calculation will be undertaken in consultation with staff from the Commission and the National Marine Fisheries Service (NMFS). If there are expected eelgrass losses, prior to the start of construction, the Discharger will estimate the mitigation costs for that loss and reserve the dollar amount in the project budget for eelgrass mitigation at a location in Newport Bay, consistent with the Southern California Eelgrass Mitigation Policy. In addition, during this estimation process, the Discharger will consult with staff from the Commission and NMFS and agree on a reasonable contingency factor to be added to the cost of mitigation. After completion of the Project, the Discharger will implement the eelgrass mitigation project. In addition, should the post-project eelgrass survey indicate eelgrass losses in excess of the pre-project estimate, the Discharger will undertake all reasonable efforts to obtain funding for the additional mitigation costs associated with the additional eelgrass impacts, and implement that mitigation in a timely manner.
 - g. Regional Water Board staff shall be notified of any problems or delays in implementing any compensatory mitigation plan for eelgrass impacts and shall be provided with copies of all reports and documents pertaining to development and implementation of the mitigation plan as specified in the MRP (Attachment A).
2. 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

³ The Southern California Eelgrass Mitigation Policy may be accessed at:
http://swr.nmfs.noaa.gov/hcd/policies/EELPOLrev11_final.pdf

be in conformance with any terms and conditions imposed by the U.S. Fish and Wildlife Service.

3. If *Caulerpa taxifolia* is found prior to or during implementation of the Project, the Discharger must not begin or continue dredge operations at that location until authorized by Regional Water Board staff. If the invasive seaweed is discovered, it is not to be disturbed, and the Regional Water Board must be notified within 48-hours of the location and date of the discovery. In addition, any sightings of *Caulerpa taxifolia* should be reported to the California Department of Fish and Game (William Paznokas at (858) 467-4218 (wpaznokas@dfg.ca.gov)) or the National Marine Fisheries Service (Eric Chavez at (562) 980-4064 (Eric.Chavez@noaa.gov)) within 24-hours of discovery. Should no *Caulerpa* be observed during the Project, the Applicant must notify the Regional Water Board of this fact when all dredging has been completed.
4. In the event that water quality objectives are exceeded:
 - a. Notify Regional Water Board staff within 24 hours of discovery
 - b. Investigate the cause of the exceedance and consult with Regional Water Board staff on proposed corrective actions
 - c. Implement corrective actions
 - d. Monitor the effectiveness of the corrective actions and report the result to Regional Water Board staff

ATTACHMENT A– MONITORING AND REPORTING PROGRAM (MRP)

CWC section 13267 authorizes the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement California regulations.

I. GENERAL MONITORING PROVISIONS

- A. All sampling, sample preservation, and analytical procedures shall be in accordance with the current approved edition of “*Standard Methods for the Examination of Water and Wastewater*” (American Public Health Association) and/or 40 CFR Part 136 approved methods unless otherwise specified by the Executive Officer of the Regional Water Board.
- B. In accordance with the provision of Water Code section 13176, chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health or at laboratories approved by the Regional Water Board's Executive Officer.
- C. The Discharger shall have and implement an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.
- D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.
- E. Monitoring and reporting shall be in accordance with the following:
 - 1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - 2. Monitoring and reporting shall be done more frequently as necessary to maintain compliance with this Order and or as specified in this Order.
 - 3. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the

calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

4. A "grab" sample is defined as any individual sample collected in less than 15 minutes.
5. Daily samples shall be collected on each day of the week.
6. Weekly samples shall be collected on any representative day of each week.
7. Monthly samples shall be collected on any representative day of each month.

II. WATER MONITORING REQUIREMENTS

1. Water column constituents to be monitored and the monitoring frequency for each constituent are specified in Table 1 and Table 2 (see notes under Table 2 for minimum monitoring frequency requirements).
2. Sampling locations for the field parameters listed in Table 1 shall be established and located where representative samples of the discharge can be obtained as follows:
 - a. One location 100 feet up current of the dredging operations
 - b. One location 100 feet down current of the dredging operations
 - c. One location 300 feet down current of the dredging operations
 - d. A control location in an area not affected by dredging operations
3. The field parameters listed in Table 1 shall be measured at three-foot intervals beginning from three feet below the surface, and shall include a location immediately above the bottom.
4. At least two water column samples shall be collected and analyzed for the water chemistry analyses and the water toxicity test listed in Table 2 when sediment is being dredged from each of the following locations:
 - a. Yacht Anchorage Area 2
 - b. Lido Isle Reach North
 - c. West Lido Area A
 - d. Balboa Island Channel
5. The samples specified in II.4 above shall be collected from the midpoint of the water column.

