STATE WATER RESOURCES CONTROL BOARD 1001 I Street, Sacramento, California 95814

ORDER WQ 202X-XXXX-DWQ GENERAL NPDES PERMIT NO. CAG370001

STATEWIDE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR SUCTION DREDGE MINING DISCHARGES TO WATERS OF THE UNITED STATES

Discharges from suction dredge mining activities, as defined in this Order, to waters of the United States in California are subject to waste discharge requirements as set forth in this Order, and as authorized by a Notice of Applicability issued by the Deputy Director of Water Quality. Definitions for the purpose of this Order are included in Attachment A. Key definitions are as follows:

Table 1. Key Definitions for the Purpose of this Order

Suction Dredge Mining or	As defined by statute, suction dredge mining or the use of any vacuum or suction dredge equipment is 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. (Fish & Game Code, section 5653, subd. (g).)
Suction Dredge Mining Activities	In this Order, suction dredge mining or suction dredge mining activities only encompass motorized dredge mining activities that take place in a water body, utilize a single intake suction nozzle, and that directly discharge to surface waters. This Order does not allow motorized dredge mining activities that take place outside the water body.
Suction Dredge Mining Discharges	Discharges from in-water suction dredge mining activities, including the immediate mobilization of pollutants bound to a water body bed into the water column, from suction dredge mining equipment.
Discharger	An individual miner authorized to discharge under this Order through an approved Notice of Applicability issued by the Deputy Director of Water Quality.
Waters of the United States	Surface waters identified as waters of the United States in accordance with the Clean Water Act. For the purpose of this Order, the terms "surface water" and "receiving water" are interchangeably used to mean "waters of the United States" unless noted otherwise.

DRAFT May 8, 2020

Table 2. Administrative Information

This Order was adopted by the State Water Resources Control Board on XXXX XX, 202X.

This Order shall become effective on XXXX XX, 202X.

This Order shall expire on XXXX XX, 202X.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on XXXX XX, 202X.

AYE: NAY:	
ABSENT:	
ABSTAIN:	
	Jeanine Townsend
	Clerk to the Board

XXXX XX, 20XX

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1. Scope of Statewide General NPDES Permit and Required Regulatory Coverage

This Order is a National Pollutant Discharge Elimination System (NPDES) general permit that provides regulatory coverage for discharges from suction dredge mining activities, as defined on Page 1 of this Order. The Fact Sheet, Attachment F of this Order, contains background information and rationale for the requirements in this Order. All attachments to this Order, including the Fact Sheet, are incorporated and constitute as part of this Order.

Suction dredge mining as regulated by this Order is an in-water activity. Equipment typically used for suction dredge mining includes a motorized water pump, typically powered by a gasoline or diesel engine, a riffle/sluice box, a water intake line to supply the water pump, and a flexible line attached to the pump that serves as the vacuum line for excavating materials from the bed of the water body. The water pump, engine, and sluice box are typically mounted on pontoons and floated in the water body at the excavation site. Miners might use an air supply system to allow them to work under water.

Suction dredge mining activities have the potential to add pollutants to a water body and relocate sediment and sediment-bound pollutants from the water body bed to the water column. Primary water quality concerns with suction dredge mining include, but are not limited to, the disturbance of the water body bed, re-mobilization of fine sediment, and release of dissolved/floured metals (including mercury) into the water column, thus adding toxic substances to the water body.

Clean Water Act section 402 requires that discharges of any pollutant or combination of pollutants from point sources to waters of the United States, with certain exceptions, be regulated by NPDES permits. On September 22, 1989, the United States Environmental Protection Agency granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue NPDES permits pursuant to Code of Federal Regulations, title 40, sections 122 and 123.

Discharges of pollutants from suction dredge mining activities into a water of the United States must be regulated by an NPDES permit. (*Rybachek v. United States Environmental Protection Agency* (9th Cir. 1990) 904 F.2d 1276.) Code of Federal Regulations, title 40, section 122.28 provides for issuance of general permits to regulate a category of discharges if they involve the same or substantially similar types of activities; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general permit rather than individual permits. As suction dredge mining is defined by this Order, the discharges to be regulated are from substantially similar types of activities, will discharge the same type of waste, need the same effluent and monitoring requirements, and because of the large number of dischargers conducting such similar activities statewide, they are more appropriately regulated under a general NPDES permit.

This Order regulates suction dredge mining discharges to waters of the United States as defined in Table 1 and Attachment A of this Order. Individual prospective miners must enroll under this Order prior to suction dredge mining. Each prospective miner shall submit an application package to the State Water Board in accordance with section 2.3, *Application Package Requirements*. Only discharges as defined in Table 1 and Attachment A are authorized by this Order. Dischargers enrolled under this Order must comply with the requirements and prohibitions herein, as well as all other federal, state, and local laws and regulations. This Order does not authorize all forms of suction dredge mining described by the statutory definition of the term; it authorizes only the subset of suction dredge mining described by the definition used for the purposes of this Order.

2. Permit Coverage and Application Requirements

2.1. Permit Coverage

This Order provides regulatory coverage to each Discharger for mechanized/motorized suction dredge mining activities, as defined in Table 1 of this Order. Attachment B includes application forms for regulatory coverage under this Order.

2.2. Permit Effective Date and Regulatory Coverage Requirements

This Order becomes effective on XXXX XX, 202X. Each individual prospective miner with proposed mining activities in one or more water bodies shall obtain regulatory coverage under this Order by:

- Submitting a complete application package in accordance with sections 2.3 and 2.4 below, and
- Obtaining a Notice of Applicability from the Deputy Director of Water Quality.

2.3. Application Package Requirements

To apply for regulatory coverage under this Order, an individual prospective miner must submit a complete application package to the State Water Board that includes the following items:

- 2.3.1. **Notice of Intent.** A completed Notice of Intent form, Attachment B.1, signed and certified in accordance with section 5.2., *Signatory and Certification Requirements*, in Standard Provisions, Attachment D of this Order.
- 2.3.2. Application Package Fee. A fee payable to the State Water Board in accordance with California Code of Regulations, title 23 (or subsequent fee regulations updates) is required for each application package. In accordance with the State Water Board fee regulations, discharges regulated under this Order are Category 3 discharges for suction dredge mining discharges. The current fee schedule for Category 3 discharges is available at the following website: Annual Fee Schedule for Category 3 discharges under all other General NPDES Permits

(https://govt.westlaw.com/calregs/Document/IEEE14760D45A11DEA95CA4428EC25FA0?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&

<u>contextData=(sc.Default)).</u> Note that an application fee is not required for an amended application.

2.3.4. Site Information.

- A site map or schematic showing all the locations per water body in which the applicant proposes to conduct suction dredge mining activities. If multiple locations are in the same water body, applicants need to identify only the starting location.
- The name of the water body. If a water body is unnamed, it may be labeled as Unnamed. If there are multiple unnamed water bodies, they may be labeled as Unnamed A, Unnamed B, etc., as appropriate.
- The names of the immediately downstream water bodies. If a downstream water body is unnamed, it may be labeled as Unnamed Downstream Water Body. If there are multiple unnamed downstream water bodies, they may be labeled as Unnamed Downstream Water Body A, Unnamed Water Body B, etc., as appropriate.
- The latitude and longitude of each suction dredge mining location identified above.
- 2.3.5. **Equipment Description.** Description of the suction dredge mining equipment to be used, including type of system (power jet or suction nozzle, for example), model, size and type of engine, sluice box size, intake nozzle size, dredge capacity, type of fuel, and any other relevant information.
- 2.3.6. **Best Management Practices.** Complete the Best Management Practices form-Attachment B2 of this Order; and provide the descriptions of the proposed site-specific best management practices to be implemented to ensure protection of water quality and restoration of pre-mining site conditions from suction dredge mining activities, and to address equipment fuel spills, trash, and human and animal waste.

2.4. Notice of Applicability

Upon submittal of a complete application, State Water Board staff will evaluate the eligibility of the proposed discharges for coverage under this Order. If the proposed discharges are eligible for coverage under this Order, the Deputy Director of Water Quality will issue a Notice of Applicability. If the proposed discharge is determined to be ineligible for coverage under this Order, the Deputy Director of Water Quality will send a response letter to the applicant outlining the reasons the proposed discharge is not eligible for coverage under this Order.

Regulatory coverage for the suction dredge mining discharges that occur at the locations identified in the application package commences on the date specified in the issued Notice of Applicability. If a Discharger proposes to mine in new locations not identified in the approved application package, the Discharger must submit a revised Notice of Intent and receive an amended Notice of Applicability per the application requirements in section 2.3 prior to suction dredge mining at the new locations. An additional application fee is not required for an amended application package.

2.5. Permit Coverage Termination

The Deputy Director of Water Quality may terminate coverage under this Order for any specified cause. Causes for permit coverage termination include, but are not limited to, the following:

- Violation of any requirements, prohibitions or provisions of this Order;
- Misrepresentation or failure to disclose all relevant facts in obtaining regulatory coverage under this Order; or
- Submittal of a Notice of Termination form, Attachment C of this Order by a
 Discharger. A Notice of Termination is only required if the Discharger has
 permanently discontinued suction dredge mining at all locations listed in the Notice
 of Intent.

2.6. Permit Coverage Transfer

Regulatory coverage under this Order is not transferrable.

3. Findings

The State Water Board finds the following:

- 3.1. Legal Authorities. This Order serves as statewide Waste Discharge Requirements pursuant to Water Code, article 4, chapter 4, division 7 (commencing with section 13260). This Order is also issued pursuant to federal Clean Water Act section 402 and implementing regulations adopted by the United States Environmental Protection Agency, and Water Code chapter 5.5, division 7 (commencing with section 13370). This Order shall serve as a statewide NPDES permit for point source discharges to waters of the United States.
- 3.2. Statutory Prohibition and Senate Bill 637. In 2009, the use of vacuum or suction dredge equipment in any river, stream, or lake of the state was statutorily prohibited in California per Fish and Game Code section 5653.1, subdivision (b). In 2015, Senate Bill 637 was signed into law, amending section 5653 of the Fish and Game Code and section 13172.5 of the Water Code. The use of vacuum or suction dredge equipment was defined as "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." (Fish & Game Code, section 5653, subd. (g).) The bill provided that suction dredge mining may resume after, among other things, prospective miners obtain regulatory approval from the State Water Board or Regional Water Boards (collectively, Water Boards) and the Department of Fish and Wildlife. Any Water Board action, in addition to protecting water quality, must address the impacts of "[m]ercury loading to downstream reaches of water bodies affected by the use of vacuum or suction dredge equipment," "[m]ethylmercury formation in water bodies," "[b]ioaccumulation of mercury in aquatic organisms," and "[r]esuspension of metals." (Wat. Code, section 13172.5, subdivision (b).)

