

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

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**ORDER R5-2022-0052
WASTE DISCHARGE REQUIREMENTS
MAINTENANCE DREDGING OPERATIONS**

The following Dischargers are subject to waste discharge requirements (WDRs) as set forth in this General Order upon authorization by a Notice of Applicability (NOA):

Table 1. Discharger Information

Dischargers	Individuals, public agencies, private businesses, and other legal entities conducting Maintenance Dredging that meet the Eligibility Requirements specified in this Order.
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Table 2. Administrative Information

This Order was adopted on:	11 August 2022
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I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **11 August 2022**.

PATRICK PULUPA, Executive Officer

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I. DISCHARGE INFORMATION

This General Order categorizes maintenance dredging projects based on their potential to discharge to waters of the state, including surface water and/or groundwater, from the dredge material placement sites. Surface waters include but are not limited to streams, dry stream courses, ephemeral streams, creeks, rivers, lakes, reservoirs, and storm drainage courses. The following categories are used to prescribe application requirements (e.g., pre-project sampling), as well as the Notice of Applicability (NOA) requirements (e.g., monitoring and receiving water limitations) to ensure protection of beneficial uses:

Category 1: Placement of dredge material to a site with potential for return water to enter surface water of material origin and groundwater.

Category 2: Placement of dredge material to a site with potential for return water to enter groundwater only.

Category 3: Placement of dredge material to a site with a curbed and impervious surface or otherwise designed to ensure no potential for return water to enter surface waters or groundwater.

II. NOTIFICATION REQUIREMENTS

A. General Order Application – Notice of Intent (NOI)

It is the responsibility of the Discharger to obtain coverage under this General Order prior to commencement of any maintenance dredging activities. To obtain coverage under this General Order the Discharger must submit a complete NOI, as detailed below and in Attachment E.

1. Requirements for all Projects

The following documents and information must be submitted as part of the NOI:

- a. A completed State Water Board Form 200 requesting coverage under this General Order;
- b. Determination of Project Category and a full description of the dredging and placement operation, dredge and placement site(s), and beneficial reuse as described in Attachment E;
- c. Pre-Dredge Sediment Evaluation Report including analytical results of sampling approved in the Pre-Dredge Sampling and Analysis Plan, as described in Attachment D; to compare analytical results to screening levels provided in Attachment D;
- d. A Dredge Operation Plan, including a description of best management practices (BMPs) to be implemented at dredge site(s), dredge material placement site(s), and reuse sites to prevent the generation and potential release of pollutants to waters of the state;
- e. The applicable fee for authorization under this Order based on Dredging Discharges in California Code of Regulations, title 23, section 2200(a)(3)(B);

- f. Copies of permits or applications for activities related to dredging from other applicable state and/or federal agencies; and
- g. Certification of the NOI by authorized personnel (see section II.A of the Notice of Intent, Attachment E).

B. General Order Coverage

1. New Projects

New projects may be single season maintenance dredging projects or episodic maintenance dredging projects that occur over multiple years. Upon receipt of the complete NOI, the Executive Officer shall determine the project's eligibility for coverage under this General Order. If the project is deemed eligible for coverage under this General Order and all required information is complete and acceptable, the Executive Officer will issue a NOA to the Discharger. The NOA will specify that the project is authorized under the terms and conditions of this General Order and Monitoring and Reporting Program and may add additional monitoring requirements related to project-specific constituents of concern. Dischargers may not commence dredging activities prior to issuance of the NOA. If the project is not eligible for coverage under this General Order, the Executive Officer will so notify the Discharger in writing, with instructions on how to proceed.

This General Order shall apply to Dischargers that have received a NOA from the Executive Officer.

2. Modifications to Projects

For current enrollees, the Discharger shall give 14-day advance notice to Central Valley Water Board staff if project implementation as described in the NOI materials is altered in any way, including by the imposition of subsequent permit conditions by any local, state, or federal regulatory authority. The Discharger shall inform Central Valley Water Board of any modifications that will interfere with the Discharger's compliance with this Order or may require an amendment to the issued NOA.

3. Project Completion and Termination of Coverage

Upon cessation of project activities and discharges, the Discharger shall submit a Notice of Project Completion, as specified in the Monitoring and Reporting Program, to request official termination of coverage under this General Order from the Executive Officer. The Discharger is subject to the terms and conditions of this General Order and is responsible for submitting the annual fee and monitoring reports associated with this General Order until the Discharger receives a Notice of Termination (NOT) from the Executive Officer. Upon receipt of the NOT, the Discharger will no longer be authorized to perform the maintenance dredging covered by this General Order. Failure to submit the annual fee and/or monitoring reports may subject the Discharger to penalties.

C. Eligibility Criteria

This General Order authorizes maintenance dredging projects that meet all of the following criteria:

1. Removal of deposited sediment is for the purpose of maintenance or restoration of a waterbody;
2. Removal of sediment does not result in an expansion of facilities beyond a previously permitted or achieved design or operational depth;
3. The project does not involve removal of contaminated sediments or material;
4. The project does not involve suction dredge mining;
5. Return water flow rates from dredge material placement sites will not exceed 1 million gallons per day (MGD);
6. The project will not significantly alter the existing drainage patterns of the dredge material placement site(s) and reuse site(s);
7. The project will not place dredge material in a way that adversely affects endangered, threatened, or rare species or adversely affects the habitat of such species;
8. The project will not place dredge material on lands listed as hazardous waste properties pursuant to Government Code section 65962.5; and
9. The project will not adversely impact beneficial uses of waters of the state.

III. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Legal Authorities

This General Order specifies general waste discharge requirements (WDRs) regulating maintenance dredging and/or placement projects within the Central Valley Region that will maintain design depth of water bodies through the removal and/or placement of material pursuant to Water Code, division 7, chapter 4, article 4 (§ 13260 et seq.). Consistent with Water Code section 13263, subdivision (I), the Central Valley Water Board has determined that discharges covered by this Order are produced by the same or similar operations, involve the same or similar types of waste, require the same or similar treatment standards, and are more appropriately regulated under general discharge requirements than individual discharge requirements.

B. Basin Plans

The Central Valley Water Board adopted *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition* and *The Water Quality Control Plan for the Tulare Lake Basin, Third Edition* (hereinafter Basin Plans, collectively) that designate beneficial uses, establish water quality objectives, contain implementation plans and policies for protecting waters of the basin, and incorporate by

reference plans and policies adopted by the State Water Resources Control Board (State Water Board). The requirements of this Order implement the Basin Plans.

C. California Environmental Quality Act (CEQA)

The Central Valley Water Board has determined that the projects authorized by this General Order are exempt from review under CEQA pursuant to California Code of Regulations, title 14, section 15304. Additionally, the Central Valley Water Board concludes that no exceptions to the CEQA exemption apply to the activities approved by this Order. The Central Valley Water Board will file a Notice of Exemption with the State Clearing House within five (5) working days from the issuance of this Order (Cal. Code Regs., tit. 14, § 15062).

D. Background and Rationale for Requirements

The Information Sheet (Attachment C), which contains additional background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order.

E. Monitoring and Reporting

Water Code section 13267 authorizes the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment B), which establishes monitoring and reporting requirements to implement State requirements, is hereby incorporated into Findings for this Order.

The technical and monitoring reports required under this Order are sought in accordance with Water Code section 13267, which states the following in subdivision (b)(1):

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the attached Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The need for the monitoring reports is discussed in the Information Sheet (Attachment C). The burden, including costs, of preparing the required reports bears a reasonable relationship to the need for such reports and the benefits to be obtained thereby.

F. Notification of Interested Parties for this General Order

The Central Valley Water Board has notified potential and existing Dischargers and interested agencies and persons of its intent to prescribe WDRs for maintenance dredging projects and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Information Sheet (Attachment C).

G. Consideration of Public Comment for this General Order

The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to maintenance dredging. Details of the Public Hearing are provided in the Information Sheet (Attachment C).

H. Discharges to Waters of the United States Not Permitted by this General Order

This General Order does not authorize discharges of waste to “waters of the United States,” as defined by the U.S. EPA and the U.S. Army Corps of Engineers. Any such discharges must be authorized separately through a NPDES permit issued pursuant to Clean Water Act section 402.

I. Clean Water Act Section 401 Water Quality Certification

Projects under federal jurisdiction that require a U.S. Army Corps of Engineers-issued Rivers and Harbors Act section 10 permit and/or a Clean Water Act section 404 permit generally also require a Clean Water Act section 401 Water Quality Certification, which is issued separately from this Order by the Central Valley Water Board.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13263 and 13267, all Dischargers shall comply with the requirements of this Order.

IV. DISCHARGE PROHIBITIONS

- A.** Discharges, other than those described in section I and meeting the eligibility criteria in section II.C.1 of this General Order, are prohibited unless the Discharger obtains separate authorization from the Central Valley Water Board through a waiver, another general order, individual waste discharge requirements, or by other separate Board action.
- B.** The discharge of dredge material placement site return water to surface waters or surface water drainage courses is prohibited, except for discharges authorized by the NOA for Category 1 projects with return water discharges to the waterbody of material origin, or unless the Discharger obtains authorization under a National Pollutant Discharge Elimination System (NPDES) permit.
- C.** Neither the placement of dredge material nor the discharge of return water shall create a nuisance, as defined in Water Code section 13050.
- D.** Discharge of waste classified as ‘hazardous’, as defined in the California Code of Regulations, title 22, section 66261.1 et seq., is prohibited.

- E. Placement or reuse of dredge material to wetlands or, biologically or culturally sensitive areas, is prohibited.

V. DISCHARGE TO LAND AND REUSE SPECIFICATIONS

A. Discharge Specifications

1. Projects shall operate in accordance with the Dredge Operation Plan submitted as part of a complete NOI and referenced in the Notice of Applicability (NOA).
2. Dredge materials shall be placed only in dredge material placement sites approved in the NOA.
3. Newly constructed or rehabilitated levees or berms that hold back water at the dredge material placement site(s) shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or Engineering Geologist.
4. The discharge to the dredge material placement site(s) shall consist solely of sediment and water produced from dredging operations.
5. A minimum freeboard of two feet in all ponds as measured vertically from the water surface to the lowest point of overflow shall be maintained at all times.
6. The dredge material placed at dredge material placement sites shall consist solely of inert waste as defined by Title 27, Chapter 3, Section 20230 of the California Code of Regulations.
7. Storm water soil erosion control measures shall be implemented and maintained in accordance with the Dredge Operation Plan referenced in the NOA to prevent discharge of sediment to surface waters or surface water drainage courses from dredge material placement sites. All stockpiled dredge materials will be managed to prevent erosion of sediment to surface water drainage courses.
8. The dredge material shall, at all times, remain within the dredge material placement site area except for authorized in the NOA for removal or reuse, and discharges authorized by the NOA for Category 1 projects with return water to the waterbody of material origin.
9. The dredge material placement sites shall be observed for signs of seepage along the exterior toe of the levees. If seepage is found, placement at the site shall cease until containment is restored.
10. The dredge material placement sites shall be managed to prevent breeding of mosquitoes. Site management shall include, but not be limited to, the following:
 - a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

- b. Weeds shall be minimized through control of water depth, a shoreline synthetic liner, harvesting, or herbicides.
 - c. Dead algae, vegetation, and debris shall be removed from the water surface.
 - d. Coordination with the local mosquito abatement or vector control district to supplement the measures described above in cases where needed.
11. Objectionable odors shall not create nuisance conditions beyond the limits of the dredge material placement site. A dissolved oxygen concentration less than 1.0 mg/L in the upper one foot of the dredge material placement site water shall be evidence of the potential to generate objectionable odors.

B. Reuse Specifications

1. Beneficial reuse of dredge material shall be in accordance with the Dredge Operation Plan submitted as part of a complete NOI and referenced in the NOA.
2. The dredge material beneficially reused shall consist solely of inert waste as defined by Title 27, Chapter 3, Section 20230 of the California Code of Regulations.
3. Storm water soil erosion control measures shall be implemented and maintained in accordance with the approved Dredge Operation Plan referenced in the NOA to prevent discharge of sediment to surface waters or surface water drainage courses from reuse sites.
4. Beneficial reuse of dredge material shall not occur in saturated conditions.

