



# Fact Sheet

## *Frequently Asked Questions*

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

The State Water Resources Control Board and Regional Water Quality Control Boards (collectively Water Boards) are beginning discussions with stakeholders and California Native American Tribal interests concerning potential 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.(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?**

Yes, you are prohibited from conducting suction dredge mining without approval in the form of a permit or waiver from the Water Boards. The Water Boards are in the process of seeking stakeholder input and evaluating potential permitting, waivers, and/or prohibitions related to suction dredge mining. The Water Boards' approval action is one of the items that the California Department of Fish and Wildlife needs to issue its permit which will authorize suction dredge mining in the state.

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

The Water Boards do not currently have a permit for suction dredge mining. The Water Boards are evaluating potential options for regulating suction dredge mining in a manner that protects water quality. As required by the recently passed California Senate Bill 637, Water Board staff will conduct public workshops to solicit stakeholder input prior to the Water Boards selecting the appropriate regulatory mechanism. To receive notice of future public workshops and other communications from the Water Boards regarding suction dredge mining, you may subscribe to an 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](http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml)

#### **How long will the process take for the Water Boards to propose an action?**

Water Board staff will begin conducting required public outreach workshops in January 2017. The State Water Board will also conduct a formal hearing to hear input directly from stakeholders and California Native American Tribal interests in late 2017 or early 2018. The State Water Board's consideration of any proposed permitting, waiver, and/or prohibition related to suction dredge mining would tentatively occur in Spring 2018. The current prohibition remains in effect until the Water Boards complete their approval action and the Department of Fish and Wildlife completes its legislatively-mandated tasks.



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

California Senate Bill 637 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;
- 2) Prohibit suction dredge mining where certain water body conditions are present;
- 3) Prohibit suction dredge mining in specific water bodies; or
- 4) Prohibit any use of, or method of using, suction dredging equipment.

## **How can I provide input into the content and scope of the Water Boards' potential actions?**

The Water Boards will solicit stakeholder and California Native American Tribal input on actions to take to address water quality impacts from suction dredge mining by conducting staff-level public workshops in San Bernardino, Fresno, and Redding in January 2017, and in Sacramento in February 2017.

Interested parties may also submit written comments or recommendations to State Water Board staff by noon on **Tuesday, February 28, 2017** to the following address with **"COMMENT LETTER– DISCUSSIONS CONCERNING POTENTIAL ACTIONS TO PROTECT WATER QUALITY FROM DISCHARGES FROM SUCTION DREDGE MINING"** in the subject line of the letter:

State Water Resources Control Board  
Division of Water Quality - NPDES Unit  
P.O. Box 100  
Sacramento, CA 95812-0100

Written comment letters may also be submitted by email to

[suctiondredgecommentletters@waterboards.ca.gov](mailto:suctiondredgecommentletters@waterboards.ca.gov) (if less than 15 megabytes in total size). For email submittals, please indicate in the subject line: **"COMMENT LETTER– DISCUSSIONS CONCERNING POTENTIAL ACTIONS TO PROTECT WATER QUALITY FROM DISCHARGES FROM SUCTION DREDGE MINING."** Couriers delivering hard copies of public comment letters must check in with CalEPA Building lobby security personnel, at 1001 I Street, Sacramento CA 95814. Couriers must request security staff to contact Russell Norman at (916) 323-5598 or Philip Isorena at (916) 341-5544.

In addition, interested persons will also have future opportunity to provide 1) written comments on an draft regulatory action the Water Boards issued for public comments, and 2) verbal comments directly to the State Water Board during a future State Water Board hearing.

## **Do I need any permits from other agencies?**

The California Department of Fish and Wildlife is the primary permitting authority for this activity. In addition to approval action from the Water Boards, you may need a permit from the U.S. Army Corps of Engineers in order to obtain authorization from the California Department of Fish and Wildlife to begin suction dredge mining. Please see the following websites for more information:

California Department of Fish and Wildlife *Dredging Webpage* -  
<https://www.wildlife.ca.gov/Licensing/Suction-Dredge-Permits>

U.S. Army Corps of Engineers *Dredging Webpage* -  
<http://www.spn.usace.army.mil/Missions/DredgingWorkPermits/Application.aspx>

**If the Water Boards decide to adopt a permit, who can apply for coverage under the permit?**

Any person who meets the California Department of Fish and Wildlife Identification and Contact Information requirements for coverage under the California Department of Fish and Wildlife suction dredge permit may be eligible to seek regulatory coverage under a proposed Water Boards permit. However, no details regarding any regulatory actions are definite until the State Water Board takes a formal action at a Board meeting.