- 3.3. National Toxics Rule and California Toxics Rule. The United States Environmental Protection Agency adopted the National Toxics Rule in December 1992 and amended the rule in May 1995 and November 1999. Approximately 40 criteria in the National Toxics Rule are applied in California. In May 2000, the United States Environmental Protection Agency adopted the California Toxics Rule which promulgated new criteria for toxic pollutants discharged to waters of the United States in California. The California Toxics Rule contains water quality criteria specifically for protecting the beneficial uses of waters of the United States from discharges of priority pollutants. The California Toxics Rule incorporates the previously adopted National Toxics Rule criteria that are applicable to waters of the United States in California. The United States Environmental Protection Agency amended the California Toxics Rule in February 2001.
- **3.4. State Implementation Policy**. In March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy). The State Water Board amended the State Implementation Policy in February 2005. The State Implementation Policy establishes implementation provisions for priority pollutant criteria in the California Toxics Rule or Regional Water Boards Basin Plans, and objectives and provisions for chronic toxicity control.
- **3.5.** California Environmental Quality Act. Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act, commencing with section 21100 of Division 13 of the Public Resources Code.
- 3.6. Water Quality Control Plans. The Regional Water Boards have adopted region-specific water quality control plans (also referred to as Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. In addition, the Basin Plans implement State Water Board Resolution 88-63, which established state policy that identifies all waters of the state, with certain exceptions, as suitable or potentially suitable for municipal or domestic supply.
- 3.7. Tribal Subsistence Beneficial Uses and Mercury Provisions. The State Water Board adopted the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California Part 2, Tribal Subsistence Beneficial Uses and Mercury Provisions on May 2, 2017, and it became effective on June 28, 2017. This plan establishes three new beneficial use definitions for use by the State and Regional Water Boards in designating Tribal Traditional Culture (CUL), Tribal Subsistence Fishing (T-SUB), and Subsistence Fishing (SUB) beneficial uses to inland surface waters, enclosed bays, or estuaries in the state. The State Water Board approved one new narrative and four new numeric mercury objectives to apply to those inland surface waters, enclosed bays, and estuaries of the state that have any of the following beneficial use definitions: COMM, CUL, T-SUB, WILD, MAR, RARE, WARM, COLD, EST, or SAL, with the exception of waterbodies or waterbody segments with site-specific mercury objectives.

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- 3.8. Cost of Compliance. In 2013, the State Water Board adopted Resolution No. 2013-0029, resolving to reduce cost of permit compliance while maintaining water quality. The State Water Board commits to continued stakeholder engagement in identifying and implementing measures to reduce cost of compliance while maintaining water quality protection and improving regulatory program outcomes. The burden and cost of monitoring and reporting in an adopted Order must be reasonable and appropriate for the protection of water quality for the corresponding discharges.
- **3.9. Beneficial Uses of Receiving Waters.** The Water Boards establish surface water and groundwater quality objectives in statewide and regional water quality control plans to protect the beneficial uses of a water body. The water quality objectives may be narrative, numerical, or both.

Inland surface water beneficial uses in water quality control plans include, but are not limited to the following uses and the corresponding official acronyms:

- Municipal and domestic supply (MUN),
- Cold freshwater habitat (COLD),
- Warm freshwater habitat (WARM),
- Native American Culture (CUL),
- Subsistence fishing (FISH),
- Tribal Subsistence Fishing (T-SUB),
- Subsistence fishing (SUB),
- Wildlife habitat (WILD),
- Migration of aquatic organisms (MIGR),
- Rare, threatened, or endangered species (RARE),
- Spawning, reproduction, and/or early development (SPWN),
- Water quality enhancement (WQE),
- Aquaculture (AQUA),
- Commercial and sport fishing (COMM),
- Wetland habitat (WET),
- Agricultural supply (AGR),
- Estuarine habitat (EST),
- Water contact recreation (REC-1) and non-contact water recreation (REC-2),
- Navigation (NAV),
- Flood peak attenuation or flood water storage (FLD),
- Freshwater replenishment (FRSH),
- Groundwater recharge (GWR),
- Inland saline water habitat (SAL),
- Industrial process supply (PRO), and
- Industrial service supply (IND).
- **3.10.** Endangered Species Act. This Order does not authorize any act that results in the taking of threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, section 2050 et. seq) or the Federal Endangered Species Act (16 U.S.C. section 1531 et. seq). This Order requires compliance with effluent limitations,

receiving water limitations, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

- 3.11 Notification of Interested Parties. State Water Board staff conducted stakeholder meetings and other informal communications, and on XXXX XX, 202X notified interested miners and other interested parties of the intent to issue this statewide General NPDES Permit. The State Water Board provided the public an opportunity to review the Order and submit written comments and testimony.
- 3.12 Consideration of Public Comment. The State Water Board, in a XXXX XX, 202X public hearing, heard and considered public comments pertaining to a draft Order. The State Water Board also considered all written public comments submitted by the due date of XXXX XX, 20XX, prior to adopting this Order. The Fact Sheet, Attachment F, provides details regarding the public notice and public hearing.

THEREFORE, IT IS HEREBY ORDERED that, to meet the provisions of Water Code, Division 7 (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act, and regulations and guidelines adopted thereunder, Dischargers that have obtained coverage under this Order shall comply with the requirements of this Order. Noncompliance with requirements of this Order may be subject to an enforcement action by the State Water Board and/or applicable Regional Water Board as authorized by the Water Code.

4. Discharge Prohibitions

The following discharges are prohibited:

- **4.1**. Discharges that do not meet the specifications in section 5.2 of this Order.
- **4.2** Discharges that are not authorized by a Notice of Applicability issued by the Deputy Director of Water Quality.
- **4.3.** Discharges into watersheds (per the Hydrological Unit Code 10 (HUC 10) watershed classification) that contain water bodies that are listed on the Clean Water Act section 303(d) list as impaired for:
 - Trace metals: Cadmium, chromium III and VI, copper, lead, nickel, silver, and/or zinc, or
 - Mercury and/or methyl mercury.
- **4.4**. Discharges into water bodies subject to a year-round prohibition on suction dredge mining per the Department of Fish and Wildlife's regulations. These water bodies are classified as Class A per the California Code of Regulations, title 14, section 228.5.
- **4.5.** Discharges into watersheds (per the HUC 10 watershed classification) with one or more water bodies located in areas of historic gold mining.

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- **4.6.** Discharges into watersheds (per the HUC 10 watershed classification) with one or more water bodies where mercury is detected above the fish tissue water quality objective, but insufficient data is available to determine whether mercury is impairing beneficial uses.
- **4.7**. Discharges into watersheds (per the HUC 10 watershed classification) subject to the North Coast Regional Water Quality Control Board Basin Plan point source prohibition

5. Discharge Specifications and Effluent Limitations

The Discharger shall comply with the following discharge specifications and effluent limitations.

5.1. Narrative Effluent Limitation

The Discharger shall not cause or contribute to an exceedance of a water quality objective.

5.2. Specification for Implementation of Best Management Practices

The Discharger shall implement the following best management practices to minimize water quality impacts, protect beneficial uses, and eliminate pollutant discharges associated with suction dredge mining activities:

- 5.2.1. **Operation**: The Discharger shall comply with the following operation practices:
 - Operate only one suction dredge at a time and maintain at minimum a distance of 500 feet from other suction dredge mining dischargers.
 - Suction dredge only within the wetted portion of the water body at the time of operation.
 - Maintain mining equipment to prevent release of oil, grease, fuels and other liquids from the equipment.
 - If turbidity levels 500 feet downstream of the suction dredge mining equipment are visually higher than upstream of the equipment, cease operation and wait until levels return to background levels before restarting operation.
 - Do not use any chemical agents that include mercury to improve mineral processing and extraction.
 - Remove vegetation and aquatic organisms and drain all water from equipment before leaving the water body.
 - If fish or wildlife eggs are observed during suction dredge mining activities, stop the activity at the site immediately.
- 5.2.2. **Site Management**: The Discharger shall manage each site to ensure:
 - All trash generated is properly disposed of and removed from the site.
 - All sewage and graywater generated is disposed of in enclosed containers and deposited in a public or private sanitary sewer or septic system.
- 5.2.3. **Fuels and Fueling**: The Discharger shall comply with the following fueling specifications:
 - Fuels used to power equipment must be properly stored in sealed containers.

- Equipment must not be cleaned or refueled in or over a water body or within water body banks.
- 5.2.4. **Metals Toxicity Reduction**: The Discharger shall follow these requirements to reduce toxicity from metals:
 - Maintain a minimum distance of 500 feet from other Dischargers' concurrent suction dredge mining activities.
 - Remove and properly dispose of visible mercury collected in the sluice box in accordance with the <u>United States Environmental Protection Agency mercury disposal</u> <u>guidelines</u> (https://www.epa.gov/mercury/storing-transporting-and-disposing-mercury) or equivalent.
- 5.2.5. **Erosion Control**: The Discharger shall implement at minimum the following control practices to prevent erosion:
 - Do not excavate, collect, or remove material, soil, boulders or vegetation from water body banks and slopes in order to:
 - Facilitate transport of the suction dredge mining equipment, or
 - Process the material used the in-water suction dredge mining equipment.
 - Do not cause a widening of the existing waterline.
 - Do not change the flow direction of the water body.
 - Do not cause potential future erosion or damage of the existing bank of the water body.

5.3. Effluent Limitations

Discharges shall not cause or contribute to an exceedance of a narrative or numeric water quality objectives or criteria in applicable federal and state regulations and water quality control plans.

6. Receiving Water Limitations

Receiving water limitations are based on water quality objectives contained in Regional Water Quality Control Board Basin Plans and State Water Board water quality control plans. Discharges to water bodies authorized by this Order shall not cause or contribute to an exceedance of a water quality objective or standard in the receiving water.

- **6.1.** Chemical Constituents. The discharge shall not cause chemical constituents to be present in concentrations that adversely affect beneficial uses in the receiving water.
- **6.2. Floating Material.** The discharge shall not cause floating material or debris to be present in a manner that causes nuisance or adversely affects beneficial uses in the receiving water.
- **6.3. Trash.** The discharge of trash to surface waters and the deposition of trash where it may be discharged to surface waters is prohibited.

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- **6.4. Sediment and Total Suspended Solids.** The discharge shall not cause increased sediment load or increased total suspended solids concentrations that cause nuisance or adversely affect beneficial uses in the receiving water.
- **6.5. Toxicity.** The discharge shall not cause presence of toxic substances, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life in the receiving water.
- **6.6. Hydromodification.** The discharge shall not directly or indirectly cause increased flow velocity or other conditions that modify the existing physical characteristics of a receiving water including the water body bed, banks and vegetative coverage.
- **6.7. Turbidity.** The discharge shall not cause turbidity concentrations to exceed corresponding Regional Water Board Basin Plan water quality objectives for turbidity in the receiving water.
- **6.8. Nuisance or Adverse Effects.** The discharge shall not cause deposition of material that causes a nuisance or adversely affects beneficial uses in the receiving water.
- **6.9. Temperature.** The discharge shall not cause an increase in temperature in the receiving water that exceeds corresponding Regional Water Board Basin Plan water quality objectives for temperature or adversely affects beneficial uses.
- **6.10. Mercury and Methylmercury.** The discharge shall not cause mercury and methylmercury levels in the receiving water to increase above applicable Regional Water Board Basin Plan water quality objectives.