Table 1: Field Parameters

Constituent	Type of Sample	Units	Minimum Monitoring Frequency
Dissolved Oxygen	Grab	mg/l	Daily
Light Transmittance	Grab	%	Daily
Turbidity	Grab	NTU	Daily
pH	Grab		Daily
Temperature	Grab	°C	Daily
Salinity	Grab	‰	Daily

Table 2: Water Chemistry and Toxicity

Constituent	Type of Sample	Units
Total Recoverable Petroleum Hydrocarbons (TRPH)	Grab	mg/l
Total Suspended Sediments (TSS)	Grab	mg/l
Dissolved Organic Carbon	Grab	mg/l
DDT, DDE, and DDD ²	Grab	µg/l
PCBs	Grab	µg/l
Arsenic (dissolved and particulate)	Grab	µg/l
Cadmium (dissolved and particulate)	Grab	µg/l
Copper (dissolved and particulate)	Grab	µg/l
Chromium (dissolved and particulate)	Grab	µg/l
Lead (dissolved and particulate)	Grab	µg/l
Mercury (dissolved and dissolved)	Grab	µg/l
Nickel (dissolved and particulate)	Grab	µg/l
Selenium (dissolved and particulate)	Grab	µg/l
Tin (dissolved and particulate)	Grab	µg/l
Zinc (dissolved and particulate)	Grab	µg/l
Water Column Toxicity Test (<i>Mytilus galloprovincialis</i> , embryo development)	Grab	% survival

Notes: The minimum monitoring frequency for TRPH and TSS is weekly. The minimum monitoring frequency for all other constituents listed in Table 2, including the water column toxicity test, is monthly; however, samples must be collected from each of the four sites listed in II.4 during dredging of each site, and analyzed for all constituents listed above including water column toxicity.

III. SEDIMENT MONITORING REQUIREMENTS – POST-DREDGE

1. Sediment constituents to be monitored and the number of samples to be collected and analyzed for each constituent are specified in Table 3.
2. Sediment samples shall be collected approximately one month after the completion of dredging operations.
3. Sample locations shall be established based on post-dredge bathymetric surveys and shall prioritize areas where elevated mercury concentrations (relative to National Oceanic and Atmospheric Administration [NOAA] sediment guidelines) were detected during the pre-dredge sediment sampling program.
4. A minimum of 2 surface sediment samples from all the dredge locations shall be collected and analyzed for the constituents listed in Table 3.
5. A minimum of 1 surface sediment sample shall be analyzed for sediment toxicity and pore water toxicity from each of the locations listed below:
 - a. Yacht Anchorage Area 1
 - b. Yacht Anchorage Area 2
 - c. Lido Isle Reach North
 - d. West Lido Area A
 - e. Balboa Reach
 - f. Balboa Island Channel or Collins Island

Table 3: Sediment Monitoring

Constituent	Type of Sample	Units	Minimum Number of Samples
Percent Solids or Moisture Content	Grab	%	2 samples at each dredge location
Grain Size	Grab	Microns	2 samples at each dredge location
Total Organic Carbon	Grab	mg/kg dw	2 samples at each dredge location
Arsenic	Grab	mg/kg dw	2 samples at each dredge location
Cadmium	Grab	mg/kg dw	2 samples at each dredge location
Copper	Grab	mg/kg dw	2 samples at each dredge location
Chromium	Grab	mg/kg dw	2 samples at each dredge location
Lead	Grab	mg/kg dw	2 samples at each dredge location
Mercury	Grab	mg/kg dw	2 samples at each dredge location
Nickel	Grab	mg/kg dw	2 samples at each dredge location
Selenium	Grab	mg/kg dw	2 samples at each dredge location
Tin	Grab	mg/kg dw	2 samples at each dredge location
Zinc	Grab	mg/kg dw	2 samples at each dredge location
Chlordane	Grab	µg/kg dw	2 samples at each dredge location
DDT, DDE, and DDD	Grab	µg/kg dw	2 samples at each dredge location
Dieldrin	Grab	µg/kg dw	2 samples at each dredge location
PAHs (total and congeners)	Grab	µg/kg dw	2 samples at each dredge location
PCBs (total and congeners)	Grab	µg/kg dw	2 samples at each dredge location
Sediment Toxicity (<i>Ampelisca abdita</i> , 10 day survival test)	Grab	% survival	1 sample at each location listed in III.5
Sediment Toxicity (sea urchin fertilization in pore water)	Grab	% reproductive success	1 sample at each location listed in III.5