VI. RECEIVING WATER LIMITATIONS AND GROUNDWATER LIMITATIONS

A. Receiving Water Limitations

Receiving water limitations are based on water quality objectives for surface waters contained in the Basin Plans for the Sacramento and San Joaquin River Basin and the Tulare Lake Basin. Any discharge authorized for coverage under this General Order shall not cause the following in the receiving water:

1. Un-ionized Ammonia

Un-ionized ammonia to be present in amounts that adversely affect beneficial uses for all waterbodies, nor to be present in excess of 0.025 mg/L (as N) in waterbodies in the Tulare Lake Basin.

2. Bacteria

The six (6)-week rolling geometric mean of *Escherichia coli* (*E. coli*) to exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

3. Biostimulatory Substances

Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

4. Chemical Constituents

Chemical constituents to be present in concentrations that adversely affect beneficial uses.

5. Color

Discoloration that causes nuisance or adversely affects beneficial uses.

6. Dissolved Oxygen

- a. For waterbodies outside the Sacramento-San Joaquin Delta and for waterbodies in the Tulare Lake Basin:
 - i. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
 - ii. The 95-percentile dissolved oxygen concentration to fall below 75 percent of saturation; and
 - iii. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time for waterbodies designated as warm freshwater habitat (WARM); or
 - iv. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time for waterbodies designated as cold freshwater habitat (COLD) and/or spawning, reproduction, and/or early development (SPWN).
- b. Within the legal boundaries of the Sacramento-San Joaquin Delta, the dissolved oxygen concentrations shall not be reduced below:
 - i. 7.0 mg/L in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge;
 - ii. 6.0 mg/L in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and
 - iii. 5.0 mg/L in all other Delta waters except those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use.

7. Floating Material

Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

8. Oil and Grease

Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

9. pH

- a. The pH to be depressed below 6.5 or raised above 8.5 for waterbodies in the Sacramento and San Joaquin River Basins (except Goose Lake in Modoc County).
- b. The pH to be depressed below 7.5 nor raised above 9.5 within Goose Lake in Modoc County.
- c. The pH to be depressed below 6.5, raised above 8.3, nor changed by more than 0.3 units for waterbodies in the Tulare Lake Basin.

10. Pesticides

- a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses.
- b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses.
- c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by U.S. EPA or the Executive Officer for waterbodies in the Sacramento and San Joaquin River Basins or prescribed in Standard Methods for the Examination of Water and Wastewater, 18th Edition, or other equivalent methods approved by the Executive Officer for waterbodies in the Tulare Lake Basin designated as cold freshwater habitat (COLD).
- d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 C.F.R. § 131.12) for waterbodies in the Sacramento and San Joaquin River Basins.
- e. Pesticide concentrations to exceed the lowest levels technically and economically achievable for waterbodies in the Sacramento and San Joaquin River Basins.
- f. Pesticides to be present in concentration in excess of the maximum contaminant levels (MCL's) set forth in California Code of Regulations, title 22, division 4, chapter 15 for waterbodies in the Sacramento and San Joaquin River Basins or specified in Table 64444-A (Organic Chemicals) of section 64444 of title 22 for waterbodies in the Tulare Lake Basin designated as municipal and domestic supply (MUN).

- g.** Thiobencarb to be present in excess of 1.0 µg/L for waterbodies in the Sacramento and San Joaquin River Basins designated as municipal and domestic supply (MUN).

11. Radioactivity

- a.** Radionuclides to be present in concentrations that are harmful or deleterious to human, plant, animal, or aquatic life, nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
- b.** Radionuclides to be present in excess of the maximum contaminant levels (MCLs) specified in Table 64442 of section 64442 and Table 64443 of section 64443 of title 22 of the California Code of Regulations.

12. Suspended Sediments

The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

13. Settleable Substances

Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

14. Suspended Material

Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

15. Taste and Odor

Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses or domestic or municipal water supplies.

16. Temperature

The natural temperature to be increased by more than 5°F.

17. Toxicity

Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

18. Turbidity

Changes to turbidity in water that cause nuisance or adversely affect beneficial uses.

- a. For waterbodies in the Sacramento and San Joaquin River Basins, turbidity:
 - i. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;
 - ii. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;
 - iii. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;
 - iv. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor
 - vi. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.
- b. For waterbodies in the Tulare Lake Basin, turbidity shall not increase:
 - i. More than 1 NTU where natural turbidity is between 0 and 5 NTUs.
 - ii. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
 - iii. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
 - iv. More than 10 percent where natural turbidity is greater than 100 NTUs.

19. Constituents of Concern

For Category 1 projects, the NOA shall specify receiving water limitations for constituents of concern shown in Table 3, below, for all constituents identified in the Pre-Dredge Sediment Evaluation Report with Modified Elutriate Test (MET) results exceeding the Screening Levels in Attachment D, Tables D-3 through D-7. The receiving water limitations are based on applicable water quality objectives to protect the municipal and domestic water supply (MUN) and aquatic life beneficial uses. If a waterbody has been de-designated for the MUN beneficial use in the Basin Plan, the "No MUN Use" receiving water limitations are applicable, otherwise the "MUN Use" receiving water limitations apply.

Table 3. Constituents of Concern

Parameters	Units	Receiving Water Limitations MUN Use	Receiving Water Limitations No MUN Use
Arsenic, Total	micrograms per liter (µg/L)	10	--
Cadmium, dissolved	µg/L	(See Table 4 or Table 5)	(See Table 4 or Table 5)
Chromium (VI)	µg/L	16	16
Copper, dissolved	µg/L	(See Table 4 or Table 5)	(See Table 4 or Table 5)
Lead, dissolved	µg/L	(See Table 4)	(See Table 4)
Mercury, Total	nanograms per liter (ng/L)	12	12
Methylmercury	ng/L	0.06	0.06
Nickel, dissolved	µg/L	(See Table 4)	(See Table 4)
Selenium, Total	µg/L	20	20
Zinc, dissolved	µg/L	(See Table 4 or Table 5)	(See Table 4 or Table 5)
Acenaphthene	µg/L	1,200	2700
Anthracene	µg/L	9,600	110,000
Benzo(a)anthracene	µg/L	0.0044	0.049
Benzo(b)fluoranthene	µg/L	0.0044	0.049
Benzo(k)fluoranthene	µg/L	0.0044	0.049
Benzo(a)pyrene	µg/L	0.0044	0.049
Chrysene	µg/L	0.0044	0.049
Dibenzo(a,h)anthracene	µg/L	0.0044	0.049
Fluoranthene	µg/L	300	370
Fluorene	µg/L	1,300	14,000
Indeno(1,2,3-cd)pyrene	µg/L	0.0044	0.049
Naphthalene	µg/L	2,300	2300
Pyrene	µg/L	960	11,000
Polychlorinated Biphenyls (PCBs)	µg/L	0.00017	0.00017
Chlorpyrifos	µg/L	0.16	0.16
Diazinon	µg/L	0.025	0.025
Dimethioate	µg/L	1.0	1.0

Parameters	Units	Receiving Water Limitations MUN Use	Receiving Water Limitations No MUN Use
Malathion	µg/L	0.43	0.43
Parathion	µg/L	0.013	0.013
Phorate	µg/L	0.7	0.7
Aldrin	µg/L	ND	ND
Alpha BHC	µg/L	ND	ND
Beta BHC	µg/L	ND	ND
Gamma BHC (Lindane)	µg/L	ND	ND
Chlordane	µg/L	ND	ND
4,4-DDD	µg/L	ND	ND
4,4-DDE	µg/L	ND	ND
4,4-DDT	µg/L	ND	ND
Dieldrin	µg/L	ND	ND
Endosulfan	µg/L	ND	ND
Endosulfan II	µg/L	ND	ND
Endosulfan sulfate	µg/L	ND	ND
Endrin	µg/L	ND	ND
Endrin aldehyde	µg/L	ND	ND
Heptachlor	µg/L	ND	ND
Heptachlor epoxide	µg/L	ND	ND
Hexachlorocyclopentadiene	µg/L	ND	ND
Methoxychlor	µg/L	ND	ND
Toxaphene	µg/L	ND	ND

a. Receiving Water Limitations for Hardness Dependent Metals

The receiving water limitations for cadmium, copper, lead, nickel, and zinc shown in Table 4, below, shall be determined based on the ambient hardness.

Table 4. Receiving Water Limitations for Hardness Dependent Metals

Ambient Hardness in mg/L (as CaCO ₃) (H)	Cadmium dissolved (µg/L)	Copper dissolved (µg/L)	Lead dissolved (µg/L)	Nickel dissolved (µg/L)	Zinc dissolved (µg/L)
H <10	0.35	1.6	4.5	67	13
10 ≤ H <25	0.95	3.6	14	140	36

Ambient Hardness in mg/L (as CaCO ₃) (H)	Cadmium. dissolved (µg/L)	Copper. dissolved (µg/L)	Lead. dissolved (µg/L)	Nickel. dissolved (µg/L)	Zinc. dissolved (µg/L)
25 ≤ H < 50	2.0	7.0	30	260	65
50 ≤ H < 100	4.3	13	65	470	120
100 ≤ H < 150	6.6	20	100	660	170
150 ≤ H < 200	9.0	26	140	840	210
200 ≤ H < 300	14	38	210	1200	300
300 ≤ H < 400	18	48	270	1400	370
H ≥ 400	19	50	280	1500	380

b. Discharges to Specific Waterbodies

For all projects with discharges to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City, the receiving water limitations contained in Table 5 for cadmium, copper, and zinc shall be determined based on the ambient hardness and apply in lieu of the receiving water limitations for the same constituents specified in Table 4.

Table 5. Receiving Water Limitations for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City

Hardness in mg/L (as CaCO ₃) (H)	Cadmium. dissolved (µg/L)	Copper. dissolved (µg/L)	Zinc. dissolved (µg/L)
H < 10	0.04	1.6	5.1
10 ≤ H < 20	0.10	3.0	9.0
20 ≤ H < 30	0.16	4.3	12.6
30 ≤ H < 40	0.22	5.6	16.0
40 ≤ H < 50	0.29	6.8	19.3
50 ≤ H < 60	0.36	8.1	22.4
60 ≤ H < 70	0.43	9.3	25.5
70 ≤ H < 80	0.50	10.5	28.5
80 ≤ H < 90	0.57	11.7	31.4
90 ≤ H < 100	0.65	12.9	34.2
100 ≤ H < 200	1.36	23.0	58.3
200 ≤ H	1.45	24.1	60.9

B. Groundwater Limitations

Release of waste constituents from the dredge material placement site(s) shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality or water quality objectives contained in the Basin Plans for the Sacramento and San Joaquin River Basin and the Tulare Lake Basin, whichever is greater, or in any amendment or revision to the water quality objectives contained in the Basin Plans adopted by the Central Valley Water Board subsequent to adoption of this General Order.

VII. PROVISIONS

A. Standard Provisions

1. All Dischargers authorized to discharge under this General Order shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this General Order, the more stringent provision shall apply:
 - a. After notice and opportunity for a hearing, this General Order may be terminated or modified for cause, including, but not limited to:
 - i. Violation of any term or condition contained in this General Order;
 - ii. Obtaining this General Order by misrepresentation or by failing to disclose fully all relevant facts; or
 - iii. A material change in the character, location, or volume of dredge material.
 - b. The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.
 - c. The provisions of this General Order are severable. If any provision of this General Order is found invalid, the remainder of this General Order shall not be affected.
 - d. All Dischargers authorized to discharge under this General Order shall take all reasonable steps to minimize any adverse effects to waters of the State. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.
 - e. A copy of this General Order and the NOA shall be maintained at the project site and be available at all times to operating personnel. Consultants, contractors, subcontractors, and other key operating personnel shall be familiar with its content.
 - f. Failure to comply with provisions or requirements of this General Order, or violation of other applicable laws or regulations governing discharges from the

dredging 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. Duty to Comply

The Discharger must comply with all terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Water Code and is grounds for enforcement action, permit termination, revocation and reissuance, or modification. (Wat. Code, §§ 13261, 13265, 13268, 13000, 13001, 13304, 13350.)