7. Provisions

7.1. Standard Provisions

The Discharger shall comply with all Standard Provisions in Attachment D of this Order.

7.2. Monitoring and Reporting Requirements

Dischargers shall comply with the Monitoring and Reporting Requirements in Attachment E of this Order.

7.3. Special Provisions

7.3.1. Reopener Provisions

The State Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:

- For modification, revocation, rescission and/or reissuance, in accordance with the provisions contained in Code of Federal Regulations, title 40, section 122.62;
- If present or future investigations demonstrate that the discharges governed by, and in compliance with, this Order cause adverse impacts on water quality or beneficial uses of the receiving waters:

- If State Water Board precedential decisions or new policies, laws, or regulations conflicting with this Order are adopted after the adoption date of this Order;
- If an administrative or judicial decision on a separate NPDES permit or waste discharge requirements addresses requirements applicable to discharges authorized in this Order; or
- As otherwise authorized by law.

7.3.2. Annual Pre-Discharge Electronic Notification to Tribal Entities

To ensure protection of the designated beneficial uses of Native American Culture (CUL), and Tribal and Subsistence Fishing (T-SUB or SUB), prior to initiating discharges related to suction dredge mining activities at specific locations per the issued Notice of Applicability, the Discharger, must provide annually (calendar year from January through December) a 30-day minimum advance notification by email to the corresponding tribal representatives and copy the State Water Board at the email: "suctiondredgeminingNPDES@waterboards.ca.gov". (A list of tribal representatives and their email addresses is provided on the State Water Board website and in the Notice of Applicability.) The notification shall include proposed mining locations for that calendar year including the names of the water body(ies), and their corresponding planned mining dates.

The Discharger may begin suction dredge mining after receiving a written response from the appropriate Tribal representatives confirming that the scheduled suction dredge mining activities at the specified locations and dates will not interfere with the tribal beneficial uses. The Discharger must forward a copy of the Tribal representatives' response to the Water Board email address at "suctiondredgeminingNPDES@waterboards.ca.gov" prior to commencing the suction dredge mining activities as scheduled.

If no response is received within 30 days after the notification to the Tribal representative was sent, the Discharger shall email the Water Board and copy the tribal representative indicating no response was received and may then begin suction dredge mining at the specified locations and dates.

ATTACHMENT A - DEFINITIONS

The following definitions apply for the purpose of this Order:

Adverse Effect or Adverse Impact to Beneficial Uses of a Water Body

An adverse effect or adverse impact to beneficial uses of a water body is a detrimental effect on water quality or beneficial uses of a water body caused by a discharge, loading of a pollutant or pollutants, or mechanical equipment activity.

Basin

A Basin is an area drained by a river and all of its tributaries.

Basin Plan

A Basin Plan is a water quality control plan adopted by a Regional Water Quality Control Board and approved by the United States Environmental Protection Agency. A Basin Plan designates beneficial uses, establishes water quality objectives and criteria, implements antidegradation policies, and contains regulatory implementation requirements to attain water quality objectives for all waters of the Basin.

Beneficial Uses

Beneficial uses are the existing or potential uses of receiving waters as designated by a Regional Water Quality Control Board Basin Plan or other water quality control plan. Per California Water Code section 13050, subdivision (f), the beneficial uses of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Other beneficial uses under Regional Water Quality Control Board Basin Plans include aquatic habitat, Native American culture, and subsistence fishing.

Best Management Practices

Best management practices are methods, measures, or practices implemented to reduce or eliminate the discharge of pollutants to receiving waters from point and nonpoint source discharges. Best management practices include structural and nonstructural treatment and source controls and operation and maintenance procedures to be applied prior to, during, or after regulated activities to prevent polluting receiving and downstream water bodies.

Deputy Director of Water Quality

The Deputy Director of Water Quality for the State Water Resources Control Board, or any person(s) delegated by the Deputy Director of Water Quality to serve as the acting Deputy Director of Water Quality.

Discharge

Discharge is a discharge from in-water suction dredge mining activities, including the immediate mobilization of pollutants bound to a water body bed into the water column, from suction dredge mining equipment.

Discharger

A Discharger is an individual miner authorized to discharge under this Order through an approved Notice of Applicability issued by the Deputy Director of Water Quality.

Estuaries

Estuaries are surface waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater.

Enclosed Bays

Enclosed bays are hydrological indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay.

Graywater

Graywater consists of all wastewater that is generated from washing dishes, pans, or any equipment using soap and other cleaning agents.

Hardness-dependent Metals

Hardness-dependent metals are metals with freshwater aquatic life criteria expressed as a function of total hardness in the water body.

Hydrologic Unit Code 10 or HUC 10

Hydrologic Unit Code 10 is the fifth level in the United States Geological Survey national standard hierarchical system based on surface hydrologic features and represents a watershed.

Inland Surface Waters

Inland surface waters are all surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

In-water Suction Dredge Mining

In-water suction dredge mining means conducting the suction dredge mining activity entirely at, within or on the water body.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES), created in 1972 by the Clean Water Act, is the federal permitting program that regulates point source discharges of pollutants to waters of the United States. The Water Boards are primarily responsible for implementing the NPDES program in California.

Pollutants

Pollutants are substances as defined in the Clean Water Act section 502(6) (33 United States Code section 1362(6)) and incorporated by reference into Water Code section 13373.

Receiving Water

Receiving water is a term that is used interchangeably with the term waters of the United States.

Suction Dredge Mining or Suction Dredge Mining Activities

As defined by statute, suction dredge mining or the use of any vacuum or suction dredge equipment is 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. (Fish & Game Code, section 5653, subd. (g).)

In this Order, suction dredge mining or suction dredge mining activities only encompass motorized dredge mining activities that take place in a water body, utilize a single intake suction nozzle, and that directly discharge to surface waters.

Suction Dredge Mining Discharges

Suction Dredge Mining Discharges are discharges from in-water suction dredge mining activities, including the immediate mobilization of pollutants bound to a water body bed into the water column, from suction dredge mining equipment.

Waters of the United States

Waters of the United States are surface waters identified as waters of the United States in accordance with the Clean Water Act. For the purpose of this Order, the terms "surface water" and "receiving water" are interchangeably used to mean "waters of the United States" unless noted otherwise.

ATTACHMENT B1 - NOTICE OF INTENT

STATE WATER RESOURCES CONTROL BOARD TO APPLY FOR REGULATORY COVERAGE UNDER ORDER WQ 202X-XXXX-DWQ, NPDES NO. CAG370001 FOR SUCTION DREDGE MINING DISCHARGES TO WATERS OF THE UNITED STATES

The following discharges are prohibited pursuant to Section 4. Discharge Prohibitions of this Order. Applications submitted for suction dredge mining in prohibited areas will be denied.

- Discharges into watersheds (per the Hydrological Unit Code 10 (HUC 10) watershed classification) that contain water bodies that are listed on the Clean Water Act section 303(d) list as impaired for: Trace metals: Cadmium, chromium III and VI, copper, lead, nickel, silver, and/or zinc, or Mercury and/or methyl mercury.
- Discharges into water bodies subject to a year-round prohibition on suction dredge mining per the Department of Fish and Wildlife's regulations. These water bodies are classified as Class A per the California Code of Regulations, title 14, section 228.5.
- Discharges into watersheds (per the HUC 10 watershed classification) with one or more water bodies located in areas of historic gold mining.
- Discharges into watersheds (per the HUC 10 watershed classification) with one or more water bodies where mercury is detected above the fish tissue water quality objective, but insufficient data is available to determine whether mercury is impairing beneficial uses.
- Discharges into watersheds (per the HUC 10 watershed classification) subject to the North Coast Regional Water Quality Control Board Basin Plan point source prohibition

1. DISCHARGER INFORMATION

Name (First, Last):			
Mailing Address:			
City:	State:	ZIP:	Phone:
Physical Address (Street):			
City:	State:	ZIP:	Phone:
Email Address:			
Signature:		Date:	

2. BILLING ADDRESS (Enter only if different from 1 above)

Name:				
Mailing Address:				
City:	State:	ZIP:	Phone:	

3. SUCTION DREDGE MINING LOCATIONS (use additional sheet if necessary)

Water Body Name	Latitude and Longitude	Nearest City or Town	County	Regional Water Board (see Attachment H)

4. BEST MANAGEMENT PRACTICE INFORMATION

Provide a completed Attachment B2 and maintain a copy on site during suction dredge mining activities.

5. APPLICATION FEE

Provide the appropriate applicable fee. Information regarding applicable water quality fees is located at the <u>fee schedule webpage</u>. Checks shall be made payable to the State Water Resources Control Board.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and I properly gathered and evaluated the information submitted. I am directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature	Date	
Printed Name		

ATTACHMENT B2 - BEST MANAGEMENT PRACTICES

Specify applicable best management practices the Discharger is proposing to implement for compliance with the permit requirements in section 5:

Α.	Operation
	Compliance by:
В.	Site Management (trash, graywater and sewage management) Compliance by:
C.	Fuels and Fueling
	Compliance by:
)	Metals Toxicity Reduction/Mercury Disposal
	Compliance by:
=	Fresion Control
E.	Erosion Control Compliance by:
	:

ATTACHMENT C - NOTICE OF TERMINATION

STATE WATER RESOURCES CONTROL BOARD TO TERMINATE REGULATORY COVERAGE UNDER ORDER WQ 202X-XXXX-DWQ, NPDES NO. CAG370001 FOR SUCTION DREDGE MINING DISCHARGES TO WATERS OF THE UNITED STATES.

1. DISCHARGER INFORMATION (Include Waste Discharge Identification (WDID) number assigned when enrolled)

Name:	State Board WDID No.:		
Mailing Address:			
City: St	ate: Zip:		
Phone:			
Signature:	Date:		
2. BASIS FOR REGULATORY TERMINA	TION: (Explain the reason for termination)		
3. CERTIFICATION			
"I certify under penalty of law that 1) I am not required to be permitted under this General NPDES Permit No.CAG370001 since I no longer plan to conduct suction dredge mining activities prohibited under SB 637, and 2) this document was prepared under my direction and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
Printed Name:			
Signature:			
4. FOR STATE WATER BOARD USE ONI	_Y		
Approved for Termination	Denied for Termination.:		
Deputy Director of Water Quality Signat	rure: Date:		
Effective Date of Termination:			

ATTACHMENT D - STANDARD PROVISIONS

1. PERMIT COMPLIANCE

1.1. Duty to Comply

The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act and the Water Code, and is grounds for a potential enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. section 122.41(a).)

