



Fact Sheet

Frequently Asked Questions

CONCERNING POTENTIAL WATER BOARD ACTIONS TO PROTECT WATER QUALITY FROM SUCTION DREDGE MINING DISCHARGES

The following information provides answers to frequently asked questions related to suction dredge mining, current permit requirements, water quality concerns, and potential Water Board regulatory actions.

What is suction dredge mining?

California Water Code section 13172.5, subdivision (a), defines suction dredge mining 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."* This does not include non-motorized recreational mining activities, including panning for gold.

Do I need Water Board approval to operate a suction dredge?

Suction dredge mining is prohibited unless permitted by the California Department of Fish and Wildlife. Unless the application includes a permit or waiver from the State Water Board or the appropriate Regional Water Board (Fish & Game Code, § 5653, subdivision (b)(1).), the California Department of Fish and Wildlife may not issue a permit.

Can I get a permit from the Water Boards now to operate a suction dredge?

At this time, the Water Boards do not offer a permit for suction dredge mining. As required by California Water Code section 13172.5, subdivision (c)(1), State Water Board staff conducted public workshops in San Bernardino, Fresno, Sacramento, Redding, and Orleans, to solicit stakeholder input prior to the Water Boards selecting an appropriate regulatory mechanism. The Water Boards are evaluating potential options for regulating suction dredge mining in a manner that protects water quality. To receive notice of future public workshops and other communications from the State Water Board regarding suction dredge mining, subscribe to the appropriate email notification list by following the link below, choosing the Water Quality list, and selecting "Suction Dredge Mining":

http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml



When will the State Water Board propose an action?

State Water Board staff tentatively proposes to release a draft of a proposed permit for public comment in Fall 2019.

What are the potential actions the Water Boards may take to protect water quality from suction dredge mining?

California Water Code section 13172.5, subdivision (b), specifies that the Water Boards may take any of the following actions, or a combination of the following actions, to protect water quality from the impacts of suction dredge mining:

- 1) Adopt a suction dredge mining permit that addresses the water quality impacts of suction dredge mining;
- 2) Prohibit suction dredge mining in specified conditions or areas to protect water quality; or
- 3) Prohibit any use of, or method of using, suction dredge mining equipment, or any portion thereof, for the extraction of minerals to protect water quality.

How can I provide input into the content and scope of the State Water Board's potential actions?

The State Water Board solicited stakeholder input on actions to take to address water quality impacts from suction dredge mining, by conducting staff workshops in San Bernardino, Fresno, Redding, and Orleans in January 2017, and Sacramento in February 2017. Interested parties had the opportunity to submit written comments and recommendations to State Water Board staff by the due date of Tuesday, February 28, 2017. State Water Board staff is tentatively scheduled to release a draft proposed permit for public comment in Fall 2019. Interested persons will have an opportunity to: 1) provide written comments, 2) participate in a staff workshop at which staff will provide information and respond to technical questions regarding the draft proposed permit, and 3) provide oral comments directly to the State Water Board during a State Water Board public hearing.

Do I need any permits from other agencies?

The California Department of Fish and Wildlife is the primary permitting authority for this activity. Please see the following website for more information:

<https://www.wildlife.ca.gov/Licensing/Suction-Dredge-Permits>

If the State Water Board decides to adopt a permit, who can apply for coverage?

Any person who is seeking regulatory coverage under a Water Board permit to obtain a Department of Fish and Wildlife suction dredge mining permit can apply. However, no details regarding any regulatory actions are definite until the State Water Board takes a formal action at a Board meeting.

If the State Water Board decides to adopt a permit, what will be required to apply?

The State Water Board will determine the applicability of and requirements for a permit once the State Water Board receives and consider all preliminary public input during the public hearing

regarding the draft permit in Fall 2019. In general, a Water Board permit may require the following:

- Completion of an application from the proposed discharger;
- An application filing fee;
- A plan (including maps) describing the location and description of the proposed activities to be covered by the permit;
- Implementation of best management practices;
- Compliance with prohibitions, water quality discharge limits, and applicable provisions; and
- Monitoring and reporting.

If the State Water Board decides to adopt a permit, will there be a fee? How much?

If the State Water Board adopts a permit, the fee will be determined as the permit is developed in accordance with the California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1, Section 2200, titled Annual Fee Schedules. The current Fiscal Year 2018-2019 Fee Schedule may be viewed at:

https://www.waterboards.ca.gov/resources/fees/water_quality/docs/fy1819_fee_schedule.pdf

If the State Water Board adopts a permit, what suction dredge mining activities would be allowed?