3. Inspections and Entry

Pursuant to Water Code sections 13267, and as may otherwise be required by law, the Discharger shall allow the Central Valley Water Board, State Water Board and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, to:

- a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- c. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the Water Code, any substances or parameters at any location.

4. Transfers

- a. This Order is not transferable to any person except after notice to the Central Valley Water Board. The Central Valley Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the Water Code.
- b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this General Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

- c. To assume operation under this General Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the General Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board and a statement that the new owner or operator assumes full responsibility for compliance with this General Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

5. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, within a reasonable time, any information which the Central Valley Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. (Wat. Code, §§ 13267, 13383.).

6. Non-Compliance

In the event the Discharger does not comply or will be unable to comply for any reason with any prohibition, or receiving water limitation of this General Order, the Discharger shall notify the Central Valley Water Board orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written notification shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Central Valley Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.

Fresno Office:	(559) 445-5116
Rancho Cordova Office:	(916) 464-3291
Redding Office:	(530) 224-4845.

B. Special Provisions

1. Dredge Operation Plan

Dischargers shall submit a Dredge Operation Plan with the NOI per the requirements specified in Attachment E. In addition, for episodic projects that occur for more than one dredge season (e.g., annual maintenance dredging), Dischargers shall submit a Dredge Operation Plan by 1 February for each calendar year that the project is scheduled to conduct maintenance dredging. The Dredge Operation Plan shall include site-specific Best Management Practices (BMPs) to prevent the generation and potential release of pollutants at the dredging site(s), from the dredge material placement site(s) (DMPS), and reuse site(s) to waters of the state. The Dredge Operation Plan shall also include descriptions of the DMPS and reuse site(s) that provides information needed to allow approval of new and/or existing DMPS and reuse site(s) in the NOA. The Dredge Operation Plan will be incorporated and referenced in the NOAs for Dischargers authorized under this General Order. For multiple year projects the NOA will be updated annually by the Executive Officer to incorporate and reference the annual Dredge Operation Plan. The Discharger shall operate the project per the Dredge Operation Plan referenced in the NOA to ensure compliance with this General Order and the NOA.

ATTACHMENT A – DEFINITIONS**Arithmetic Mean (μ)**

Also called the average; the sum of measured values divided by the number of samples.

Bioaccumulative Substances

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food, and subsequently concentrated and retained in the body of the organism.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Detected, but Not Quantified (DNQ)

DNQ are those sample results less than the reporting level (RL), but greater than or equal to the laboratory's method detection limit (MDL). Sample results reported as DNQ are estimated concentrations.

Discharger

Individuals, public agencies, private businesses, or other legal entities conducting Maintenance Dredging that meets the Eligibility Requirements specified in this Order

Dredging

The process of excavating sediments and other materials from below the water surface, including transportation and placement of the material.

Dredge Material

Material that is removed from below the water surface by digging or other dredge method.

Dredge Material Placement Site

Site where dredge material is placed after removal from the waterbody, including areas disturbed for purposes of construction and maintenance of ponds or other barriers, site access, vehicle movement, or other project-related activities.

Freeboard

Elevation difference between the liquid level in a surface impoundment and the lowest point of the embankment where water can overflow.

Maintenance Dredging

Removal of material from below the water surface to restore or maintain a previously permitted or achieved design or operational depth, and does not involve expansion of the waterbody beyond the previously permitted or achieved width or depth. Removal of material occurs during an authorized work window, and which the dredge materials are deposited in area authorized by applicable state and federal regulatory agencies, and/or beneficially reused in a manner approved by the Central Valley Water Board.

Method Detection Limit (MDL)

The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 Code of Federal Regulations section 136, Attachment B, revised as of July 3, 1999.

Project

All activities authorized by the NOA, which may include extraction, storage, placement, and handling of material, to restore or maintain a previously permitted or achieved design depth, or operational depth of waters of the state.

Reporting Level (RL)

The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The RL is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Reuse Site

Site where dredge material is placed for beneficial reuse after dredge material has been dewatered. Examples of reuse sites include levee improvement or foundation material.

Not Detected (ND)

Sample results which are lower than the laboratory's MDL.

Suction Dredge Mining

The use of a mechanized or motorized system for removing or assisting in the removal of, or the processing of, material from the bed, bank, or channel of a river, stream, or lake in order to recover minerals.

Return Water

The water separated from dredge material placed on land, which drains naturally or by other means out of the dredge material and may ultimately reenter the water body of origin or groundwater.

ATTACHMENT B – MONITORING AND REPORTING PROGRAM

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ATTACHMENT B – MONITORING AND REPORTING PROGRAM

This Monitoring and Reporting Program (MRP) describes requirements for evaluating pre-dredge sediment and leachate and for monitoring dredging operations, dredge material placement sites, authorized return water, and receiving waters in accordance with the requirements of the General Order. This Monitoring and Reporting Program is issued pursuant to Water Code 13267. Specific monitoring requirements for constituents with receiving water limitations will be specified in the NOA from the Executive Officer. The Discharger shall not implement any changes to this MRP unless the Central Valley Water Board or Executive Officer issues a revised MRP. The Central Valley Water Board or Executive Officer may revise this MRP as it applies to Dischargers.

I. PROVISIONS

A. General Monitoring Provisions

1. Samples and measurements shall be taken at monitoring locations specified below. Monitoring locations will not be changed without notification of and the approval by the Executive Officer.
2. Laboratories analyzing monitoring samples shall be accredited by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW), in accordance with the provision of the Water Code section for the most current methods described in "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium" (SW-846), if available. Laboratories will include quality assurance/quality control data with their reports. Dischargers shall, in all monitoring reports submitted to the Central Valley Water Board, identify and provide accreditation status for each laboratory that performs sample analyses contained in those reports.
3. All monitoring instruments and devices used to conduct monitoring shall be properly maintained and calibrated to ensure accuracy.
4. Monitoring results, including noncompliance, shall be reported at the intervals and in the manner specified in this MRP.
5. Monitoring results shall be reported in such a way that the date, sample type (e.g. return water, receiving water, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in a manner that clearly illustrates compliance with this Order.

II. MONITORING REQUIREMENTS

A. Monitoring Locations

1. Each Discharger shall establish the following monitoring locations to demonstrate compliance with this General Order:

Table B-1. Monitoring Locations

Station	Location Description
RSW-001 (see table note 1 below)	Surface water monitoring location within 3,000 feet up-current of the dredging location (see Figure B-1). For waterbodies with no current, monitoring shall be conducted in ambient conditions undisturbed by the dredging operation.
RSW-002 (see table note 1 below)	Surface water monitoring location within 300 feet down-current of the dredging location (see Figure B-1). For waterbodies with no current, monitoring shall be conducted within 150 feet of the dredging location.
RSW-003 (see table note 1 below)	Surface water monitoring location within 300 feet up current of the return water discharge location. For waterbodies with no current, monitoring shall be conducted in ambient conditions undisturbed by the return water discharge from the dredge material placement site.
RSW-004 (see table note 1 below)	Surface water monitoring location within 300 feet down current of the return water discharge point on the same side of the waterbody as the discharge point. For waterbodies with no current, monitoring shall be conducted within 150 feet of the return water discharge point, or as otherwise required by the NOA.
RET-001 (see table note 1 below)	Monitoring location where a representative sample of return water can be collected prior to entering surface water, such as an overflow weir or discharge pipe.
DMPS-001 (see table notes 1 and 2 below)	Dredge material placement site accepting sediment from dredge operation.

Table B-1 Notes:

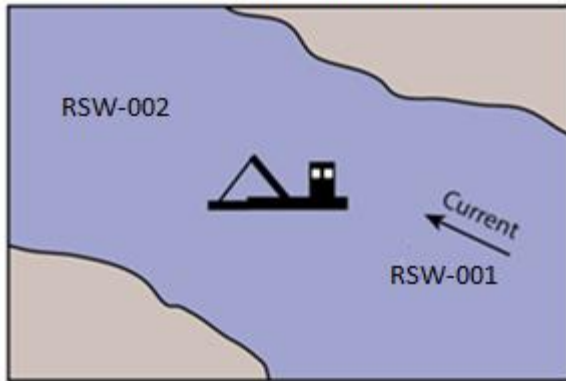
1. Monitoring station location may be further described in the NOA.
2. Additional dredge material placement sites may be added following the naming convention of this table

B. Dredge Site Receiving Water Monitoring (RSW-001/002)

1. **Applicable to all dischargers.** The Discharger shall commence surface water monitoring at each dredge location immediately upon start of dredging operations.

Monitoring shall continue during active dredging operations. Figure 1 shows the relative locations of RSW-001 and RSW-002.

Figure 1: Dredge Site Sampling Locations



The Discharger shall monitor the Receiving Water at Monitoring Locations RSW-001 and RSW-002 in accordance with Table B-2 and the testing requirements described in section II.B.2 below:

Table B-2. Dredge Site Monitoring (RSW-001/002)

Parameter	Unit	Sampling Frequency	Sample Type
Dissolved Oxygen	Milligram per liter (mg/L)	Every 4 hours	Grab
pH	Standard Unit (SU)	Every 4 hours	Grab
Temperature	Degrees Farenheight (°F)	Every 4 hours	Grab
Turbidity	Nephelometric Turbidity Unit (NTU)	Every 4 hours	Grab

2. **Table B-2 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table B-2:
 - a. Monitoring shall be completed at both one-third (1/3) of the water depth and at two-thirds (2/3) of the water depth.
 - b. A handheld field meter may be used for **dissolved oxygen, pH, temperature, and turbidity**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained.

- c. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:
 - i. Floating or suspended matter
 - ii. Discoloration
 - iii. Bottom deposits
 - iv. Aquatic life
 - v. Visible films, sheens, or coatings
 - vi. Fungi, slimes, or objectionable growths
 - vii. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

C. Dredge Material Placement Site Monitoring (DMPS-001)

- 1. **Applicable to all dischargers.** The Discharger shall begin monitoring at each dredge material placement site immediately after placement of dredge materials at the site commences. Monitoring shall continue until the dredge material placement site is completely empty of water. The dredge material placement site shall be sampled for the parameters and at the frequency specified in Table B-3 and the testing requirements described in section II.C.2 below:

Table B-3. Dredge Material Placement Site Monitoring (DMPS-001)

Parameter	Unit	Sampling Frequency	Sample Type
Freeboard	0.1 feet	1/Day	Measurement
Dissolved Oxygen	mg/L	1/Week	Grab
pH	SU	1/Week	Grab
Levee condition	--	1/Day	Observation

- 2. **Table B-3 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table B-3:
 - a. A handheld field meter may be used for **dissolved oxygen and pH** provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained.
 - b. Dissolved oxygen samples shall be collected opposite the inlet location within one (1) foot from the surface for each pond or other containment facility in use. Monitoring for dissolved oxygen may cease when the water depth in the containment facility is less than 0.5 feet.

- c. If dissolved oxygen is measured below 1 mg/L, then daily monitoring for dissolved oxygen shall be conducted until dissolved oxygen levels increase to 1 mg/L or greater, at which time weekly monitoring may resume.
- d. **Levee Condition.** The Discharger shall inspect the levees for signs of seepage along the exterior toe of the levees. If seepage is found, per the Discharge Specifications (WDR Section V.A.9) placement at the site shall cease until containment is restored.

D. Return Water Monitoring (RET-001)

- 1. **For Category 1 dischargers.** The Discharger shall monitor return water from each dredge material placement site during discharge into surface waters. Return water shall be monitored prior to the discharge entering waters of the state at the overflow weir or discharge pipe. Monitoring shall commence within the first 24 hours of discharge and shall continue at the frequency provided in Table B-4 and the testing requirements described in section II.D.2 below, as specified in the NOA, until return water discharges from the dredge material placement site cease:

Table B-4. Return Water Monitoring (RET-001)

Parameter	Unit	Sampling Frequency	Sample Type
Dissolved Oxygen	mg/L	1/Day	Grab
pH	SU	1/Day	Grab
Temperature	°F	1/Day	Grab
Turbidity	NTU	1/Day	Grab
Total Suspended Solids	mg/L	1/Week	Grab
Constituents of concern	Microgram per Liter (µg/L)	1/Week	Grab

- 2. **Table B-4 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table B-4:
 - a. A handheld field meter may be used for **dissolved oxygen, pH, temperature, and turbidity** provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained.
 - b. Constituents of concern will be identified in the NOA based on parameters analyzed for the pre-dredge sediment evaluation exceeding screening levels in Attachment D.
 - c. Sampling shall be concurrent (i.e., within 4 hours) with receiving water sampling required in Table B-5.