1.2. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 C.F.R. section 122.41(c).)

1.3. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. section 122.41(d).)

1.4. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain suction dredge mining equipment used by the Discharger to achieve compliance with the conditions of this Order.

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort, or any exclusive privilege. (40 C.F.R. section 122.41(g).)
- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations. (40 C.F.R. section 122.5(c).)

1.6. Inspection and Entry

The Discharger shall allow staff of the State and/or Regional Water Board, the United States Environmental Protection Agency, the Department of Fish and Wildlife, and/or their authorized representatives, upon the presentation of credentials and other documents as may be required by law, to:

- 1.6.1. Enter the area where suction dredge mining activity is conducted, under the conditions of this Order (40 C.F.R. section 122.41(i)(1));
- 1.6.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. section 122.41(i)(2));

- 1.6.3. Inspect and photograph at reasonable times any suction dredge mining equipment (including monitoring and control equipment), practices, or activities regulated or required under this Order (40 C.F.R. section 122.41(i)(3)); and
- 1.6.4. Sample or monitor at reasonable times for the purposes of assuring Order compliance or as otherwise authorized by the Clean Water Act or the Water Code, any substances or parameters at any suction dredge mining location. (40 C.F.R. section 122.41(i)(4).)

2. PERMIT ACTION

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. section 122.41(f).)

2.2. Duty to Reapply

If the Discharger chooses to continue a discharge regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain new permit coverage when a subsequently reissued Order becomes available. (40 C.F.R. section 122.41(b).)

2.3. Transfers

This Order is not transferable.

3. MONITORING

- 3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. section 122.41(j)(1).)
- 3.2. If applicable, monitoring analysis shall be conducted according to test procedures under Code of Federal Regulations, title 40, section 136. (40 C.F.R. section 122.41(j)(4) and 122.44(i)(1)(iv).)
- 3.3. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both. (40 C.F.R. section 122.41(j)(5).)

4. RECORDS

4.1. Records Retention

The Discharger shall retain records of all monitoring information, including copies of all reports required by this Order, and records of all data used to complete the application

for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Deputy Director of Water Quality at any time. (40 C.F.R. section 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- The date, exact place, and time of visual representative monitoring (40 C.F.R. section 122.41(j)(3)(i));
- The individual(s) who performed the monitoring (40 C.F.R. section 122.41(j)(3)(ii));
- The results of such visual monitoring. (40 C.F.R. section 122.41(j)(3)(vi).)

4.3. Claims of confidentiality for the following information will be denied (40 C.F.R. section 122.7(b)):

- The name and mailing address of any permit applicant or Discharger (40 C.F.R. section 122.7(b)(1)); and
- Permit applications and attachments, permit deliverables and monitoring data. (40 C.F.R. section 122.7(b)(2).)

5. STANDARD PROVISIONS - REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the State Water Board, the applicable Regional Water Board, or the United States Environmental Protection Agency, within a reasonable time, any information which the Water Boards or the United States Environmental Protection Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the State Water Board, a Regional Water Board or the United States Environmental Protection Agency copies of records required to be maintained by this Order. (40 C.F.R. section 122.41(h) and Wat. Code, section 13383.)

5.2. Signatory and Certification Requirements

- 5.2.1. All applications, reports, or information submitted to the Water Boards, and/or the United States Environmental Protection Agency shall be signed and certified in accordance with Standard Provisions Reporting sections 5.2.2 through 5.2.3, below. (40 C.F.R. section 122.41(k).)
- 5.2.2. Each Discharger shall sign and submit their individual permit application, respectively. (40 C.F.R. section 122.22(a)(2).)
- 5.2.3. Any person signing a document under Standard Provisions Reporting section 5.2.2 above is making the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information,

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the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. section 122.22(d).)

5.3. Monitoring Reports

- 5.3.1. Monitoring results must be reported at the intervals specified in the Monitoring and Reporting Program, Attachment E of this Order.
- 5.3.2. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Code of Federal Regulations, title 40, section 136, the results of this monitoring shall be included in the calculation and reporting of the data to the State Water Board. (40 C.F.R. section 122.41(*I*)(4)(ii).)

5.4. Twenty-Four Hour Reporting

- 5.4.1. The Discharger shall report any noncompliance that may endanger health or the environment to the appropriate Regional Water Board. Information shall be provided by phone within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided to the applicable Regional Water Board within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission 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. (40 C.F.R. section 122.41(/)(6)(i).)
- 5.4.2. The State Water Board Executive Director or a Regional Water Board Executive Officer 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. (40 C.F.R. section 122.41(/)(6)(iii).)

5.5. Anticipated Noncompliance

The Discharger shall provide advance notice to the appropriate Regional Water Board of any planned changes in the permitted activity that may result in noncompliance with General Order requirements. (40 C.F.R. section 122.41(I)(2).)

5.6. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting sections 5.3 and 5.4 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting section 5.4 above. (40 C.F.R. section 122.41(*I*)(7).)

5.7. Other Information

When the Discharger becomes aware of a failure to submit relevant facts or submittal of incorrect information in a permit application or in any report to the State Water Board, a Regional Water Board or the United States Environmental Protection Agency, the

Discharger shall promptly submit such facts or information. (40 C.F.R. section 122.41(I)(8).)

5.8 Enforcement

The State and Regional Water Board are authorized to enforce the terms of this permit under provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

ATTACHMENT E - MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Discharges from suction dredge mining activities, as authorized by this Order, shall be properly managed to prevent adverse impacts to beneficial uses of a water body. The purpose of the visual monitoring and reporting requirements provided in this Attachment is for the Discharger to demonstrate compliance with this Order.

Code of Federal Regulations, title 40, section 122.48 requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the State Water Resources Control Board (State Water Board) and a Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which implement the federal and State of California regulations.

Dischargers regulated under this Order shall comply with all Standard Provisions in Attachment D related to monitoring, reporting and recordkeeping.

1. GENERAL VISUAL MONITORING PROVISIONS FOR SUCTION DREDGE MINING DISCHARGES

1.1. The Discharger shall visually monitor for the constituents in Table E-1 at a representative location for each water body, upstream, and 500 feet downstream of the suction dredge mining location, 30 minutes after starting the suction dredge mining activity.

Table E-1. Representative Monitoring for Each Water Body

Parameter	Units	Sampling	Sample Type
Turbidity	NTU	1/Event	Visual Estimate per chart below
Trash	Presence	1/Event	Visual
Oil and Grease Sheen	Presence	1/Event	Visual
Note: NTU: Nephlometric Turbidity Unit			

The following illustrations provide guidance for visual turbidity monitoring:



- **1.2**. The Discharger shall take photographs of the receiving water body at both the upstream and downstream locations.
- **1.3** The Discharger shall comply with all Standard Provisions in Attachment D for discharges to waters of the United States related to monitoring, reporting and recordkeeping.
- **1.4** The Discharger shall retain all records, including copies of all reports required by this General Order for a period of at least three years from the date of the report.

2. ANNUAL REPORT FOR SUCTION DREDGE MINING DISCHARGES

The Discharger shall submit an Annual Report to the State Water Board by March 1 of the following year. The Annual Report shall contain, at a minimum, a copy of the site map previously submitted in the application package, with:

2.1 Identified locations of suction dredge mining activities that occurred between January 1 and December 31 of the previous calendar year with dates,

- 2.1.1 Corresponding tabular records of suction dredge mining activity performed in permitted water bodies, per mining date, including:
- 2.1.2 The date and the start and end time of the suction dredge mining activity.
- 2.1.3 The name of the water body. If a water body is unnamed, it may be labeled as Unnamed. If there are multiple unnamed water bodies, they may be labeled as Unnamed A, Unnamed B, etc.
- 2.1.4 The latitude and longitude of the activity location.
- 2.1.5 Estimate of the amount of material processed/mobilized (cubic yards total for that day).
- 2.1.6 Estimate of the amount of mercury recovered and method of disposal (include photographs).
- **2.2** Visual monitoring locations with:
- 2.2.1 Corresponding visual monitoring information, results and photographs
- 2.2.2 Corresponding visual observations of trash, and oil and grease presence or absence noted.
- 2.3 If there was no discharge during the annual reporting period, the Discharger shall submit an Annual Report indicating there was no discharge.

3. REPORTING REQUIREMENTS FOR SUCTION DREDGE MINING DISCHARGES

3.1 The Discharger shall submit an Annual Report to the State Water Board, signed and certified as required in the Standard Provisions in Attachment D of this Order, electronically to SuctionDredgeMiningNPDES@waterboards.ca.gov, or hard copy to:

State Water Resources Control Board Division of Water Quality NPDES Wastewater Permitting Unit 1001 I Street, 15th Floor Sacramento, CA 95814

3.2 In accordance with the Standard Provisions of this Order (Attachment D), the Discharger shall report all non-compliant discharge monitoring information to the applicable Regional Water Quality Control Board (See Attachment H), at the following applicable address:

North Coast Regional Water Quality Control Board 5550 Skylane Boulevard, Suite A Santa Rosa, CA 95403-1072

San Francisco Bay Regional Water Quality Control Board 1515 Clay Street Oakland, CA 94612

Central Coast Regional Water Quality Control Board 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401-7906

Los Angeles Regional Water Quality Control Board 320 West Fourth Street, Suite 200 Los Angeles, CA 90013

Central Valley Regional Water Quality Control Board 11020 Sun Center Drive, #200 Rancho Cordova, CA 95670-6114

Lahontan Regional Water Quality Control Board 2501 Lake Tahoe Boulevard South Lake Tahoe, CA 96150

Colorado River Regional Water Quality Control Board 73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260

Santa Ana Regional Water Quality Control Board 3737 Main Street, Suite 500 Riverside, CA 92501-3348

San Diego Regional Water Quality Control Board 2375 Northside Drive, Suite 100 San Diego, CA 92108-2700

ATTACHMENT F - FACT SHEET

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This Order serves as statewide Waste Discharge Requirements pursuant to Water Code, article 4, chapter 4, division 7 (commencing with section 13260). This Order is also issued as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to federal Clean Water Act section 402 and implementing regulations adopted by the United States Environmental Protection Agency, and Water Code chapter 5.5, division 7 (commencing with section 13370).

This Fact Sheet includes the rationale that serves as the basis for the requirements in this statewide NPDES permit for discharges from in-water suction dredge mining activities in waters of the United States.

1. PERMIT INFORMATION

1.1. Background

1.1.1. Activity Description

Gold, mercury, and other high-density materials in a river or stream are transported by high flows at recurrence intervals. These materials are transported with sediment and suspended load in the water body and settle in areas of the water body where larger boulders, cobbles, and gravels are prone to settle with decreasing water velocities. These materials can be subsequently buried by finer grained sediment during lower flow events. The heaviest materials eventually settle at the bedrock interface below the boulders, cobble, gravel, sand, silt, and clay that make up the active bed of a water body.