IV. REPORTING REQUIREMENTS

A. Reporting Requirements

1. All analytical data shall be reported with method detection limit¹ (MDLs) and with identification of either reporting level or limits of quantitation (LOQs). To the maximum extent practicable, all MDLs shall be sufficiently low enough to compare analytical results for water and sediment samples to the values listed in Table 4.
2. Laboratory data must quantify each constituent down to the approved reporting levels for specific constituents. Any internal quality control data

¹ The standardized test procedure to be used to determine the method detection limit (MDL) is given at Appendix B, "Definition and Procedure for the Determination of the Method Detection Limit" of 40 CFR 136.

associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data are unavailable or unacceptable.

3. Discharge monitoring data shall be submitted in a format acceptable by the Regional Water Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.
4. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.
5. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.
6. The Discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Water Board at any time. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling, and/or measurements;
 - c. The laboratory which performed the analyses;
 - d. The date(s) analyses were performed;
 - e. The individual(s) who performed the analyses;
 - f. The analytical techniques or methods used, including any modification to those methods;
 - g. All sampling and analytical results, including
 - i. units of measurement used;
 - ii. minimum reporting limit for the analysis (minimum level);
 - iii. results less than the reporting limit but above the method detection limit (MDL);
 - iv. data qualifiers and a description of the qualifiers;

- v. quality control test results (and a written copy of the laboratory quality assurance plan);
 - vi. dilution factors, if used; and,
 - vii. sample matrix type.
 - h. All monitoring equipment calibration and maintenance records;
 - i. All original strip charts from continuous monitoring devices;
 - j. All data used to complete the application for this Order; and,
 - k. Copies of all reports required by this Order.
7. All reports and/or information submitted to the Regional Water Board shall be signed by a responsible officer or duly authorized representative of the Discharger and shall be submitted under penalty of perjury.

Table 4: Water Quality and Sediment Guidelines

Constituent	Water Column (µg/L)	Sediment (µg/kg dry weight -organics) (mg/kg dry weight -metals)
Arsenic	36	8.2
Cadmium	9.3	1.2
Copper	3.1	34
Chromium	50	81
Lead	8.1	46.7
Mercury	0.051	0.15
Nickel	8.2	20.9
Selenium	5	4
Tin	0.0074	48
Zinc	81	150
Chlordane (total)	0.004	0.5
Dieldrin	0.0019	0.02
DDT (total)	0.001	1.58
PCBs (total)	0.03	22.7
PAHs (total)	NA	4,022

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the Water Board’s California Integrated Water Quality System (CIWQS) or GeoTracker. Until such notification is given, the Discharger shall

- submit SMRs in accordance with the requirements described in subsections B.2 and B.3., below.
2. The Discharger shall submit monthly reports via e-mail to the assigned Regional Water Quality Control Board staff by the 7th day of each month. The monthly reports shall include a copy of the laboratory reports for samples collected during the previous month, as well as a brief description of Project activities conducted during the previous month.
 3. The monthly reports shall be submitted in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Project is operating in compliance with the WDRs.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. An electronic copy of the monitoring data in database or spreadsheet format shall be included as an attachment to the monthly report.
 - d. SMRs must be submitted to the Regional Water Board, signed and certified under penalty of perjury to the address listed below:

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348
 4. A final water quality monitoring report summarizing the Project data and correcting any errors and/or omissions in the SMRs shall be submitted to the Regional Water Board in accordance with the specifications listed in B.3 above.
 5. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136. To the maximum extent practicable, all MDLs shall be sufficiently low enough to compare analytical results for water and sediment samples to the values listed in Table 4 (see also IV.A.1 and IV.A.2).

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration² of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. The Discharger is to instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

C. Other Reports

1. The Discharger shall submit draft and final copies of the following reports and documents to the Regional Water Board within 30 days of their completion.
 - a. Pre-project *Caulerpa* Survey Report
 - b. Pre-project Eelgrass Survey Report
 - c. Post-project Eelgrass Survey Report

² The estimated chemical concentration is the concentration that results from the confirmed detection of the substance by the analytical method below the RL value.

- d. Eelgrass Mitigation Plan (if necessary)
 - e. Eelgrass Mitigation Report (if necessary)
2. In accordance with the requirements of Water Code section 13271, the Discharger shall provide notification to the Office of Emergency Services of the release of reportable amounts of hazardous substances that cause, or probably will cause, a discharge to any waters of the State. The phone number for reporting these releases to the Office of Emergency Services is (800) 852-7550.

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