E. Receiving Water Monitoring (RSW-003/004)

1. **For Category 1 dischargers.** The Discharger shall monitor receiving waters at each return water discharge location during discharge into surface waters. Monitoring shall be conducted at locations RSW-003 and RSW-004 as shown in Figure 2 below and as described in Table B-1. Monitoring shall commence within the first 24 hours of discharge and shall continue at the frequency provided in Table B-5 and the testing requirements described in section II.D.2 below, as specified in the NOA, until return water discharges from the dredge material placement site cease.

Figure 2: Receiving Water Sampling Locations

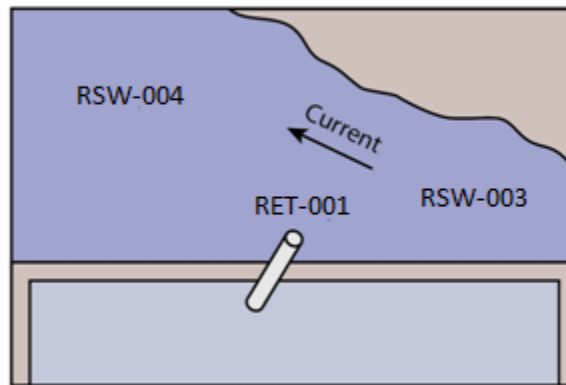


Table B-5. Receiving Water Monitoring (RSW-003/004)

Parameter	Unit	Sampling Frequency	Sample Type
pH	SU	1/Day	Grab
Dissolved Oxygen	mg/L	1/Day	Grab
Temperature	°F	1/Day	Grab
Turbidity	NTU	1/Day	Grab
Total Suspended Solids	mg/L	1/Week	Grab
Constituents of concern	µg/L	1/Week	Grab

2. **Table B-5 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table B-5:
 - a. A handheld field meter may be used for **dissolved oxygen, pH, temperature, and turbidity** provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained.
 - b. Constituents of concern will be identified in the NOA based on parameters analyzed for the pre-dredge sediment evaluation exceeding screening levels in Attachment D.

- c. Sampling shall be concurrent (i.e., within 4 hours) with return water sampling required in Table B-4.
- d. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-003 and RSW-004. Attention shall be given to the presence or absence of:
 - i. Floating or suspended matter
 - ii. Discoloration
 - iii. Bottom deposits
 - iv. Aquatic life
 - v. Visible films, sheens, or coatings
 - vi. Fungi, slimes, or objectionable growths
 - vii. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the Monitoring Report.

III. REPORTING REQUIREMENTS

The Discharger shall submit reports and notifications as described in this section. Written reports and notifications must be certified and submitted by the Discharger or an authorized representative identified in the NOI.

The Discharger must submit all notifications, submissions, materials, data, correspondence, and reports in a searchable Portable Document Format (PDF).

Documents smaller than 50 MB must be emailed to

centralvalleysacramento@waterboards.ca.gov. The subject line of the email must identify the Central Valley Water Board staff contact, Project name, and WDID Number.

Documents that are 50 MB or larger must be transferred to a disk and mailed to the Central Valley Water Board staff contact.

A. Analytical Methods Report.

1. The Discharger shall complete and submit an Analytical Methods Report for approval by the Executive Officer. The Analytical Methods Report shall include the following for each constituent of concern with a receiving water limitation (Table 3) specified in the NOA: 1) analytical method, 2) reporting level (RL), and 3) method detection limit (MDL). The due date for submittal of the Analytical Methods Report will be specified by the Executive Officer in the NOA and shall not exceed 90 days from the date of the NOA.
2. The analytical methods shall be consistent with the recommended methods provided in Attachment D and include sufficiently sensitive RLs to evaluate compliance with the receiving water limitations specified in the NOA. Equivalent analytical methods can be requested in the Analytical Methods Report.

3. Current analytical methods used by commercial analytical laboratories within the Central Valley Region may not provide RLs sufficiently sensitive to evaluate compliance with the receiving water limitations for all constituents of concern in this Order. The NOA will include a Target RL for each constituent of concern to be monitored to guide Dischargers in providing sufficiently sensitive methods that are feasible.
4. If an RL is not less than or equal to the Target RL specified in the NOA for a constituent of concern, the Discharger shall demonstrate the proposed analytical method and reporting level are the lowest available for commercial analytical laboratories.

B. Project Status Notifications

1. Notice of Commencement

- a. **Purpose:** Notify Central Valley Water Board staff prior to the start of dredging.
- b. **When to Submit:** Must be received at least seven (7) days prior to the start of dredge activities.
- c. **Contents:**
 - i. Date of project commencement;
 - ii. Anticipated date(s) when dredging activities will occur;
 - iii. Location and description of dredge material placement site(s) to be used;
 - iv. Expected dredging rate in cubic yards per day; and
 - v. Project schedule milestones, including a schedule for dewatering dredge material and return water discharge duration, if applicable.

2. Notice of Project Completion

- a. **Purpose:** To request termination of coverage under this General Order.
- b. **When to Submit:** Following completion of all dredge activities and all discharges to waters of the state have ceased.
- c. **Contents:**
 - i. Notice of Project Completion form
 - ii. Final maps depicting Project areas, including the entire footprint of dredged area and dredge material placement sites;
 - iii. Quantity of dredge material removed in cubic yards; and

- iv. Photo documentation of all dredged areas and dredge material placement sites.

C. Conditional Notifications and Reports

1. Non-Compliance Event Report

- a. **Purpose:** Notifies Central Valley Water Board of a non-compliance event, such that a violation of water quality standards, the NOA, and/or this General Order has occurred.
- b. **When to Submit:** The Discharger shall submit a written report to Central Valley Water Board staff within five (5) working days of the beginning of the non-compliance event.
- c. **Contents:** The report shall include a description of the non-compliance, the cause of non-compliance, a map indicating the location where the non-compliance occurred, and the beginning and end of the non-compliance event including exact dates and times. If the non-compliance has not been corrected, the report shall also include an estimate of when the non-compliance will cease; the steps taken or planned by the Discharger to reduce, eliminate, and prevent reoccurrence of the non-compliance; and results from any increased monitoring conducted by the Discharger to evaluate impacts to the receiving water due to the non-compliance.

2. Modifications to Project Report

- a. **Purpose:** Notifies Central Valley Water Board if the dredging project, as described in the Notice of Intent (NOI), is altered in any way or by the imposition of subsequent permit conditions by any local, state, or federal regulatory authority.
- b. **When to Submit:** If dredging as described in the NOI is altered in any way or by the imposition of subsequent permit conditions by any local, state, or federal regulatory authority.
- c. **Contents:**
 - i. A description and location of alterations to dredging implementation, including, but not limited to, alterations to dredge areas, dredge material placement sites, and monitoring; and
 - ii. Identification of any Project modifications that may interfere with the Discharger's compliance with this Order and/or NOA.

3. Annual Dredge Operation Plan (only required for multiple year projects)

- a. **Purpose:** For multiple year project, this notifies Central Valley Water Board of Dischargers intent to continue the dredging project in the next calendar year and provides necessary information for Central Valley Water Board staff to evaluate if any changes to NOA are necessary.
- b. **When to Submit:** If Discharger plans to conduct maintenance dredging for multiple years. The Annual Dredge Operation Plan shall be submitted by **1 February** each calendar year in which maintenance dredging is scheduled to occur.
- c. **Contents:**
 - i. The Dredge Operation Plan shall meet requirements in Attachment E, Section I. D; and
 - ii. Pre-Dredge Evaluation Report per Attachment E, Section I.E shall be submitted if it has been more than three (3) years since last pre-dredge sampling and analysis has been performed.

D. Monitoring Reports

1. Monthly Monitoring Reports

- a. **Purpose:** Notify Central Valley Water Board of the status of dredge activities, monitoring, and environmental compliance activities on a monthly basis.
- b. **When to Submit:** Monthly monitoring reports shall be submitted on the first (1st) day of each month following submittal of the Notice of Commencement. Monitoring data shall be reported in the monthly report submitted on the (1st) day of the second month after monitoring (e.g., January monitoring results shall be included with the monthly report by March 1). Monthly Monitoring Reports must be submitted from the date of the Notice of Commencement until coverage is formally terminated in accordance with this General Order, even if there is no dredge activity and/or discharge during the reporting month.
- c. **Contents:**
 - i. **Summary of Dredge Site, Dredge Material Placement Site, and Reuse Site Activities:** Describe the dredging activities conducted, including work schedule, dredging sites operated, dredging methods, dredge material placement sites used, dredge material that has been beneficial reused, dredge material placement site and reuse site management for all dredge material placement sites and reuse sites (not just those sites used during the reporting period), and the implementation status of all Best Management Practices (BMPs) implemented at each dredge material placement site and reuse site.

- ii. **Summary of Other Activities:** Describe all non-dredging activities during the month, including but not limited to BMP maintenance, compliance monitoring, environmental monitoring, surveys, and inspections. Describe all occurrences during the month, including but not limited to non-compliance, problems encountered, and steps taken to address non-compliance and problems encountered.
- iii. **Compliance Summary:**
 - (a) List name and company/organization of environmental surveyors, monitors, and inspectors involved with monitoring environmental compliance during the reporting period.
 - (b) Provide the date(s) samples were taken and the date(s) sample analyses (if any) were performed, and the name of the person(s) performing the sampling and analyses.
 - (c) Describe the analytical techniques/methods used.
 - (d) Summarize the results of the analyses.
 - (e) Summarize observed incidents of non-compliance, compliance issues, problems, or occurrences.
 - (f) Describe each observed incident in detail. List monitor name and organization; the date, location, type of incident; corrective actions taken (if any), current status, and resolution in accordance with Reporting Protocols in subsection D below.

2. Annual Reports

- a. **Purpose:** Notify Central Valley Water Board of the quantity of material dredged during the previous State Fiscal Year (July 1- June 30), which is used to establish the annual fee.
- b. **When to Submit:** Annual Reports shall be submitted by the first (1st) day of September. The Discharger shall continue to submit Annual Reports until coverage is formally terminated in accordance with this General Order.
- c. **Contents:**
 - i. Map(s) showing dredge progress and footprint of area dredged.
 - ii. Quantity (cubic yards) of material dredged during the previous State Fiscal Year (July 1- June 30) for which the project was authorized.

E. Reporting Protocols

1. Dischargers shall report with each sample result the applicable Reporting Limit (RL) and the Method Detection Limit (MDL), as determined by the procedure described in title 40 of the Code of Federal Regulations, section 136.
2. Dischargers 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 concentration of the sample shall also be reported.
 - c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. 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.
 - d. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - e. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
3. Dischargers shall submit monitoring reports in accordance with the following requirements:
 - a. Each Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate compliance with applicable limitations.
 - b. Each Discharger shall attach all laboratory analysis sheets, including quality assurance/quality control information, with all submitted monitoring reports for which sample analyses were performed.

ATTACHMENT C – INFORMATION SHEET

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INFORMATION SHEET

As described in section III.C of the Waste Discharge Requirements, the Central Valley Water Board incorporates this Information Sheet as findings of the Central Valley Water Board supporting issuance of this General Order. This Information Sheet includes the rationale for the requirements of this Order.

I. INFORMATION

A. Background

The General Waste Discharge Requirements (WDRs) for maintenance dredging within the Central Valley Region (Sacramento and San Joaquin River Basins and Tulare Lake Basin) are being issued to reflect current conditions, policies and plans and provide coverage to maintenance dredging operations regionwide, including the Sacramento-San Joaquin Delta (Delta). On 13 August 2009 the Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted Order R5-2009-0085 General Waste Discharge Requirements for Maintenance Dredging Operations Sacramento-San Joaquin Delta. This General Order is intended to replace Order R5-2009-0085 to regulate maintenance dredging in the Delta. Existing enrollees under Order R5-2009-0085 will be notified of the process to enroll under this General Order and the Central Valley Water Board will rescind Order R5-2009-0085 at a future Board meeting.