Suction dredge mining or the use of any vacuum or suction dredge equipment, as defined in the Fish and Game Code, section 5653, subdivision (g) and Water Code section 13172.5, subdivision (a), is 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. This Order regulates a subset of these activities. In this Order, the terms "suction dredge mining" and "suction dredge mining activities" only encompass motorized dredge mining activities that take place in a water body, utilize a single intake suction nozzle, and directly discharge to surface waters. Suction dredge mining may resuspend sediment, mercury, and other trace metals present in the bed of a water body, resulting in discharges that may adversely affect beneficial uses.

Standard suction dredge mining equipment consists of a motorized water pump, typically powered by a gasoline or diesel engine, a riffle/sluice box, a water intake line to supply the water pump, and a flexible vacuum line attached to the pump for excavating materials from the bed of the water body. The water pump, engine, and sluice box are typically mounted on pontoons and floated in the water body at the excavation site. The miner may use an air supply system to be able to work under water. In the past, miners have moved in-stream boulders using winches and excavated through overburden on the bed of the water body to reach the bedrock interface with suction dredge mining equipment. The water pump discharges to the front of the riffle/sluice box and creates a venturi effect at the nozzle of the vacuum line. As silt, gravel, and rocks are vacuumed up, the excavated material is discharged to the front of the riffle/sluice box where

heavier materials including gold, mercury, and other similarly dense fine-grained particles are captured in the riffles of the sluice box. Materials not captured by the riffle/sluice box, including very fine and very coarse particles, are discharged back to the water body.

1.1.2. Statutory Prohibitions

The Department of Fish and Wildlife (Department) issued an average of approximately 3,200 suction dredge mining permits annually from 1994 to 2009. In 2009, the use of vacuum or suction dredge equipment was statutorily prohibited in California in accordance with Fish and Game Code section 5653.1, subdivision (b). At the time, "suction dredge mining" was more narrowly defined in the Department's regulations as the use of a suction system to vacuum material from a river, stream or lake for the extraction of minerals. (Cal. Code Regs., tit. 14, section 228.) The current definition - the use of any 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 - became effective on January 1, 2016. This definitional change broadened the scope of the 2009 prohibition to apply to a wider variety of activities.

The Department completed a court-ordered environmental review and rulemaking effort for suction dredge mining in March 2012. (*Suction Dredge Permitting Program Subsequent Environmental Impact Report* (State Clearing House No. 2009112005).) In March 2012, the Department certified the environmental impact report, and adopted updated regulations (Cal. Code Regs., title 14, sections 228, 228.5) to implement and administer its suction dredge permitting program pursuant to Section 5653 of the Fish and Game Code. The Department concluded that:

- Significant effects on the environment had to be mitigated to the extent feasible, for purposes of the California Environmental Quality Act (CEQA).
- Certifying the environmental impact report and adopting the regulations for suction dredge mining is consistent with enabling statutory authority directing the Department to promulgate the updated regulations.

The Department concluded that the use of vacuum or suction dredge mining equipment to extract minerals results in various significant and unavoidable environmental effects, including the following water quality effects that are beyond the substantive reach of the Department in promulgating regulations:

- Resuspension and downstream transport of mercury resulting in increased methyl mercury (MeHg) formation and bioaccumulation of mercury in aquatic organisms;
- Resuspension and downstream transport of trace metals other than mercury resulting in impacts to aquatic organisms;
- Generation of turbidity; and
- Suspension and downstream transport of sediment.

Senate Bill 637 (2015), effective January 1, 2016, amended Section 5653 of the Fish and Game Code and added section 13172.5 to the Water Code, revising the definition

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of suction dredge mining and requiring that before beginning activities, any person proposing to use suction dredge equipment obtain waste discharge requirements, a waiver of waste discharge requirements, a Clean Water Act section 401 certification, or a letter from the Water Boards stating that no such permit is required from the Water Boards and a suction dredge mining permit from the Department.

Water Code, section 13172.5, subdivision (b), specifies that the Water Boards may take one or more of the following actions to protect water quality from suction dredge mining activities:

- Adopt waste discharge requirements that, at a minimum, address the water quality impacts of mercury loading to downstream reaches of surface water bodies affected by the use of vacuum or suction dredge equipment; methyl mercury formation in water bodies; bioaccumulation of mercury in aquatic organisms; and the resuspension of metals in the water column,
- Specify certain conditions or areas where the discharge of waste or other adverse impacts on beneficial uses of the waters of the state from the use of vacuum or suction dredge equipment is prohibited, or
- Prohibit any particular use of, or methods of using, vacuum or suction dredge equipment, or any portion thereof, for the extraction of minerals that the Water Boards determine generally cause or contribute to an exceedance of applicable water quality objectives or unreasonably impact beneficial uses.

1.1.3. Regulatory Background

The Federal Water Pollution Control Act (also referred to as the Clean Water Act) section 402 requires that a discharge of any pollutant or combination of pollutants from point sources to waters of the United States, with certain exceptions, be regulated by an NPDES permit. (For the purpose of this Order, the terms "waters of the United States," "surface waters," and "water bodies" are used interchangeably unless noted otherwise.) On September 22, 1989, the Unites States Environmental Protection Agency, pursuant to Code of Federal Regulations, title 40 sections 122 and 123, granted the State of California, through the State and Regional Water Boards, the authority to issue NPDES permits.

Discharges of pollutants from suction dredge mining are point source discharges required to be regulated by an NPDES permit. (*Rybachek v. United States Environmental Protection Agency* (9th Cir. 1990) 904 F.2d 1276). Code of Federal Regulations, title 40, section 122.28 provides for issuance of general permits to regulate a category of discharges if they involve the same or substantially similar types of activities; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general permit rather than individual permits. As suction dredge mining is defined by this Order, the discharges to be regulated are from substantially similar types of activities that will discharge the same type of waste, and need the same effluent and monitoring requirements, and, because of the large number of dischargers conducting such similar activities statewide, are more appropriately regulated under a general

NPDES permit. This Order requires miners in California proposing to discharge to waters of the United States to obtain regulatory coverage through enrollment in this Order prior to obtaining a Department of Fish and Wildlife permit. A prospective miner shall submit an application package to the State Water Board in accordance with section 2.3 of this Order, *Application Package Requirements*, any time after the effective date of the permit.

1.2. Discharges Authorized by this Order

This Order authorizes discharges in non-prohibited areas from suction dredge mining activities (as defined in Table 1 of this Order) in water bodies within the allowed watersheds shown in Attachment G2 of this Order, that:

- Only take place in-water,
- Utilize a single intake suction nozzle in accordance with the Department of Fish and Wildlife's regulations, and
- Directly discharge to surface waters.

1.3. Discharges Not Authorized by this Order

Discharges not described in section 1.2 above are not authorized by this Order.

This Order does not authorize suction dredge mining activities in watersheds shown in Attachment G1. Suction dredge mining activities are not authorized in:

- Watersheds that contain water bodies that are listed on the Clean Water Act 303(d)
 list as impaired for the following trace metals: cadmium, chromium III and VI, copper,
 lead, mercury, methyl mercury, nickel, silver, and/or zinc;
- Watersheds with one or more water bodies where mercury is detected above the fish tissue water quality objective, but insufficient data is available to determine whether mercury is impairing beneficial uses;
- Watersheds with one or more water bodies located in areas of historic gold mining;
- Watersheds subject to the North Coast Regional Water Quality Control Board Basin Plan point source prohibition; and
- Water bodies that are subject to year-round suction dredge mining prohibitions per the Department of Fish and Wildlife's regulations.

All discharges that meet the definition of suction dredge mining in section 5653 of the Fish and Game Code and section 13172.5 of the Water Code are subject to Fish and Game Code section 5653's requirement to obtain waste discharge requirements, a waiver of waste discharge requirements, a Clean Water Act section 401 certification, or a letter from the Water Boards stating that no such permit is required. Generally, a federal NPDES permit – which constitutes waste discharge requirements when issued by the Water Boards – is required for discharges of pollutants from point sources to waters of the United States; waste discharge requirements or waivers of waste discharge requirements are required for discharges of waste from nonpoint sources, or discharges of waste that may affect only non-federal waters of the state, including

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groundwater; and, Clean Water Act section 401 certifications are required when a federal agency plans to issue a permit or license to conduct any activity that may result in a discharge to waters of the United States, including Clean Water Act section 404 permits issued by the United States Army Corps of Engineers.

This Order is an NPDES permit that provides regulatory coverage for discharges from motorized dredge activities that take place in a water body, utilize a single intake suction nozzle, and directly discharge to surface waters (referred to as "traditional" suction dredge mining). Traditional suction dredge equipment is considered to be a point source and most traditional suction dredge mining activities occur in, or upstream of, waters of the United States. In addition, the activities and the water quality impacts associated with traditional suction dredge mining are generally similar. Other forms of suction dredge mining, as statutorily defined, are highly variable. Many of these other forms of suction dredge mining could affect waters of the state, either at the time of the activities, or later, due, for example, to infiltration, a hydrologic connection to surface waters of the state, future precipitation events, or future high flows in a surface water body, depending on the type of activity and the location where it is conducted.

This Order does not provide regulatory coverage for discharges from other forms of suction dredge mining because permitting determinations will be location- and activity-specific. Anybody who intends to conduct any type of suction dredge mining that is not covered by this Order must contact the appropriate Regional Water Board to determine the necessary Water Board permit coverage. If the Regional Water Board determines that the proposed suction dredge mining activity will not affect the quality of any waters of the state, it will respond with a letter stating that no Water Board permit is required. Please note that, in all cases, a Discharger must also obtain a permit from the Department of Fish and Wildlife prior to commencing suction dredge mining activities.

2. APPLICATION REQUIREMENTS

2.1. General Order Application

A prospective miner applying for coverage under this General Order must submit a complete application package, including a Notice of Intent (Attachment B1) and Best Management Practices (Attachment B2) of this Order any time after the effective date of the Order and receive approval of the application through issuance of a Notice of Applicability before seeking to obtain a suction dredge mining permit from the Department of Fish and Wildlife. A miner planning to mine in multiple locations needs to submit one complete application package listing all proposed mining locations. Regulatory coverage under this permit (for identified locations in the application package) commences with the Deputy Director of Water Quality issuance of a Notice of Applicability, of the application package (or application amendment). The complete application package must, at minimum, include the following information:

- A complete Notice of Intent application (Attachment B1),
- A site map providing information regarding the location of the proposed mining activities and the affected water bodies,

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- An application fee payable to the State Water Resources Control Board, and
- Description of site-specific best management practices (Attachment B2) proposed to be implemented to comply with this Order.

If a Discharger proposes to mine in locations not identified in the originally approved application, the Discharger must submit a revised Notice of Intent (Attachment B1) and receive an amended Notice of Applicability from the Deputy Director of Water Quality prior to suction dredge mining at the new locations. An additional application fee is not required for an amended application package.