The State Water Board will determine what suction dredge mining activities would be allowed once all public comments are considered, but that determination will not be finalized until a permit is formally adopted.

What is known and what are the information gaps with respect to potential water quality impacts from suction dredge mining?

Water Board staff is evaluating available information on potential water quality impacts from suction dredge mining. Information suggests:

- 1) The effects of suction dredge mining on turbidity and suspended sediment concentrations are not limited to the area immediately downstream of suction dredge mining;
- 2) Fine particles in sediment in historic gold mining regions have been shown to contain at least an order of magnitude higher concentration of mercury than larger size fractions and potentially travel to downstream environments;
- 3) Remobilized mercury can be converted to methylmercury, which can bioaccumulate up the food chain; this is of concern to biota and human health through fish and shellfish consumption;
- 4) Mercury is known to often exist in waterbodies where gold has been found;
- 5) The amount and characteristics of mercury that is discharged from suction dredge mining is unknown; and
- 6) Dissolved, flocculated, liquid, and fine particle-bound mercury may be transported long distances to environments favorable to methylation.

- 7) Some of the metals that may be discharged during suction dredge mining are arsenic, copper, silver, zinc, lead, chromium, nickel, antimony, cadmium, and selenium.

What potential water quality impacts from suction dredge mining may be addressed in the actions the State Water Board takes?

The main water quality concerns with in-stream suction dredge mining are the disturbance and re-mobilization of fine sediment and metals already present in the water body. Specifically, as specified in California Water Code section 13172.5, subdivision (b)(1) and in response to significant environmental impacts identified in the California Department of Fish and Wildlife's *Suction Dredge Permitting Program Subsequent Environmental Impact Report* (certified on March 16, 2012), the Water Boards must consider the following water quality impacts from discharges due to suction dredge mining activities:

- 1) Mercury loading to downstream reaches of surface water bodies affected by the use of vacuum or suction dredge equipment;
- 2) Methylmercury formation in water bodies;
- 3) Bioaccumulation of mercury in aquatic organisms;
- 4) Re-suspension and discharge of other trace metals; and
- 5) Increased turbidity and the discharge total suspended sediment.

The Water Boards may also address the following potential impacts to protect water quality from suction dredge mining activities:

- 1) Environmental effects of dredge site development including site access and encampments;
- 2) Response and notification requirements for fuel and chemical spills;
- 3) Notification requirements when mercury hotspots (i.e., places where large amounts of mercury are concentrated) are identified;
- 4) Management and disposal requirements for recovered mercury, lead, etc.; and
- 5) Any other activities related to suction dredge mining that pose a threat to water quality.

What prohibitions may the Water Boards consider in a potential regulatory action?

California Water Code section 13172.5, subdivision (b)(1), allows the Water Boards to specify any 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 are prohibited in order to protect water quality from suction dredge mining. In addition, Water Code section 13172.5, subdivision (b)(1), allows the Water Boards to 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 as a result of suction dredge mining activity.

Specific prohibitions that the Water Boards may consider addressing the above-noted potential water quality impacts include:

- 1) Prohibiting suction dredge mining where existing high concentrations or measures of mercury, sediment, turbidity, and/or trace metals impair the water body and impact its beneficial uses, such as:
 - a. by prohibiting suction dredge mining in any part of water bodies with segments not meeting objectives;
 - b. by prohibiting suction dredge mining a specified distance above segments of water bodies not meeting objectives; or
 - c. by prohibiting suction dredge mining in segments or upstream of segments of water bodies not meeting objectives.
- 2) Prohibiting suction dredge mining a specified distance upstream of drinking water system water intakes;
- 3) Prohibiting suction dredge mining a specified distance from California Native American tribal land boundaries; or
- 4) Prohibiting dredge mining in waters with elevated fish or aquatic invertebrate tissue mercury levels.

If the Water Boards decide to adopt a permit, what type of monitoring and reporting may be required?

Potential Water Boards' monitoring and reporting requirements may include, but may not be limited to, any combination of the following items:

- Preliminary receiving water monitoring to determine applicable Water Boards requirements;
- Compliance monitoring for any applicable water quality limitations;
- Water quality sampling and analysis for specific constituents of concern related to suction dredge mining;
- Visual monitoring; or
- Reporting of best management practices implemented.

All information and data acquired through discharger monitoring must be reported to the Water Boards per requirements of the applicable permit, waiver, or prohibition.