Dredging of accumulated sediment in surface waters is necessary to maintain storage or flow capacity, safe navigation and passage, flood control, water conveyance, public access, and recreation. Sediments deposited by rivers and waterways must be periodically removed to maintain these uses. Dredge material will be removed from surface waters and placed at dredge material placement (DMP) sites for management and/or retention, as well as, for beneficial reuse.

B. General Criteria

This General Order is designed to allow maintenance dredging, placement of dredge sediment to DMPS, reuse of sediment, and authorizes return water discharges to surface waters and infiltration to groundwater. The dredging must be for maintenance purposes, the dredge material is not hazardous, and the return water discharges are only authorized to discharge back to the waterbody where the dredging occurs, among other conditions specified in this Order. Surface waters include but are not limited to streams, dry stream courses, ephemeral streams, creeks, rivers, lakes, reservoirs, and storm drains.

This Order includes prohibitions, discharge specifications, receiving water limitations, special provisions, and monitoring and reporting to protect beneficial uses of waters of the state. Discharge pathways associated with operation of the DMPS include infiltration to groundwater and return water discharges to surface water. Discharge pathways associated with operation of the reuse sites include infiltration to groundwater and surface storm water runoff. Dischargers authorized by this General Order are categorized based on the discharge pathways associated with the DMPS. Category 3

discharges lack hydraulic connectivity to surface and ground waters but potential for discharge exists during dredging and placement activities. Category 2 discharges are those that may additionally impact groundwater through infiltration but otherwise do not enter surface waters. Category 1 discharges are those that include all discharge pathways including infiltration to groundwater and return water discharges to surface water body where the maintenance dredging is conducted.

II. RATIONALE FOR REQUIREMENTS

The Central Valley Water Board adopted The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fifth Edition and The Water Quality Control Plan for the Tulare Lake Basin, Third Edition (hereinafter Basin Plans, collectively) that designate beneficial uses, establish water quality objectives, contain implementation plans and policies for protecting waters of the basin, and incorporate by reference plans and policies adopted by the State Water Resources Control Board (State Water Board). In addition, the Basin Plans implement State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plans identify the typical beneficial uses for surface waters as follows: municipal and domestic supply; agricultural irrigation; stock watering; process supply; service supply; hydropower supply; water contact recreation; canoeing and rafting recreation; other non-contact water recreation; warm freshwater aquatic habitat; cold freshwater habitat; warm fish migration habitat; cold fish migration habitat; warm and cold spawning habitat; wildlife habitat; navigation; rare, threatened, or endangered species habitat; groundwater recharge; and freshwater replenishment. The Basin Plans also identify beneficial uses of groundwater as follows: municipal and domestic supply; agricultural supply; industrial service supply; and industrial process supply.

The Basin Plan for the Sacramento and San Joaquin River Basins at page IV-17.00 and the Basin Plan for the Tulare Lake Basin at page IV-21, contain implementation policies, “Policy for Application of Water Quality Objectives” and “Application of Water Quality Objectives”, respectively, that specify that the Central Valley Water Board “will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.” With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA’s published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board’s “Policy for Application of Water Quality Objectives”) (40 C.F.R. § 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plans include numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” The narrative chemical constituent objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, “...water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum

contaminant levels (MCLs)” in Title 22 of CCR. The Basin Plans further state that to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs. The narrative tastes and odors objective states: “Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.”

A. Discharge Prohibitions

- 1. Prohibition IV.A (No discharge or application of waste other than that described in this General Order).** This prohibition is based on Water Code section 13260 that requires filing of a report of waste discharge (ROWD) before discharges can occur. Dischargers seeking authorization to discharge under this General Order are required to submit a ROWD as part of the Notice of Intent for the discharges described in this General Order; therefore, discharge of wastes, other than those described in section I and meeting the eligibility criteria in sections II.C.1, 2, 3, and 4 of this General Order are prohibited.
- 2. Prohibition IV.B (No discharges to other surface waters).** Discharges of dredge material to surface waters other than return water to the dredge material waterbody of origin are prohibited, except where the discharge is authorized under an NPDES Permit.
- 3. Prohibition IV.C (No controllable condition shall create a nuisance).** This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.
- 4. Prohibition IV.D (Hazardous waste location).** This prohibition ensures projects authorized by this order will not contribute to the rapid production and subsequent discharge of hazardous materials that may violate Basin Plan objectives.
- 5. Prohibition IV.E (No discharge to wetlands and sensitive biological/cultural areas).** This prohibition ensures projects authorized by the order do not impact wetlands and sensitive biological or cultural areas.

B. Discharge to Land and Reuse Specifications

- 1.** These specifications ensure appropriate best management practices measures will be maintained and implemented in accordance with a Dredge Operation Plan referenced in the Notice of Applicability to ensure the dredge material placement sites and reuse sites are managed to prevent discharge of waste or sediment to surface waters and ensure the activities do not cause pollution or nuisance.

C. Receiving Water Limitations

The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plans. The Basin Plans state that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plans includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This General Order contains receiving water limitations based on the Basin Plan numerical and narrative water quality objectives for ammonia, bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

1. Constituents of Concern

Notices of Applicability issued under this General Order will identify project specific constituents of concern and contain applicable numeric receiving water limitations, as shown in Table 3. As part of a complete Notice of Intent, Category 1 dischargers will provide analytical test results of Modified Elutriate Tests of pre-dredged sediments compared against the screening levels from Tables D-3 through D-7 in Attachment D of this Order. Constituents reported in concentrations exceeding screening levels will be identified in the NOA as constituents of concern and the numeric receiving water limitation from Table 3 for the constituent will be included in the NOA. In addition, monitoring, as described in the Monitoring and Reporting Program (MRP) for the constituents of concern will be included in the NOA.

Two sets of numeric receiving water limitations for constituents of concern are established for receiving waters where the municipal and domestic water supply (MUN) beneficial use is applicable and where MUN has been de-designated in the Basin Plan. For receiving waters with MUN the numeric receiving water limitations are established using the most stringent criteria/objectives between State Water Board Division of Drinking Water primary maximum contaminant levels (MCLs), California Toxics Rule (CTR) human health criteria considering consumption of drinking water and organisms, CTR acute (1-hour average) aquatic life criteria, Basin Plan site-specific objectives, and Statewide Water Quality Objectives. For non-MUN receiving waters, the MCLs are not applied and the CTR human health criteria is based on consumption of organisms only. For the CTR aquatic life criteria the acute (1-hour average) criteria has been applied in lieu of the chronic criteria (4-day average), because the return water discharges for projects eligible for coverage under this General Order are short in duration, typically less than 4 days, so chronic effects are not a concern. Furthermore, the CTR chronic criteria may be exceeded once every three years and are fully protective of aquatic life. Maintenance dredging projects are not expected to occur more than once every three years.

a. Receiving Water Limits for Hardness Dependent Metals

The California Toxics Rule (CTR) contains aquatic life criteria cadmium, copper, lead, nickel, and zinc that vary based on hardness. In addition, the Sacramento and San Joaquin Rivers Basin Plan contains site-specific objectives for copper, cadmium, and zinc for discharges to the Sacramento River and its tributaries

above State Highway 32 bridge at Hamilton City that apply in lieu of the acute CTR aquatic life criteria. This General Order contains numeric receiving water limitations for cadmium, copper, lead, nickel, and zinc that vary as a function of hardness to protect freshwater aquatic life based on the CTR or Basin Plan, as applicable. The CTR expresses the objectives for these metals through equations where the hardness of the receiving water is a variable. To simplify the permitting process for this General Order, it was necessary that fixed hardness values be used in these equations. Tables 4 and 5 contain receiving water limitations for cadmium, copper, lead, nickel, and zinc with ranges of hardness between 0 mg/L and 200 mg/L, where the upper hardness value of each range was used to calculate the acute aquatic life criteria. The CTR requires that, for waters with a hardness of 400 mg/L (as CaCO₃), or less, the actual ambient hardness of the surface water must be used (40 C.F.R. section 131.38(c)(4)). For this General Order the lowest measured ambient hardness provided in the Notice of Intent shall be used for determining the CTR and Basin Plan acute criteria.

D. Groundwater Limitations

The Central Valley Water Board adopted ground water quality criteria as water quality objectives in the Basin Plans. The Basin Plans state that “[t]he objectives are relevant to the protection of designated beneficial uses. These objectives do not require improvement over naturally occurring background concentrations.” The Basin Plans includes numeric and narrative water quality objectives for various beneficial uses. This General Order contains groundwater limitations as follows, “Release of waste constituents from the dredge material placement site(s) shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality or water quality objectives contained in the Basin Plans for the Sacramento and San Joaquin River Basin and the Tulare Lake Basin, whichever is greater, or in any amendment or revision to the water quality objectives contained in the Basin Plans adopted by the Central Valley Water Board subsequent to adoption of this General Order.” Category 1 and 2 projects have the potential to discharge to groundwater at the dredge material placement (DMP) sites. This Order requires these projects to analyze the sediment proposed to be dredged and placed at the DMPS by conducting aqueous analysis after performing a Title 22 Waste Extraction Test (WET) procedure for the constituents listed in Table D-3. The WET analysis predicts constituent concentrations that may infiltrate to groundwater. To evaluate whether the proposed project could impact groundwater, the results of the WET analysis is compared to the Table D-3 WET Screening Levels, which have been established to protect the beneficial uses of the groundwater. The WET procedure may be modified to use deionized water in place of a citrate buffer. An alternative extraction procedure may be requested in the Pre-Dredge Sampling and Analysis Plan. Projects exceeding any WET Screening Level in Table D-3 are not eligible for coverage under this General Order, unless the concentrations are less than or equal to existing background soil WET analyses concentrations and/or the Discharger demonstrates there is sufficient soil attenuation to protect groundwater quality. The soil attenuation report must be submitted by a California Registered Civil Engineer or Engineering Geologist.

III. GENERAL ORDER COVERAGE

A. New Dischargers

Upon receipt of a complete Notice of Intent, the Executive Officer shall determine the applicability of the proposed discharge to this General Order. If the discharge is deemed eligible for coverage under this General Order, the Executive Officer will issue a NOA to the Discharger. The NOA will specify that the discharge is authorized under the terms and conditions of this General Order. New discharges that are not covered by an existing NOA may not commence discharging until issuance of a NOA. If the discharge is not eligible for coverage under this General Order, the Executive Officer will notify the Discharger in writing with instructions on how to proceed.

This General Order shall apply to the individuals, public agencies, private businesses, and other legal entities that have submitted a complete NOI and have received a NOA from the Executive Officer.

B. Eligible Dischargers

This General Order authorizes maintenance dredging projects that meet all of the following criteria:

1. Removal of deposited sediment is for the purpose of maintenance or restoration of a waterbody;
2. Removal of sediment does not result in an expansion of facilities beyond a previously permitted or achieved design or operational depth;
3. The project does not involve removal of contaminated sediments or material;
4. The project does not involve suction dredge mining;
5. Return water flow rates from dredge material placement sites will not exceed 1 million gallons per day (MGD);
6. The project will not significantly alter the existing drainage patterns of the dredge material placement site(s) and reuse site(s);
7. The project will not place dredge material in a way that adversely affects endangered, threatened, or rare species or adversely affects the habitat of such species;
8. The project will not place dredge material on lands listed as hazardous materials sites pursuant to Government Code section 65962.5; and
9. The project will not adversely impact beneficial uses of waters of the state.

Discharges associated with suction dredge mining for minerals are ineligible for coverage under this General Order. Senate Bill 637 amended the California Water Code and Fish and Game Code and prohibits a miner from conducting suction dredge mining without approval (in the form of a permit or documentation that a permit is not required) from the State Water Resources Control Board or a Regional Water Quality Control Board (collectively Water Boards). Water Board approval is needed prior to the California Department of Fish and Wildlife issuance of a permit authorizing a miner to

suction dredge mine within the State of California. The State Water Board issued a draft statewide General NPDES Permit that proposes to regulate discharges from motorized and mechanized suction dredge mining activities that take place in a surface water body. The draft General Permit will provide regulatory coverage for individual miners and allow suction dredge mining in specific watersheds and water bodies. The current State of California suction dredge mining prohibition remains in effect until the adoption of the General Permit at a future publicly noticed State Water Board meeting and the California Department of Fish and Wildlife completes its legislatively-mandated tasks and resumes the issuance of suction dredge mining permits.