If a proposed discharge in an application package is determined to be ineligible for coverage under this Order, the Deputy Director of Water Quality will provide a response to the applicant outlining the reasons the proposed discharge is not eligible for coverage under this Order.

2.2. Permit Coverage Termination

The Deputy Director of Water Quality may terminate coverage under this Order for any of the following reasons:

- Violation of any requirements, prohibitions, or provisions of this Order.
- Misrepresentation or failure to disclose all relevant facts in obtaining regulatory coverage under this Order.
- Submittal of a Notice of Termination, Attachment C, by a Discharger to terminate enrollment because the permit is no longer needed.

3. LEGAL AUTHORITIES

This Order serves as Waste Discharge Requirements pursuant to Water Code article 4, chapter 4, division 7 (commencing with section 13260). This Order is also issued pursuant to federal Clean Water Act section 402 and implementing regulations adopted by United States Environmental Protection Agency, and Water Code chapter 5.5, division 7 (commencing with section 13370). It shall serve as an NPDES permit for discharges from suction dredge mining activities into waters of the United States.

This Order authorizes discharges to surface waters and includes requirements and provisions to protect beneficial uses of these surface waters. The requirements contained in this Order are based on the applicable statewide and regional plans, policies, and regulations identified in the Findings of this Order. The Regional Water Quality Control Boards have adopted Basin Plans that designate beneficial uses of water bodies, establish surface water and groundwater objectives to protect the beneficial uses of a water body, and contain implementation programs and policies to achieve those objectives.

Regional Water Board Basin Plans can be viewed at each Regional Water Board's website as shown below:

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- North Coast Regional Water Quality Control Board.
 (https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/basin_plan_documents/)
- <u>San Francisco Bay Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html#basinplan)
- <u>Central Coast Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/)
- <u>Los Angeles Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/)
- <u>Central Valley Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans)
- <u>Lahontan Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.html)
- <u>Colorado River Regional Water Quality Control Board</u>. (https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/)
- <u>Santa Ana Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index .html)
- <u>San Diego Regional Water Quality Control Board</u>.
 (https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index .html)

4. CLEAN WATER ACT SECTION 303(D) LIST

This Order incorporates prohibition requirements to discharges from suction dredge mining activities in water bodies that are listed on the Clean Water Act section 303(d)-list for mercury and the trace metals: cadmium, chromium III and VI, copper, lead, nickel, silver, and zinc.

Section 303(d) of the Clean Water Act requires states, territories, and authorized tribes to develop lists of water quality-impaired segments. Impaired waters are those waters not meeting water quality standards pursuant to section 303(d) and that do not support beneficial uses. States must also prioritize the water bodies on the list and develop action plans, called total maximum daily loads, to improve water quality.

The United States Environmental Protection Agency approves California's Water Quality Integrated Report and supporting documentation pursuant to Clean Water Act sections 303(d) and 305(b). The Regional Water Board Basin Plans reference the sections of lakes, streams, rivers or other freshwater bodies where water quality does not meet (or is not expected to meet) water quality standards. (Code of Federal Regulations, title 40, section 130.2(j).)

California's updated Clean Water Act section 303(d) list for impaired waters is located at the following website: California's Impaired Water Bodies
California's Impaired Water Bodies
Chitps://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.sht
Chitps://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.sht

5. COST OF COMPLIANCE

In 2013, the State Water Board adopted Resolution 2013-0029, resolving to reduce the cost of permit compliance while maintaining water quality. The State Water Board commits to continued stakeholder engagement in identifying and implementing measures to reduce costs of compliance while maintaining water quality protection and improving regulatory program outcomes. The State Water Board considered the cost of compliance with this Order as follows:

- Not requiring dischargers to pay an annual fee for continued permit coverage throughout the term of this Order
- Not requiring site-specific analytical water quality sampling and analysis for each mining activity.
- Requiring low-cost visual monitoring in place of analytical monitoring
- Requiring a minimum level of annual reporting.

The burden and cost of preparing reports are reasonable and consistent with the interest of the State in protecting water quality. The State Water Board will use a portion of the permit fees collected for coverage under this Order towards monitoring of mined water bodies through its Surface Water Ambient Monitoring Program or other regional monitoring programs. Results from regional monitoring will assist the State Water Board to further assess water quality in water bodies that the State Water Board authorizes in this order.

6. ANTIDEGRADATION

Code of Federal Regulations, title 40, section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where it applies. Resolution 68-16 requires that existing high-water quality be maintained unless degradation is justified based on specific findings. The State Water Board and Regional Water Boards' water quality control plans implement, and incorporate by reference, both the state and federal antidegradation policies. The permitted discharges must be consistent with the antidegradation provisions of section 131.12 and State Water Board Resolution 68-16.

To ensure discharges from suction dredge mining activities do not degrade water quality, this Order prohibits discharges in water bodies that the State Water Board has determined suction dredge mining may cause adverse impacts to beneficial uses. This Order requires Dischargers to implement best management practices, and monitor and report any impacts due to suction dredge mining activities.

The State Water Board finds that, due to the intermittent and seasonal characteristics of suction dredge mining discharges, the impact of discharges (in compliance with this Order) on existing surface water quality will be insignificant. The State Water Board finds that the temporary water quality degradation in the immediate vicinity of suction dredge mining activities (as allowed in this Order), is consistent with the maximum social and economic benefit of the people of the state, provided that the discharges comply with this Order. Therefore, the discharges permitted under this Order are consistent with the antidegradation provision of section 131.12 and the State Water Board Resolution 68-16.

7. MONITORING AND REPORTING REQUIREMENTS FOR SUCTION DREDGE MINING DISCHARGERS

Code of Federal Regulations, title 40, section 122.48, requires that all NPDES permits specify requirements for recording and reporting monitoring results. Section 13383 of the Water Code authorizes the Regional Water Boards to require dischargers to submit technical and monitoring reports. The Monitoring and Reporting Program in Attachment E of this Order establishes monitoring, recordkeeping, notification, and reporting requirements to implement State and federal requirements.

The State Water Board typically requires NPDES monitoring requirements that include sampling and lab analysis. It is not feasible or practicable for Dischargers to properly conduct sampling and monitoring per the Environmental Laboratory Accreditation Program (ELAP) requirements; therefore the State Water Board staff will use a portion of the application fee collected under this Order to conduct regional monitoring through its Surface Water Ambient Monitoring Program or other established programs.

This Order requires visual monitoring at each suction dredge mining location for the Discharger to evaluate impacts to water quality from discharges associated with its suction dredge mining activity. This Order also requires annual reporting of suction dredge mining activities, mandatory recordkeeping, reporting of estimated annual amounts of mercury disposed and captured, and estimates of material processed and remobilized in surface waters.

8. TRIBAL CONSULTATIONS

Governor Edmund G. Brown signed Executive Order B-10-11 on September 19, 2011, which states that "every state agency and department subject to my executive control shall encourage communication and consultation with California Indian Tribes.

Agencies and departments shall permit elected officials and other representatives of

tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities."

To comply with the Executive Order B-10-11, the State Water Board adopted the Tribal Consultation Policy, which affirms the Water Boards' continued commitment to communicate and consult with California Native American Tribes and provide opportunity for meaningful input into the development of legislation, regulations, rules, and policies on matters that may impact tribal communities.

In 2017, State Water Board staff conducted five public outreach workshops throughout the state; one workshop was conducted in Orleans to specifically accommodate input from Native American tribal representatives in northern California. State Water Board staff continued focused meetings with the California Native American Tribal representatives throughout the development of this Order. Representatives of the Karuk tribe provided input regarding pre-project notification requirements to tribes, to avoid impacts to Native American Culture and Tribal Subsistence Fishing beneficial uses in water bodies with permitted suction dredge mining activities. Consequently, this Order requires a Discharger to provide a 30-day pre-mining notification to corresponding tribal representatives prior to the proposed mining activities.

9. RATIONALE FOR PROHIBITIONS

Attachment G1 of this Order specifies watersheds in California with water bodies in which the State Water Board prohibits discharges from suction dredge mining for water quality protection purposes, as described below. The watersheds in Attachment G1 were delineated by the United States Geological Survey using a national standard hierarchical system based on surface hydrologic features and are classified into the following hydrologic unit codes (also known as HUC):

- First level is a 2-digit HUC, which represents a region;
- Second level is a 4-digit HUC, which represents a sub-region;
- Third level is a 6-digit HUC, which represents an accounting unit;
- Fourth level is an 8-digit HUC, which represents a cataloguing unit;
- Fifth level is a 10-digit HUC, which represents a watershed; and
- Sixth level is a 12-digit HUC, which represents a sub-watershed.

9.1. Prohibition of Discharge to Watersheds with Impaired Water Bodies

Pursuant to Clean Water Act sections 303(d) and 305(b) (33 United States Code sections 1313(d) and 1315(b)), states are required to report to the United States Environmental Protection Agency on the overall quality of the waters of the United States within their state. The "303(d) List" is the list of a state's impaired waters. A water body is 303(d)-listed for a specific pollutant when the water body is impaired for that pollutant because it does not meet applicable water quality standards. Discharges that would contribute to increases in concentrations of pollutants for which a water body is impaired are prohibited and may only be authorized so long as the discharge is treated to the point it meets the applicable water quality standard.

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Various studies have been conducted to evaluate the water quality impacts of suction dredge mining. A study was performed in 1997 and 1998 to assess the possible impacts of suction dredge mining on water quality, benthic habitat, and biota in the Fortymile River and Resurrection Creek, Alaska. (Todd V. Royer, et al., Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska, April 1999.) This study indicated that levels of dissolved trace metals (specifically copper and zinc) downstream of the suction dredge mining were greater than upstream of the suction dredge mining. This study confirmed that suction dredge mining activities cause sediment-bound metal to be released in dissolved form into the water column, increasing the dissolved metals concentrations in the water body.

Due to the nature of the suction dredge activities, treatment of discharges (including the release of sediment bound pollutants into the water column) prior to discharge into the receiving waters is not feasible. Pollutant concentration increases in the water column of an impaired water body adds to the water body impairment; the State Water Board cannot authorize further discharge of pollutants that do not meet applicable water quality standards.

A second study conducted by the United States Geological Survey during 2011 and 2012 collected environmental mercury data to analyze the factors that control mercury concentrations in fish tissue in the Sierra Nevada foothills. (United States Geological Survey, Geochemical Data for Water, Streambed Sediment, and Fish Tissue form the Sierra Nevada Mercury Impairment Project, 2011-12.) The United States Geological Survey collected water, sediment, and fish tissue samples from 24 locations in the Sierra Nevada foothills. The United States Geological Survey report, published in 2018, identified two main points regarding mercury and sediment: 1) High levels of mercury (as high as 1,410 nanograms per gram) are found in the very fine sediments or suspended particulates of less than 0.063 millimeters, and 2) there is a higher ratio of monomethyl mercury to total mercury in the very fine suspended sediment. This report provides evidence that methyl mercury is forming in the Sierra Nevada streams and can be found in the extremely fine sediment, and any disturbance caused by suction dredge mining activities has the potential to make mercury and methyl mercury available in the water column and in suspended material and mobilize the sediment-bound mercury to downstream water bodies.