**If the Water Boards decide to adopt a permit, what will be required to apply for the permit?**

The Water Boards will not determine the applicability of and requirements for a permit until the Water Boards receive and consider all preliminary public input during the initial staff outreach being conducted in January and February of 2017. In general, a typical 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 Water Boards decide to adopt a permit, will there be a fee? How much?**

If the Water Boards adopt 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, Section 2200, Article 1, titled Waste Discharge Reports and Requirements, Annual Fee Schedules. The current Fiscal Year 2015-2016 Fee Schedule may be viewed at

[http://www.waterboards.ca.gov/resources/fees/water\\_quality/docs/fy1516\\_fee\\_schedule.pdf](http://www.waterboards.ca.gov/resources/fees/water_quality/docs/fy1516_fee_schedule.pdf)

**If the Water Boards decide to adopt a permit, what suction dredge mining activities would be allowed?**

The Water Boards will not determine what suction dredge mining activities would be allowed until the Water Boards receive and consider all preliminary public input during the initial staff outreach being conducted in January and February of 2017. State Water Board staff urge all stakeholders and interested parties to provide input regarding suction dredge mining activities, including high banking and other related mineral recovery activities during the January-February 2017 stakeholder outreach events.

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

The Water Boards are currently evaluating available information on potential water quality impacts from suction dredge mining and determining where information gaps exist. The California Department of Fish and Wildlife summarized the following water quality and toxicology impacts and information gaps in Appendix D, page 4.2-6 of the *Suction Dredge Permitting Program Subsequent Environmental Impact Report*, certified on March 16, 2012:

- 1) All studies to date suggest that the effects of suction dredge mining on turbidity and suspended sediment concentrations are limited to the area immediately downstream of the dredging for the duration of active dredging.
- 2) Fine particles (less than 75 microns) in sediment in historic mining regions have been shown to contain at least an order of magnitude higher concentration of mercury than larger size fractions.

- 3) There are very few studies specifically addressing the effects of suction dredge mining on mercury fate and transport processes. No studies that directly evaluate the relative magnitude of dredging related effects on mercury discharges compared to other causes have been conducted.
- 4) The human and aquatic toxicity of mercury discharged from suction dredge mining operations has not been studied. Studies have shown that remobilized mercury can be converted to methyl mercury, which can bio-accumulate up the food chain; this is of concern to biota and human health through fish and shellfish consumption.
- 5) Practices for reducing mercury discharge from suction dredge mining have been recommended, but it is unknown if they are effective or are being used.
- 6) Mercury hotspots (i. e., places where large amounts of mercury are concentrated) are known to exist, but there has been no concerted effort to locate them.
- 7) The suspended particle size fraction at which mercury is discharged from suction dredge mining is unknown. In addition, it is not known whether the reactivity or speciation of mercury remaining at the dredge site is altered by dredging operations.
- 8) The transport of floured mercury from dredging operations has not been studied. There have been no studies performed to determine whether local methyl mercury formation occurs as a result of suction dredge mining. Dissolved mercury, floured liquid mercury, and fine particle/colloid bound mercury may be transported long distances to environments favorable to methylation.
- 9) There have been no studies performed to determine mercury discharges from suction dredges and their subsequent fate, transport, and other effects.
- 10) There is very little information available on the potential operations-related effects of dredging to discharges of other constituents (e.g., trace metals, organic compounds). Other metals that may be discharged during suction dredge mining include arsenic, copper, silver, zinc, lead, chromium, nickel, antimony, cadmium, and selenium, but the distribution of metals of different particle sizes, transport of released metals, biotic uptake, etc., have not been studied.
- 11) There have been no studies undertaken to determine whether suction dredge mining releases legacy pesticides and, if so, what the fate, transport, and effects of the chemicals are downstream.

### **What potential water quality impacts from suction dredge mining may be addressed in the actions the Water Boards take?**

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 Senate Bill 637 and in response to un-mitigated 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 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; and
- 4) Management and disposal requirements for recovered mercury, lead, etc.

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

California Senate Bill 637 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, Senate Bill 637 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 to address 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 dredging in any part of water bodies with segments not meeting objectives;
  - b. by prohibiting dredging a specified distance above segments of water bodies not meeting objectives; or
  - c. by prohibiting dredging in segments or upstream of segments of water bodies not meeting objectives.
- 2) Prohibiting dredging a specified distance upstream of drinking water system water intakes;
- 3) Prohibiting dredging a specified distance from California Native American Tribal land boundaries; or
- 4) Prohibiting dredging in waters with elevated fish or aquatic invertebrate tissue mercury levels.

**If the Water Boards decide to allow suction dredge mining through a permit, what type of monitoring and reporting may be required?**

Potential Water Board 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 Board 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.