C. Screening Levels

Attachment D contains screening levels based on water quality objectives/criteria from applicable Basin Plans, the CTR, California Division of Drinking Water MCLs, and Statewide objectives for constituents of concern. The screening levels are used to evaluate whether the projects are eligible for coverage under this General Order. In addition, screening levels are used as thresholds to establish receiving water limitations and monitoring requirements for Category 1 projects. Dischargers applying for authorization under this General Order are required to analyze sediment to be dredged for constituents listed in the appropriate sections of Attachment D and submit the results with the Notice of Intent (NOI). Depending on the applicable project category the following analyses may be required:

- **Solid Phase Analysis:** Category 1, 2, and 3 projects shall conduct solid phase analysis for the constituents listed in Table D-2. The results of the solid phase analysis shall be compared to the Screening Levels in Table D-2, which are based on U.S. EPA Preliminary Remediation Goals (PRG) for ecological or residential use. The PRG screening values are based on risk assessment of common exposure pathways in an upland soil environment. The sediment screening levels are chosen to protect humans and wildlife from potential exposure to the sediments and their constituents once they are placed in an upland environment. **Projects exceeding any screening level in Table D-2 are not eligible for coverage under this General Order.**
- **Waste Extraction Test:** Category 1 and 2 projects shall conduct aqueous analysis after performing a Title 22 Waste Extraction Test (WET) procedure for the constituents listed in Table D-3. The WET analysis predicts constituent concentrations that may infiltrate to groundwater. The WET procedure may be modified to use deionized water in place of the citrate buffer. An alternative extraction procedure may be used with approval by the Executive Officer. The results of the WET analysis shall be compared to the Table D-3 WET Screening Levels, which have been established to protect the beneficial uses of the groundwater. **Projects with pre-dredge WET analyses exceeding any WET Screening Level in Table D-3 are not eligible for coverage under this General Order, unless the concentrations are less than or equal to existing background soil WET analyses concentrations and/or the Discharger demonstrates there is sufficient soil attenuation to protect groundwater quality.**

- **Modified Elutriate Test:** Category 1 projects shall perform a Modified Elutriate Test (MET) procedure on representative sediment samples and receiving water from the anticipated dredge site. The MET analysis is used to predict constituent concentrations of the decant water that may discharge as return water from the dredge material placement sites. Aqueous analysis of the MET supernatant shall be analyzed for the constituents listed in Table D-3 through Table D-9. The MET procedure is described in Environmental Effects of Dredging Technical Notes EEDP-04-2 (USACE 1985). Projects exceeding any MET Screening Level in Tables D-3 through Table D-9 will result in specific receiving water limitations and monitoring for the parameter(s) with the exceedance.

D. Analytical Methods

Laboratory analytical methods provided in Attachment D have been selected by the Central Valley Water Board to be sufficiently sensitive to quantify the level of the pollutant/parameter, and evaluate compliance with the conditions of this General Order. Equivalent analytical methods may be substituted with the approval of the Executive Officer.

IV. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Water Code section 13267 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment B of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The MRP requirements for monitoring ensure adequate data is collected to characterize the impacts to waters of the state associated with maintenance dredging, placement, and dewatering operations. During active dredging all Dischargers shall conduct monitoring each continuous four-hour period of operation to evaluate compliance with receiving water limitations and identify any generation of nuisance condition. Dredge site monitoring data, measured at the upstream and downstream monitoring locations identified in the Monitoring and Reporting Program, will be used to determine compliance with section VI.A to ensure the operation does not cause adverse effects to beneficial uses. Dredge Material Placement Site (DMPS) monitoring shall commence immediately following initiation of placement operations to ensure adequate capacity exists and identify the creation of nuisance conditions. Monitoring is intended to provide representative observations at a frequency adequate to assess compliance with the terms of this Order.

A. Return Water Monitoring

Return water monitoring is necessary to assess the effectiveness of the Dredge Material Placement Site BMPs per the Dredge Operation Plan, and to assess the impacts of the discharge on the receiving water and groundwater. Monitoring is required for constituents of concern identified in the NOA with applicable receiving water limits.

B. Receiving Water Monitoring

Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the return water discharge on the receiving

water body. Applicable receiving water monitoring will be specified in the NOA considering the site-specific conditions of the discharge. Regular dredge material placement site return water monitoring and receiving water monitoring for Category 1 projects is required in the Monitoring and Reporting Program and must be sufficient to evaluate the impacts of the discharge and compliance with this General Order. Regular dredge material placement site monitoring data and receiving water monitoring data, measured at the upstream and downstream receiving water monitoring locations identified in the Monitoring and Reporting Program, will be used to determine compliance with section VI.A to ensure the discharge does not cause adverse effects to beneficial uses. In this General Order, receiving water limitations for cadmium, copper, lead, nickel, and zinc are based on a range of hardness concentrations, with the upper value selected.

V. SPECIAL PROVISIONS

A. Dredge Operation Plan

Dischargers shall submit a Dredge Operation Plan with the NOI per the requirements specified in Attachment E. Furthermore, for episodic maintenance dredging projects that occur over multiple years an annual Dredge Operation Plan is required for each calendar year in which maintenance dredging will occur. The Dredge Operation Plan shall include site-specific Best Management Practices (BMPs) to prevent the generation and potential release of pollutants at the dredging site, and from the dredge material placement sites (DMPS) and reuse sites to waters of the state. The Dredge Operation Plan shall also include descriptions of the DMPS and reuse site that provides information needed to allow approval of new and/or existing DMPS and reuse sites in the NOA. The Dredge Operation Plan will be incorporated and referenced in the NOAs for Dischargers authorized under this General Order. For multiple year projects the NOA will be updated annually by the Executive Officer to incorporate and reference the annual Dredge Operation Plan. Special Provisions VII.B.1 requires the Discharger operate the project per a Dredge Operation Plan referenced in the NOA to ensure compliance with this General Order and the NOA.

BMPs are management practices implemented to prevent or reduce the discharge of pollutants to waters of the state. BMPs include scheduling of activities, prohibitions of certain practices, physical controls, erosion and sedimentation controls, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from dredge material placement sites and reuse sites. Each Discharger authorized to discharge under this General Order is required to implement BMPs per an approved Dredge Operation Plan.

For maintenance dredging projects BMPs are necessary at the following areas of concern: (1) active dredge site, (2) dredge material transfer, (3) DMPS, (4) reuse sites, and (5) return water discharge. At the dredge site BMPs are necessary to protect the water column from the sediments disturbed by the dredging action (e.g. curtains and sealed mechanical dredge bucket). During material transfer, which can occur by pipeline (hydraulic dredging) or placement to transfer barges/truck or land (mechanical) BMPs should protect against incidental fall back of sediments and entrained water (e.g. sealed transfer pipeline with outlet at DMPS, barge with k-rails and plastic sheeting to

contain material during transfer, rumble strips or access routes for transfer truck to minimize ground disturbance/erosion). At the DMPS and reuse sites, BMPs should prevent erosion of dredge material or discharges to surface water from locations other than the approved discharge point (e.g. maintenance of control dykes/levees, installation of barriers to increase detention time). Finally, for projects with return water discharges from the DMPS to surface water, at the discharge point BMPs should adequately control the return water discharge to comply with the Order and NOA (e.g., increased detention time for sediment removal or other turbidity reduction methods).

This General Order allows for the use of existing and new or expanding DMPS and reuse sites, provided that (1) each site has been approved for such use by relevant federal, state, and local authorities and (2) such use does not cause, or threaten to cause, an exceedance of applicable water quality objectives, as defined in the applicable Basin Plan, or a condition of pollution or nuisance, as those terms are defined in Water Code section 13050. To be exempt from CEQA under 15304(g) the Discharger shall document that the site has been authorized by applicable federal and/or state regulatory agencies. Biological assessments are regularly required by the California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Services under the Endangered Species Act. Most maintenance dredging projects require a Lake and Streambed Alteration Agreement by CDFW per Fish and Game Code section 1602, which requires biological assessment. If a CEQA evaluation has been conducted by a local planning agency (e.g., the city or county), or another public agency, Dischargers must provide a copy of the CEQA evaluation, including the Initial Study or Site Plan Review, a list of any mitigation measures, and Notice of Determination. If the local planning agency or another public agency, has determined that the project is exempt from CEQA review, a copy of the Notice of Exemption, or other relevant correspondence issued by the public agency must be provided.

VI. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs for maintenance dredging discharges. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley Water Board notified the Dischargers authorized by the existing Maintenance Dredging General Order and interested agencies and persons of its intent to prescribe general WDRs for maintenance dredging discharges and provided an opportunity to submit written comments and recommendations. Notification was provided through specific mailings and through publication in major newspapers for the following communities: Fresno, Redding and Sacramento.

The public had access to the agenda and any changes in dates and locations through the [Central Valley Water Board's website](http://www.waterboards.ca.gov/centralvalley/board_info/meetings/) (http://www.waterboards.ca.gov/centralvalley/board_info/meetings/)

B. Consideration of Public Comment

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Officer at the Central Valley Water Board at the address on the cover page of this Order, or via email to RB5S-NPDES-Comments@waterboards.ca.gov.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due by 5:00 p.m. on 15 July 2022.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 11 August 2022

Time: 8:30 a.m.

Location: Online Meeting

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

ATTACHMENT D – SCREENING REQUIREMENTS

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I. NOI MONITORING REQUIREMENTS

- A.** All dischargers seeking authorization under this General Order shall sample and analyze a representative sample of the sediment to be dredged in accordance with a Pre-Dredge Sampling and Analysis Plan approved by Central Valley Water Board staff. Depending on the applicable project category the following analyses may be required:
- 1. Solid Phase Analysis:** Category 1, 2, and 3 projects shall conduct solid phase analysis for the constituents listed in Table D-2.
 - 2. Waste Extraction Test:** Category 1 and 2 projects shall conduct aqueous analysis after performing a Title 22 Waste Extraction Test (WET) procedure for the constituents with WET screening levels listed in Table D-3. The WET procedure may be modified to use deionized water in place of the citrate buffer. An alternative extraction procedure may be used with approval by the Executive Officer.
 - 3. Modified Elutriate Test:** Category 1 projects shall perform a Modified Elutriate Test (MET) procedure on representative sediment samples and receiving water from the anticipated dredge site. Aqueous analysis of the MET supernatant shall be analyzed for the constituents with MET screening levels listed in Table D-3 through Table D-9. The MET procedure is described in Environmental Effects of Dredging Technical Notes EEDP-04-2 (USACE 1985).
- B.** This General Order categorizes maintenance dredging projects based on their potential to discharge to waters of the state, including surface water and/or groundwater, from the dredge material placement sites and are defined as follows:
- Category 1:** Placement of dredge material to a site with potential for return water to enter surface water of material origin and groundwater.
- Category 2:** Placement of dredge material to a site with potential for return water to enter groundwater only.
- Category 3:** Placement of dredge material to a site with a curbed and impervious surface or otherwise designed to ensure no potential for return water to enter surface waters or groundwater.
- C.** The analytical results shall be compared to the screening levels in D-3 through D-9, as applicable. A Pre-Dredge Sediment Analysis Plan, required in Attachment D, Section II, shall be submitted for approval prior to sample analysis. The required analyses based on project category are described in Table D-1, below.