Based on these findings and because suction dredge mining discharges cannot feasibly be treated to remove metals, this Order establishes a prohibition of suction dredge mining activities in Clean Water Act section 303(d)-listed water bodies impaired for mercury and methyl mercury and the hardness dependent toxic metals cadmium, copper, chromium III, chromium VI, lead, nickel, silver, and zinc. To prevent water quality impacts to impaired water bodies, this Order expands the prohibition to watersheds that contain such impaired water bodies.

9.2. Prohibition of Discharges Per Department of Fish and Wildlife Year-round Prohibition

The Department of Fish and Wildlife promulgated regulations in California Code of Regulations, title 14, sections 228 and 228.5 to implement Fish and Game Code, section 5653. Section 228.5 establishes suction dredge use restrictions in California lakes, reservoirs, streams, and rivers. Class A use restriction consists of water bodies in which no suction dredge mining is permitted at any time. This Order prohibits discharges from suction dredge mining in Class A water bodies identified in California Code of Regulations, title 14, section 228.5.

9.3. Prohibition of Discharges in Watershed with Historic Gold Mines

Historically, miners used mercury to recover gold throughout the western United States at both placer and hardrock mines. The majority of mercury lost to the environment in California was from placer-gold mines, which used hydraulic, drift, and dredging methods. At hydraulic mines, placer ores were broken down with monitors or water cannons and the resulting slurry was directed through sluices and drainage tunnels where gold particles combined with liquid mercury to form gold-mercury amalgam. The rate of mercury loss in this process was 10 to 30 percent per season (Bowie, A. J.,1905, A practical treatise on hydraulic mining in California: New York, Van Nostrand, 313p), resulting in highly contaminated sediments at mine sites.

Elevated present-day mercury concentrations in the waters and sediments at these areas of historic gold mining indicate that hundreds to thousands of pounds of mercury remain at each of the many sites affected by hydraulic mining. High mercury levels in fish, amphibians, and invertebrates downstream of the hydraulic mines are a consequence of the historic mercury use. The United States Geological Survey, in an effort to assess the extent of mercury contamination from historic hydraulic gold mining, conducted a study in 1999 in the upper Bear River watershed. (Michael P. Hunerlach et al, Mercury Contamination from Hydraulic Placer-Gold Mining in the Dutch Flat Mining District, California (1999) United States Geological Survey Water-Resources Investigations, Report 99-4018B, p. 179-189.) The study found extremely high mercury concentrations in the water and sediment, demonstrating a positive correlation between mercury bioaccumulation and the intensity of historic hydraulic gold mining in the Sierra Nevada.

9.4. Prohibition of Discharges to Watersheds that Include Water Bodies with Detected Mercury Concentrations above the Fish Tissue Water Quality Objective

Pursuant to Clean Water Act sections 303(d) and 305(b) (33 United States Code sections 1313(d) and 1315(b)), states are required to report to the United States Environmental Protection Agency on the overall quality of the waters of the United States within their states. While the 303(d) List focuses on impaired water bodies, in the "305(b) Report," states report on the health of all the waters of the United States within their states. The United States Environmental Protection Agency encourages states to combine the 303(d) List and the 305(b) Report, referred to in California as the "Integrated Report." States are required to submit their 303(d) Lists and 305(b) Reports every two years.

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The Integrated Report includes water bodies which have been assessed for compliance with water quality standards. The data per the current 2014 and 2016 Integrated Reports, includes water bodies assessed for mercury with detected levels above the fish tissue water quality objective, but not yet assessed whether the water body is impaired. In addition, staff considered more recent data submitted into the California Data Exchange Network with detected levels of mercury above the fish tissue water quality objectives.

Suction dredge mining activities cause the resuspension of material including mercury and methyl mercury. Methyl mercury has been found to form in very fine sediment. Allowing discharges from suction dredge mining activities in water bodies containing mercury and methyl mercury concentrations above the fish tissue water quality objectives would accelerate the mobilization of mercury and methyl mercury to downstream water bodies where further methylation (the conversion of mercury to methylmercury) can occur. With caution to minimize further water quality impairment associated with mercury bio accumulation, this Order prohibits suction dredge mining in watersheds with waterbodies where mercury is detected above fish tissue water quality objectives, and in which there is insufficient information to determine whether mercury is impairing beneficial uses.

Statewide NPDES permits typically place the requirement on the Discharger to monitor for the Reasonable Potential Analysis to determine if a discharge will cause or contribute to an exceedance of a water quality objective. Due to the nature and remote location of the activity resulting in the discharges, and the Dischargers being private individuals, it is not reasonable to expect each Discharger to conduct the required "clean hands" sampling techniques necessary to determine if their mercury discharges will potentially impact beneficial uses. Therefore, this Order prohibits discharges in waterbodies where mercury has been detected above the fish tissue water quality objective, but there is not sufficient information to determine whether or not the waterbody should be listed as impaired. The proposed prohibition provides miners and other interested parties an opportunity to work with the Water Boards to establish organized monitoring that brings forth further information regarding the regulation of suction dredge mining in the subject waterbodies

9.5. Prohibition of Discharges to Watersheds per the North Coast Regional Water Quality Control Board Basin Plan point source prohibition

Section 13243 of the Porter-Cologne Water Quality Control Act authorizes a Regional Water Board to specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted. Under this authority and in order to achieve water quality objectives, protect present and future beneficial water uses, protect public health, and prevent nuisance, the North Coast Regional Water Quality Control Board adopted in its Basin Plan, under Chapter 4, section 4.1.1., a point source waste discharge prohibition that applies to the surface waters of the entire region except:

- The lower Lost River system within the Klamath River Basin, and
- The Mad River, Eel River, and the Russian River and their tributaries within the North Coastal Basin.

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In the Mad River, Eel River, and the Russian River and their tributaries, the point source discharge of waste is prohibited during the period of May 15 through September 30 and all times when the waste discharge flow exceeds one percent of the receiving water's flow.

These prohibitions apply unless the North Coast Regional Water Board makes an exception. The North Coast Regional Water Board can provide an exception through an individual NPDES Permit based on a site-specific evaluation that the discharge is a low threat discharge or through a regional general NPDES permit designed to ensure that all discharges in compliance with the permit constitute low threat discharges.

This Order regulates the location of suction dredge mining discharges on a watershed basis. This Order prohibits suction dredge mining discharges in all watersheds under the North Coast Regional Water Quality Control Board in accordance with the Basin Plan point source prohibition, except in the lower Lost River system and in the Mad River, Eel River, and Russian River and their tributaries when neither the seasonal nor flow level prohibitions are in effect.

Additionally, independent of this Basin Plan prohibition, due to other established prohibitions, suction dredge mining is prohibited in all watersheds in the North Coast Region.

10. RATIONALE FOR DISCHARGE SPECIFICATIONS

The Clean Water Act requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. This Order requires dischargers to control the discharge of pollutants during suction dredge mining activities through best management practices for compliance with the following applicable water quality objectives.

10.1. Water Quality Objectives.

Basin Plans specify various narrative and numeric water quality objectives, including the maximum contaminant levels in California Code of Regulations, title 22. Typical narrative objectives most relevant to this Order are listed below:

- 10.1.1. **Toxicity.** The toxicity objective typically states, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." Suction dredge mining activities may add toxicity to the receiving water by increasing the metals concentrations in the water column since the activity disturbs or resuspends sediment, releasing metals into the water phase.
- 10.1.2. Sediment and Suspended Material. Sediment objectives in Basin Plans vary; however, the Basin Plans typically provide a narrative objective such as, "The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses." This Order requires implementation of appropriate best management practices to minimize/eliminate nuisance due to resuspension of sediment in the water body.

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- 10.1.3. **Turbidity**. Turbidity objectives in Basin Plans vary; some objectives are fixed numeric objectives while other objectives are expressed as a narrative objective such as, "Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU." Suction dredge mining activities not addressed by appropriate best management practices may cause a nuisance due to increased turbidity in the water body.
- 10.1.4. California Toxic Rule Criteria. The California Toxics Rule specifies numeric aquatic life and human health criteria for 126 priority pollutants. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." The priority pollutants of concern related to suction dredge mining activities are the toxic metals with hardness dependent criteria for protection of aquatic life: cadmium, chromium III and VI, copper, lead, nickel, silver, and zinc. The priority pollutant of concern due to human health impacts is the bio-accumulative metal mercury. Suction dredge mining activities can have impacts on aquatic life as well as human health as they can release toxic metals and mercury into the water column by processing water body bed material through the suction dredge equipment. This Order requires implementation of appropriate best management practices to ensure protection of human health and the environment.

10.2. Water Quality-Based Effluent Limitations

According to Code of Federal Regulations, title 40, section 122.44(d)(1)(i), NPDES permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard.

There are 126 priority pollutants in the California Toxics Rule for which reasonable potential can be conducted based on data available. The process for determining reasonable potential per the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, is intended to establish effluent limitations for discharges to comply with applicable water quality objectives established to protect designated beneficial uses of receiving waters.

Suction dredge mining discharges authorized under this Order are specifically limited to in-water suction dredge mining activities in water bodies where data is not available to indicate the presence of mercury or other trace metals. This Order does not contain specific numeric water quality-based effluent limitations, but contains a narrative effluent limitation that specifies suction dredge mining activities shall not cause or contribute to an exceedance of a water quality objective. Water quality data is not available in the water bodies authorized under this Order for suction dredge mining to indicate exceedances of water quality standards for trace metals or mercury. The State Water Board finds that it is not feasible to establish numeric water quality-based effluent limits for protection of beneficial uses of receiving waters. Therefore, this Order requires best management practices be implemented to ensure protection of water quality standards.

11. TECHNOLOGY-BASED EFFLUENT SPECIFICATIONS AND EFFLUENT LIMITATIONS

Clean Water Act section 301(b) and Code of Regulations, title 40, section 122.44 require that permits include conditions meeting technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet water quality standards. The Clean Water Act requires the United States Environmental Protection Agency to develop effluent limitations guidelines and standards representing application of best practicable treatment control technology, best available technology economically achievable, best conventional pollutant control technology, and best available demonstrated control technology for new sources or new source performance standards. Clean Water Act section 402(a)(1) and Code of Federal Regulations, title 40, section 125.3 authorize the use of best professional judgment to derive technology-based requirements and effluent limitations on a case-by-case basis when effluent limitations guidelines are unavailable.

The State Water Board finds that the technology-based effluent limitations in Regional Water Board Basin Plans apply to discharges that are continuous in nature and contain "wastes." This Order regulates intermittent and seasonal discharges of suction dredge mining activities that are short-term. Therefore technology-based effluent limitations are not included.