Table D-1. Selection of Monitoring for Submittal with NOI

Constituents and Parameters	Category 1	Category 2	Category 3
Solid Phase Metals Analysis	Yes	Yes	Yes
Soluble Metals (WET and/or MET)	Yes (WET and MET)	Yes (WET only)	No
Organophosphorus Pesticides (MET)	Yes	No	No
Organochlorine Pesticides (MET)	Yes	No	No
Polychlorinated Biphenyls (MET)	Yes	No	No
Polyaromatic Hydrocarbons (MET)	Yes	No	No

II. PRE-DREDGE SAMPLING AND ANALYSIS PLAN

A. A Pre-Dredge Sampling and Analysis Plan must be approved by Central Valley Water Board staff prior to implementation of sampling activities. The purpose of the plan is to notify the Central Valley Water Board of intent to conduct sediment sampling for the Notice of Intent. The plan must fulfill project Category sampling and analysis requirements described in Table D-1 above. The plan must include the following:

1. Identification and description of specific sample station locations, and composited samples, if any;
2. Estimated number of sediment samples to be collected and analyzed;
3. Map(s) depicting planned sampling locations;
4. Estimated volume (cubic yards) of dredge material anticipated to be removed from each sampled location;
5. Test method and procedure to be used for each analysis following the analytical methods recommended in Section IV, below. Equivalent analytical methods may be substituted if the methods are adequate to evaluate samples to the Screening Levels and are approved by the Executive Officer;
6. Method detection limits and reporting levels for each analysis method that are sufficiently sensitive to evaluate samples to the Screening Levels. Reporting levels greater than the Screening Levels may be requested if it is demonstrated lower reporting levels are infeasible; and
7. Sample collection technique.

B. Sediment sampling and analyses shall be conducted according to project Category, as described below.

1. A minimum of two core samples shall be collected for any project. At least one core sample shall be collected for each 5,000 cubic yards of material expected to be dredged. Composite samples may be prepared for analysis from at least two core samples for each 10,000 cubic yards of material expected to be dredged. Actual sample frequency and sample compositing may change depending on material and site characteristics. Samples must be representative of the entire depth and volume to be dredged.
2. **Solid Phase Analysis:** Category 1, 2, and 3 projects shall conduct solid phase analysis for the constituents listed in Table D-2.
3. **Waste Extraction Test:** Category 1 and 2 projects shall conduct aqueous analysis after performing a Title 22 Waste Extraction Test (WET) procedure for the constituents with WET screening levels listed in Table D-3. The WET procedure may be modified to use deionized water in place of the citrate buffer. An alternative extraction procedure may be used with approval by the Executive Officer.
4. **Modified Elutriate Test:** Category 1 projects shall perform a Modified Elutriate Test (MET) procedure on representative sediment samples and receiving water from the anticipated dredge site. Aqueous analysis of the MET supernatant shall be analyzed for the constituents with MET screening levels listed in Table D-3 through Table D-9. The MET procedure is described in Environmental Effects of Dredging Technical Notes EEDP-04-2 (USACE 1985).

III. SCREENING LEVELS

A. Screening Levels for Solid Phase Metals

1. Screening Levels in Table D-2 for solids are based on U.S. EPA Preliminary Remediation Goals (PRG) for ecological or residential use. The PRG screening values are based on risk assessment of common exposure pathways in an upland soil environment. The sediment screening levels are chosen to protect humans and wildlife from potential exposure to the sediments and their constituents once they are placed in an upland environment. **Projects exceeding any screening level in Table D-2 are not eligible for coverage under this General Order.**

Table D-2. Sediment Screening Values for Metals

Constituent	Unit	Screening Level
Arsenic, Total	mg/kg	10
Cadmium, Total	mg/kg	21
Total Chromium	mg/kg	92.9
Copper, Total	mg/kg	61
Lead, Total	mg/kg	400

Constituent	Unit	Screening Level
Mercury, Total	mg/kg	0.2
Nickel, Total	mg/kg	60
Selenium, Total	mg/kg	390
Zinc, Total	mg/kg	120

B. Screening Levels for Soluble Metals

1. Screening levels in Table D-3 for soluble metals are chosen to protect the beneficial uses of the groundwater and surface water. The values for the WET analysis are based on applicable water quality objectives to protect the municipal and domestic water supply of the groundwater. The values for MET analyses are based on applicable water quality objectives to protect the municipal and domestic water supply (MUN) and aquatic life beneficial uses. If a waterbody has been de-designated for the MUN beneficial use in the Basin Plan, the “No MUN Use” screening levels are applicable, otherwise the “MUN Use” screening levels apply. **Projects pre-dredge WET analyses exceeding any WET Screening Level in Table D-3 are not eligible for coverage under this General Order, unless the concentrations are less than or equal to existing background soil WET analyses concentrations and/or the Discharger demonstrates there is sufficient soil attenuation to protect groundwater quality. Projects exceeding any MET Screening Level will result in specific receiving water limitations and monitoring for the parameter(s) with the exceedance.**

Table D-3. Aqueous Screening Values for Soluble Metals

Constituent	Units	MET Screening Levels MUN Use	MET Screening Levels No MUN Use	WET Screening Levels
Arsenic, total	µg/L	10	--	10
Cadmium	µg/L	Variable (See Tables D-4 and D-5)	Variable (See Tables D-4 and D-5)	5
Chromium (IV)	µg/L	16	16	--
Total Chromium	µg/L	--	--	50
Copper	µg/L	(See Tables D-4 and D-5)	(See Tables D-4 and D-5)	1,300
Lead	µg/L	(See Table D-4)	(See Table D-4)	15
Mercury, Total	ng/L	12	12	--
Methylmercury	ng/L	0.06	0.06	--
Nickel	µg/L	(See Table D-4)	(See Table D-4)	100
Selenium, Total	µg/L	20		50
Zinc	µg/L	(See Tables D-4 and D-5)	(See Tables D-4 and D-5)	5000

Table D-3 Notes:

1. **Cadmium, Copper, Lead, Nickel, and Zinc.** For MET screening levels for the hardness-dependent metals, cadmium, copper, lead, nickel, and zinc, see Tables D-4 and D-5 below. For the WET screening levels, cadmium, copper, lead, nickel, and zinc shall be in the form of total metals.

C. Screening Levels for Hardness Dependent Metals

1. Screening levels for cadmium, copper, lead, nickel, and zinc are provided in Table D-4, which are based on the ambient hardness. **For Category 1 projects, receiving water limitations and monitoring will be required in the NOA for all constituents where the MET test results exceed the screening levels.**

Table D-4. Hardness Dependent Metals Screening Levels

Ambient Hardness in mg/L (H)	Cadmium, Dissolved (µg/L)	Copper, Dissolved (µg/L)	Lead, Dissolved (µg/L)	Nickel, Dissolved (µg/L)	Zinc, Dissolved (µg/L)
H < 10	0.35	1.5	5	70	17
10 ≤ H < 20	0.74	2.9	11	120	30
20 ≤ H < 30	1.2	4.3	17	170	42
30 ≤ H < 40	1.6	5.7	24	220	54
40 ≤ H < 50	2.0	7.0	30	260	65
50 ≤ H < 60	2.5	8.3	37	300	76
60 ≤ H < 70	2.9	9.6	44	350	87
70 ≤ H < 80	3.3	11	51	390	97
80 ≤ H < 90	3.8	12	58	430	110
90 ≤ H < 100	4.3	13	65	470	120
100 ≤ H < 200	8.5	25	130	810	200
H ≥ 200	9.0	26	140	540	210

- For discharges to the Sacramento River and its tributaries above State Highway 32 bridge at Hamilton City, screening levels for cadmium, copper, and zinc are provided in Table D-5, which vary based on the ambient hardness. Screening levels apply in lieu of the screening levels for cadmium, copper, and zinc in Table D-4.

Table D-5. Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City – Cadmium, Copper, and Zinc Screening Levels

Ambient Hardness in mg/L (as CaCO ₃) (H)	Cadmium dissolved (µg/L)	Copper dissolved (µg/L)	Zinc dissolved (µg/L)
H <10	0.04	1.6	5.1
10 ≤ H <20	0.10	3.0	9.0
20 ≤ H <30	0.16	4.3	12.6
30 ≤ H <40	0.22	5.6	16.0
40 ≤ H <50	0.29	6.8	19.3
50 ≤ H <60	0.36	8.1	22.4
60 ≤ H <70	0.43	9.3	25.5
70 ≤ H <80	0.50	10.5	28.5
80 ≤ H <90	0.57	11.7	31.4
90 ≤ H <100	0.65	12.9	34.2
100 ≤ H <200	1.36	23.0	58.3
200 ≤ H	1.45	24.1	60.9

D. Screening Levels for Polychlorinated Biphenyls

- Aqueous analysis of MET supernatant shall be analyzed for the polychlorinated biphenyls listed in Table D-6. **Projects exceeding any Screening Level in Table D-6 will result in specific receiving water limitations and monitoring for PCBs.**

Table D-6. Screening Values for Aqueous Polychlorinated Biphenyls (PCBs)

Constituent	Unit	Screening Level
Aroclor 1016	µg/L	0.00017 (see table note 1 below)
Aroclor 1221	µg/L	0.00017 (see table note 1 below)
Aroclor 1232	µg/L	0.00017 (see table note 1 below)
Aroclor 1242	µg/L	0.00017 (see table note 1 below)
Aroclor 1248	µg/L	0.00017 (see table note 1 below)
Aroclor 1254	µg/L	0.00017 (see table note 1 below)
Aroclor 1260	µg/L	0.00017 (see table note 1 below)

Table D-6 Notes:

- Sum of PCBs will total less than 0.00017 µg/L.

E. Screening Levels for Polyaromatic Hydrocarbons (PAHs)

1. Aqueous analysis of MET supernatant shall be analyzed for the PAHs listed in Table D-7. **Projects exceeding any Screening Level in Table D-7 will result in specific receiving water limitations and monitoring for the parameter(s) with the exceedance.**

Table D-7. Screening Values for Aqueous Polyaromatic Hydrocarbons

Constituent	Unit	Screening Level
Acenaphthene	µg/L	1200
Anthracene	µg/L	9600
Benzo(a)anthracene	µg/L	0.0044
Benzo(b)fluoranthene	µg/L	0.0044
Benzo(k)fluoranthene	µg/L	0.0044
Benzo(a)pyrene	µg/L	0.0044
Chrysene	µg/L	0.0044
Dibenzo(a,h)anthracene	µg/L	0.0044
Fluoranthene	µg/L	300
Fluorene	µg/L	1300
Indeno(1,2,3-cd)pyrene	µg/L	0.0044
Naphthalene	µg/L	620
Pyrene	µg/L	960

F. Screening Levels for Organophosphorus Pesticides

1. Aqueous analysis of MET supernatant shall be analyzed for the organophosphorus pesticides listed in Table D-8. **Projects exceeding any Screening Level in Table D-8 will result in specific receiving water limitations and monitoring for the parameter(s) with the exceedance.**

Table D-8. Screening Values for Aqueous Organophosphorus Pesticides

Constituent	Unit	Screening Level
Chlorpyrifos	µg/L	0.16
Diazinon	µg/L	0.025
Dimethioate	µg/L	1.0
Malathion	µg/L	0.43
Parathion	µg/L	0.013
Phorate	µg/L	0.7

G. Screening Levels for Organochlorine Pesticides

1. Aqueous analysis of MET supernatant shall be analyzed for the organochlorine pesticides listed in Table D-9. **Projects exceeding any Screening Level in Table D-9 will result in specific receiving water limitations and monitoring for the parameter(s) with the exceedance.**

Table D-9. Screening Values for Aqueous Organochlorine Pesticides

Constituent	Unit	Screening Level
Aldrin	µg/L	ND
Alpha BHC	µg/L	ND
Beta BHC	µg/L	ND
Gamma BHC (Lindane)	µg/L	ND
Chlordane	µg/L	ND
4,4-DDD	µg/L	ND
4,4-DDE	µg/L	ND
4,4-DDT	µg/L	ND
Dieldrin	µg/L	ND
Endosulfan	µg/L	ND
Endosulfan II	µg/L	ND
Endosulfan sulfate	µg/L	ND
Endrin	µg/L	ND
Endrin aldehyde	µg/L	ND
Heptachlor	µg/L	ND
Heptachlor epoxide	µg/L	ND
Hexachlorocyclopentadiene	µg/L	ND
Methoxychlor	µg/L	ND
Toxaphene	µg/L	ND

IV. ANALYTICAL METHODS

Analysis of samples collected for compliance with this Order should be conducted according to test methods recommended below in Tables D-10 through D-14 for the analysis of constituents. Equivalent analytical methods may be substituted through approval of the Pre-Dredge Sampling and Analysis Plan (Attachment D, Section II.A) and/or Analytical Methods Report (Attachment B, Section III.A) by the Central Valley Water Board staff.

Table D-10. Recommended Analytical Methods for Metals

Constituent	Solid Phase Analysis Analytical Method	Aqueous Analysis Analytical Method
Arsenic	6010D/6020B	6020B
Barium	-	6020B
Cadmium	6010D/6020B	6020B
Total Chromium	6010D/6020B	6020B
Copper	6010D/6020B	6020B
Lead	6010D/6020B	6020B
Mercury	7471B	1631
Methylmercury	--	1630
Nickel	6010D/6020B	6020B
Selenium	6010D/6020B	6010D/6020B/7740/7741
Zinc	6010D/6020B	6020B

Table D-10 Notes:

1. The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and 1631 (Revision E), respectively, with a reporting limit of 0.06 ng/L for methyl mercury and 12 ng/L for total mercury. EPA method 245.7 may be used in situations where mercury concentrations are expected to be high such that methods 1630 and 1631 are too sensitive and the samples will foul the lab equipment. Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at U.S. EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2).

Table D-11. Recommended Analytical Methods for Organophosphorus Pesticides

Constituent	Aqueous Analysis Analytical Method
Chlorpyrifos	8141B
Diazinon	8141A
Dimethioate	8141A
Malathion	8141A
Parathion	8141A
Phorate	8141A

Table D-12. Recommended Analytical Methods for Organochlorine Pesticides

Constituent	Solid Phase Analysis Analytical Method	Aqueous Analysis Analytical Method
Aldrin	8081B	8081B
Alpha BHC	8081B	8081B
Beta BHC	8081B	8081B
Gamma BHC (Lindane)	8081B	8081B
Chlordane	8081B	8081B
4,4-DDD	8081B	8081B
4,4-DDE	8081B	8081B
4,4-DDT	8081B	8081B
Dieldrin	8081B	8081B
Endosulfan	8081B	8081B
Endosulfan II	-	8081B
Endosulfan sulfate	-	8081B
Endrin	8081B	8081B
Endrin aldehyde	-	8081B
Heptachlor	8081B	8081B
Heptachlor epoxide	8081B	8081B
Hexachlorcyclopentadienne	8081B	8081B
Methoxychlor	8081B	8081B
Toxaphene	8081B	8081B

Table D-13. Recommended Analytical Methods for Polychlorinated Biphenyls (PCB)

Constituent	Solid Phase Analysis Analytical Method	Aqueous Analysis Analytical Method
Aroclor 1016	8082A	8082A
Aroclor 1221	8082A	8082A
Aroclor 1232	8082A	8082A
Aroclor 1242	8082A	8082A
Aroclor 1248	8082A	8082A
Aroclor 1254	8082A	8082A
Aroclor 1260	8082A	8082A

Table D-14. Recommended Analytical Methods for Polyaromatic Hydrocarbons (PAH)

Constituent	Solid Phase Analysis Analytical Method	Aqueous Analysis Analytical Method
Acenaphthene	8310 or 8270D	8310 or 8270D
Anthracene	8310 or 8270D	8310 or 8270D
Benzo(a)anthracene	8310 or 8270D	8310 or 8270D
Benzo(b)fluoranthene	8310 or 8270D	8310 or 8270D
Benzo(k)fluoranthene	8310 or 8270D	8310 or 8270D
Benzo(a)pyrene	8310 or 8270D	8310 or 8270D
Chrysene	8310 or 8270D	8310 or 8270D
Dibenzo(a,h)anthracene	8310 or 8270D	8310 or 8270D
Fluoranthene	8310 or 8270D	8310 or 8270D
Fluorene	8310 or 8270D	8310 or 8270D
Indeno(1,2,3-cd)pyrene	8310 or 8270D	8310 or 8270D
Naphthalene	8310 or 8270D	8310 or 8270D
Pyrene	8310 or 8270D	8310 or 8270D

ATTACHMENT E – NOTICE OF INTENT
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF
GENERAL ORDER R5-2022-0052
FOR
MAINTENANCE DREDGING

To obtain coverage under this Order the Discharger must submit a complete Notice of Intent (NOI). Additional information may be requested by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) for a specific project.

Section II.A of this Order identifies items that are required for a complete NOI. Additionally, section II.A.2 identifies items that may be required for a complete NOI on a case-by-case or conditional basis.

Central Valley Water Board staff will review an NOI submission within 30 days of receipt and provide a completeness determination to the Discharger. A completeness determination may include a request for additional information for a complete NOI.

Application fees must be paid before an application will be determined complete. The fee for authorization under this Order shall be based on Dredging Discharges in California Code of Regulations, title 23, section 2200(a)(3)(B). The current fee schedule is available on the Water Board's [401 Water Quality Certification and Wetlands Program Website](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) (https://www.waterboards.ca.gov/water_issues/programs/cwa401/)

Dischargers are encouraged to contact the Central Valley Water Board to discuss the applicability of this NOI form, items required for a complete NOI, and/or the appropriate level of detail needed to obtain authorization.

I. NOI REQUIREMENTS FOR ALL DISCHARGERS

A. State Form 200

A completed [State Water Board Form 200- Report of Waste Discharge Form](http://www.waterboards.ca.gov/publications_forms/forms/docs/form200.pdf).
(http://www.waterboards.ca.gov/publications_forms/forms/docs/form200.pdf)

B. Fee Requirement

Provide the applicable fee based on Dredging Discharges in California Code of Regulations, title 23, section 2200(a)(3)(B). Checks must be made payable to the State Water Resources Control Board. The current fee schedule is available on the Water Board's [401 Water Quality Certification and Wetlands Program Website](https://www.waterboards.ca.gov/water_issues/programs/cwa401/) (https://www.waterboards.ca.gov/water_issues/programs/cwa401/).

C. Category Determination

Determine Project Category as described below.

1. **Category 1 Projects:** All projects shall be Category 1 unless all criteria below for authorization by a different Category are met.
2. **Category 2 Projects:** To be authorized as a Category 2 project under this General Order, the Discharger must demonstrate that the project meets the following criteria:
 - a. Dredge material return water does not discharge to, or is otherwise prevented from entering surface waters; and
 - b. Dredge material placement site has capacity to contain dredge material, leachate (other than percolation), and storm water runoff from the dredge material until completely dewatered.
3. **Category 3 Projects:** To be authorized as a Category 3 project under this General Order, the Discharger must demonstrate that the project meets the following criteria:
 - a. Placement of dredge materials occurs at a site with a curbed and impervious surface, or otherwise lacks hydraulic connectivity to waters of the state and will not discharge to surface waters or infiltrate to groundwater;
 - b. Dredge material return water does not discharge to surface waters;
 - c. Dredge material return water does not discharge to ground water; and
 - d. Dredge material placement site has capacity to contain dredge material and storm water runoff until completely dewatered.

D. Dredge Operation Plan

Dischargers shall submit a Dredge Operation Plan with the NOI describing the operation, monitoring, and best management practices (BMPs) to be implemented to prevent the generation and potential release of pollutants at the dredging site and the dredge material placement site to waters of the state. The Dredge Operation Plan must include the following information:

1. A site map showing the location of the project, dredge area, dredge material placement sites, surface water discharge points (if applicable), and monitoring locations.
2. Indication whether project is expected to occur over multiple dredging years (e.g., annual maintenance dredging) or is a one-time maintenance dredging project;
3. A narrative description of past maintenance events or reasons why dredging is necessary;
4. Description of dredge material handling equipment;
5. Expected dredging rate in cubic yards per day;
6. Schedule with hours of operation and estimated days to complete dredging and dewatering including start and end dates;
7. A copy of permits or applications for activities related to dredging from other applicable state and/or federal agencies;
8. **Dredge Material Placement Site(s).** Description of dredge material placement site(s), including:
 - a. Name, location, and description of dredge material placement site(s) to be used (County, City, street, nearest cross street, Township/Range/Section, GPS coordinates);
 - b. Available volumetric capacity (cubic yards) of the dredge material placement site(s);
 - c. Names and addresses of adjacent property owners;
 - d. Expectation of discharge of return water to groundwater and/or surface water, including estimated maximum flow rate of return water to surface waters, if applicable;
 - e. Description and location of overflow weir, discharge pipe, or other return water discharge point into surface waters, if applicable;
 - f. Name and location of receiving waters;
 - g. Locations of up- and downstream receiving water monitoring stations for compliance sampling;

- h. Calculations for minimum holding time of dredge material at dredge material placement site before return water discharge to surface waters, if applicable;
 - i. Expected volumes of dredge material to be placed at each dredge material placement site; and
 - j. Method of transporting dredge materials to dredge material placement sites, including description methods to prevent leakage during transport.
- 9. Dredge Material Reuse Sites.** Description of dredge material reuse site(s), including:
- a. Name, location, and description of dredge material reuse site(s) to be used (County, City, street, nearest cross street, Township/Range/Section, GPS coordinates);
 - b. Expected volumes of dredge material to be placed at each dredge material reuse site;
 - c. Demonstration that dredge material to be put to beneficial reuse consists solely of inert waste as defined by Title 27, Chapter 3, Section 20230 of the California Code of Regulations; and
 - d. Demonstration the dredge material will not be reused in saturated conditions.
- 10.** For new or expanding dredge material placement site(s) or reuse site(s), the Discharger shall provide documentation of California Environmental Quality Act (CEQA) compliance, as follows:
- a. For CEQA exemptions pursuant to California Code of Regulations, title 14, section 15304(g), submit documentation that the dredge material placement site(s) and/or reuse site(s) has been authorized by applicable federal and state regulatory agencies.
 - b. If a CEQA evaluation has been conducted by a local planning agency (e.g., the city or county), or another public agency, provide the following:
 - A copy of the CEQA evaluation, including the Initial Study or Site Plan Review, a list of any mitigation measures, and Notice of Determination.
 - If the local planning agency or another public agency has determined that the project is exempt from CEQA review, include a copy of the Notice of Exemption, or other relevant correspondence issued by the public agency.
- 11. Best Management Practices (BMPs).** Description of BMPs to be implemented at the active dredge site, during dredge material transfer, at the dredge material placement site(s), at reuse site(s), and during return water discharge (if applicable). The Discharger shall demonstrate the BMPs will ensure compliance with the Discharge Prohibitions, Discharge Specifications, and Receiving Water Limitations required by this General Order and NOA. The following are examples that should be considered when developing site-specific BMPs:

- a. Turbidity or siltation curtains deployed at dredge site to limit migration of disturbed sediments within the water column;
- b. Sealed clamshell bucket utilized to limit release sediments to water column during lifting action of dredge bucket;
- c. Erosion and runoff control measures deployed during dredge material transfer to prevent discharge of return water from locations other than the approved DMPs discharge location(s);
- d. Erosion control measures implemented at DMPS to ensure containment of dredge material and return water;
- e. Turbidity reduction methods utilized at the DMPS to ensure return water compliance with limitations required by this Order.
- f. Erosion control measures implemented at reuse site to prevent excess erosion in surface water runoff.

E. Pre-Dredge Sediment Evaluation Report

A Pre-Dredge Sediment Evaluation Report shall be submitted with the NOI for all project categories. For projects occurring multiple years (e.g., annual maintenance dredging) a Pre-Dredge Sediment Evaluation Report shall be submitted every three (3) years. The report shall include the following:

1. Pre-dredge sampling and analysis plan, that was approved by the Executive Officer prior to sampling (see Attachment D, Section II);
2. Number of sediment samples collected and description of any composite samples prepared;
3. Map(s) depicting location of samples collected;
4. The date, time, manner, and exact place of sample collection.
5. The name of person(s) collecting samples.
6. List of parameters analyzed as required by this Order (Attachment D – Screening Requirements);
7. Test method and procedure used for each analysis;
8. The results of the analyses;
9. Method detection limits and reporting levels for each analysis method;
10. Sample collection technique; and
11. Table comparing analytical results with the applicable Screening Levels specified in Attachment D with a clear identification of any results exceeding the Screening

Levels. Projects pre-dredge WET analyses exceeding any WET Screening Level in Table D-3 are not eligible for coverage under this General Order, unless the concentrations are less than or equal to existing background soil WET analyses concentrations and/or the Discharger demonstrates there is sufficient soil attenuation to protect groundwater quality. The soil attenuation report must be submitted by a California Registered Civil Engineer or Engineering Geologist.