12. BEST MANAGEMENT PRACTICES

In the absence of established Effluent Limit Guidelines, it is the United States Environmental Protection Agency and State Water Board's best professional judgement that best management practices be established to minimize the environmental impacts of suspended solids or turbidity in discharges from suction dredge mining. Best management practices are measures that are intended to prevent or minimize the generation and the potential for the release of pollutants from facilities or an activity to the waters of the United States.

The State Water Board finds that responsible controls and practices conducted during suction dredge mining activities can prevent and minimize water quality impacts associated with these activities. Therefore, this Order requires a Discharger to implement and report best management practices as specified in this Order. The Discharger shall modify its best management practices as necessary to maintain compliance with the requirements of this Order. If monitoring results or other available information demonstrates that the discharge is not in compliance, the Discharger shall determine the source of non-compliance, and develop and implement new or revised best management practices as necessary.

This Order requires the Discharger to validate the effectiveness of any new or revised best management practices to comply with the requirements of this Order. All non-compliance and corresponding corrective actions to address non-compliance are required to be reported to the State Water Board in the Discharger's Annual Report. The Discharger is required to maintain a documented log of all implemented best

management practices for its suction dredge mining activities, and have the documentation available to Water Board staff upon request.

13. RATIONALE FOR RECEIVING WATER LIMITATIONS

This Order includes receiving water limitations established in accordance with federal and state water quality standards in statewide water quality control plans and policies, and Regional Water Board Basin Plans.

14. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Code of Federal Regulations, title 40, section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code, section 13383 authorizes the Water Boards to require a discharger to submit monitoring reports. Attachment E of this Order establishes monitoring, recordkeeping, and reporting requirements applicable to discharges from suction dredge mining activities. The following discussion provides the rationale for this Order's monitoring and reporting requirements in accordance with federal and state regulations and policies.

14.1. Receiving Water Monitoring

To assess the effectiveness of the best management practices and to minimize impacts to water quality, this Order requires visual monitoring for the following parameters:

- Turbidity this Order includes visual monitoring for turbidity at 500 feet downstream
 of the activity to ensure the suction dredge mining activity does not increase
 turbidity above background levels. If the turbidity plume continues to be visible
 beyond 500 feet, the activity should stop until water quality returns to background
 levels.
- Oil and grease sheens To ensure suction dredge mining equipment has been properly operated and maintained and prevent oil or grease leaks at any time while conducting suction dredge mining, this Order requires oil and grease visual monitoring in the water body surrounding the suction dredge mining equipment.
- Trash To ensure cleanliness of the activity area and to ensure all individuals
 participating in the suction dredge mining activity are following appropriate best
 management practices, this Order requires visual monitoring for trash at the area
 surrounding the suction dredge mining activity and within 500 feet downstream of
 the suction dredge mining activity.

Receiving water monitoring requirements have been established in this Order to provide the information necessary for: (1) the Discharger to make informed decisions regarding the implementation of effective management practices, and (2) the State Water Board to determine compliance with effluent specifications and limitations.

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14.2. Reporting and Recordkeeping Requirements

- 14.2.1. This Order requires the Discharger to maintain annual monitoring reports, including compliant and non-compliant discharge monitoring information, and to submit these to the State Water Board.
- 14.2.2. Monitoring periods and reporting for all required monitoring shall be completed according to the schedule in Attachment E.
- 14.2.3. This Order requires the Discharger to arrange and summarize any reported numerical data in a tabular format.
- 14.2.4. If the Discharger monitors any parameter more frequently than required by this Order, the results of this monitoring shall be included in the Annual Report.
- 14.2.5. This Order requires the Discharger to report, by March 1 of every year, all discharge monitoring information for the past calendar year. All non-compliant discharge monitoring information shall be accompanied by a description of the corrective actions the Discharger has taken to return the discharge to compliance. Identified non-compliance must include a description of the violated requirement and a description of the violation.

14.3. Increase in Monitoring Requirements

The Deputy Director of Water Quality may modify the monitoring and reporting requirements at any time to ensure the protection of the beneficial uses of the water body. The modified requirements will be based on site-specific data or information indicating that a site-specific discharge threatens to cause or contribute to an exceedance of a receiving water quality criteria or objective.

At any time during the term of this permit, the Deputy Director of Water Quality may direct Dischargers to electronically submit monitoring reports through the <u>State Water Board California Integrated Water Quality System (CIWQS) Project web page</u>. (https://www.waterboards.ca.gov/ciwqs/index.html). Until such time, each Discharger shall submit electronically as a single pdf file to <u>SuctionDredgeMiningNPDES@waterboards.ca.gov</u> or a hard copy of its monitoring reports to the State Water Board.

15. RATIONALE FOR STANDARD PROVISIONS

Standard Provisions, which apply to all NPDES permits in accordance with Code of Federal Regulations, title 40, section 122.41, and additional conditions applicable to specified categories of permits in accordance with Code of Federal Regulations, title 40, section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions applicable under Code of Federal Regulations, title 40, section 122.42.

Code of Federal Regulations, title 40, section 122.41(a)(1) and (b) through (n) establishes conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order.

Code of Federal Regulations, title 40, section 123.25(a) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with Code of Federal Regulations, title 40, part 123.25, this Order omits federal conditions that address enforcement authority specified in Code of Federal Regulations, title 40, section 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code, section 13387, subdivision (e).

16. PUBLIC PARTICIPATION

Water Code, section 13172.5, subdivision (c) required the State Water Board to hold public workshops in San Bernardino, Fresno, Sacramento, and Redding for outreach to the public generally, as well as mining groups, environmental organizations, and California Native American tribes prior to taking any permitting action. In addition to the public workshops, the State or Regional Water Board must conduct at least one public hearing pursuant to, and compliant with, the Bagley-Keene Open Meeting Act. (Water Code, section 13172.5, subdivision (c)(2).)

Between January 17, 2017 and February 6, 2017, the State Water Board conducted workshops in San Bernardino, Fresno, Sacramento, and Redding, as required by the Water Code, and one additional workshop in Orleans, to accommodate input from Native American tribal representatives in northern California. Staff established a webpage with answers to frequently asked questions regarding suction dredge mining. The webpage also describes how interested persons and parties may subscribe to an email notification list to receive periodic updates, including notification of any future public workshops. The State Water Board's webpage is available at: National Pollutant Discharge Elimination System (NPDES) Suction Dredge Mining. (https://www.waterboards.ca.gov/water_issues/programs/npdes/suction_dredge_mining .html).

16.1. Notification of Interested Parties

The State Water Board notified interested agencies, parties, and persons of its intent to consider adoption of this Order. Notification was provided through the State Water Board Lyris email system and through notification to associated trade associations and nongovernmental organizations. A draft Order was issued for public comment and review on XXXX XX, 202X. Interested persons were invited to submit written comments to the State Water Board by noon on XXXX XX, 20XX.

The State Water Board held a public hearing on XXXX XX, 202X, and subsequently adopted this Order on XXXX XX, 202X.

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16.2. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order must register on the Suction Dredge Mining Lyris Email System at the <u>State</u> Water Resources Control Board Email Lists

(https://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.html) by entering name and email address and selecting under 'Water Quality', the topic of 'Suction Dredge Mining'.

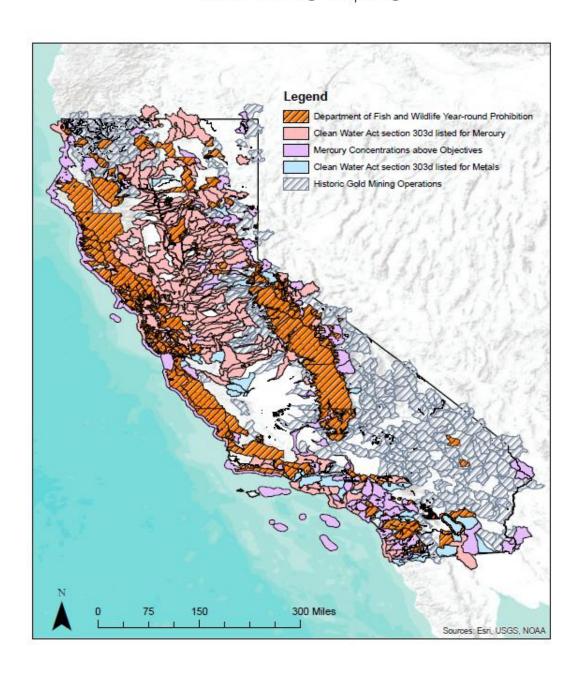
16.3. Additional Information

Requests for additional information or questions regarding this Order should be directed to the State Water Board, at SuctionDredgeMiningNPDES@waterboards.ca.gov.

ATTACHMENT G1 – MAP OF WATERSHEDS PROHIBITED FOR SUCTION DREDGE MINING

The following Map illustrates watersheds in California with water bodies in which the State Water Board prohibits discharges from suction dredge mining.

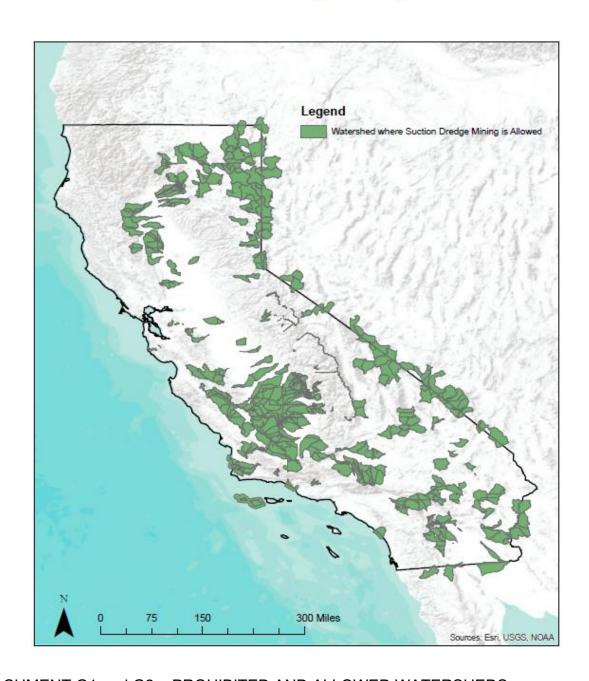
California HUC10 Watersheds With Existing or Proposed Prohibitions of Suction Dredge Mining



ATTACHMENT G2 – MAP OF WATERSHEDS PERMITTED FOR SUCTION DREDGE MINING

The following Map illustrates watersheds in California where the State Water Board permits discharges from suction dredge mining in accordance with this Order.

California HUC10 Watersheds With Existing or Proposed Prohibitions of Suction Dredge Mining



ATTACHMENT H - MAP OF THE REGIONAL WATER QUALITY CONTROL BOARDS

To find the Regional Water Board for a particular location, click on the map or enter a street address at the following website: <u>State and Regional Water Boards</u>.



ATTACHMENT H H-1

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ATTACHMENT H H-2