

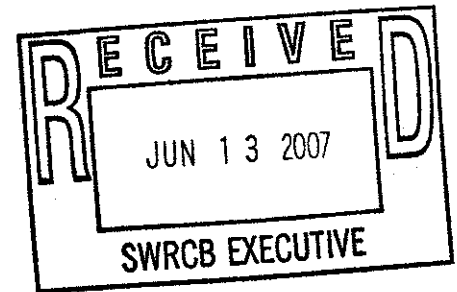
From: "James Hughes" <jhughes@health.nv.gov>
To: <commentletters@waterboards.ca.gov>
Date: Wed, Jun 13, 2007 9:12 AM
Subject: Comment Letter - Water Quality and Suction Dredge Mining

6/12/07 Workshop
Suction Dredge Mining
Deadline: 6/22/07 Noon

State Water Resources Control Board
Division of Water Quality
P.O. Box 100 Sacramento, California 95812-0100
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13 June, 2007

Dear Sirs,



My name is James Hughes and I reside in the state of Nevada. I consider myself an environmentalist and a recreational prospector. Suction gold dredging is one of my favorite hobbies. It is a wonderful experience to be under water in a river and be able to see all of the wonders that exist there. The last thing that I would want to do is harm that ecosystem. I have a great respect for nature and all of the life forms that share it with us. If I thought that dredging was detrimental to the water quality of our rivers or harmed any of the animal life I would give it up. I have been to Northern California several times and have met many prospectors who share the same ideas and beliefs as me. I have never met another recreational prospector who did not have a high regard for nature and God's creations. Since Gold dredging is controlled and regulated by the CA DFG dredging is off limits in areas where the fish population may be affected. Deep cool water pools where fish like to gather and rest are off limits to dredging. Dredging does not occur when fish eggs and fry are present in the gravels. Fishermen and boaters cause more damage to the fish population because they are disturbing the gravels and constantly wading or beaching their boats in the shallows when the eggs and fry are present. I have a large collection of lead weights and fishing lures that I have recovered from the streams by dredging. I also recover a lot of mercury left over from early mining operations. There is no other way to remove these heavy metals efficiently from the rivers and streams. I honestly believe that our rivers are healthier and cleaner after a dredging season.

There have been numerous studies done on the impact of suction dredging on water quality. I have not seen even one study that can prove that suction dredging harms water quality or the environment. My personal observation has been when any visual impact can be seen at all, the impact is small and localized. This observation has been similarly reflected by numerous studies and published reports on this subject. For example, a report on the water quality cumulative effects of placer mining on the Chugach National Forest, Alaska found:

"The results from water quality sampling, do not indicate any strong cumulative effects from multiple placer mining operations within the

sampled drainages." "Several suction dredges probably operated simultaneously on the same drainage, but did not affect water quality as evidenced by above and below water sample results. In the recreational mining area of Resurrection Creek, five and six dredges would be operating and not produce any water quality changes (Huber and Blanchet, 1992).

The effects of a 12" dredge operating in the Klamath River in the 1990's under Special Permit were visited by DFG biologists. They conducted turbidity sampling above the dredge and about 200 feet below the dredge. They were not able to determine any increase in turbidity. These observations were consistent with other published information on this subject:

Thomas (1985), using a dredge with a 2.5-inch diameter nozzle on Gold Creek, Montana, found that suspended sediment levels returned to ambient levels 100 feet below the dredge. Gold Creek is a relatively undisturbed third order stream with flows of 14 cubic feet per second. A turbidity tail from a 5-inch (12.7 cm) dredge on Clear Creek, California was observable for only 200 feet downstream. Water velocity at the site was about 1 foot per second (Lewis, 1962).

Turbidity below a 2.5 inch suction dredge in two Idaho streams was nearly undetectable even though fine sediment, less than 0.5 mm in diameter, made up 13 to 18 percent, by weight, of substrate in the two streams (Griffith and Andrews, 1981).

Hassler (1986) noted "...during dredging, suspended sediment and turbidity were high immediately below the dredge, but diminished rapidly within distance downstream." He measured 20.5 NTU 4 meters below a 5-inch dredge that dropped off to 3.4 NTU 49 meters below the dredge. Turbidity from a 4-inch dredge dropped from 5.6 NTU 4 meters below to 2.9 NTU 49 meters below with 0.9 NTU above. He further noted "...water quality was impacted only during the actual operation of the dredge...since a full day of mining by most Canyon Creek operators included only 2 to 4 hours of dredge running time, water quality was impacted for a short time." Also "...the water quality of Canyon Creek was very good and only affected by suction dredging near the dredge when it was operated."

As I am sure that you aware, environmental interests have been trying to eliminate suction dredging from California's waterways for a long time. During recent years, they have been making noise about the possibility that the localized increased turbidity behind some suction dredges may contribute to raising water temperatures in the overall waterway. With concern over this possibility, a northern California prospecting club hired two qualified fish biologists (both retired from the EPA) two years ago to perform water temperature testing upstream and downstream of active dredging operations along the Klamath River. They tested in numerous locations, and were not able to find any measurable increase in water temperature behind operating dredges. Although, in some cases, they did discover cooler water within the dredge holes, and cooler water

within the discharges from the dredges which were sucking up the cooler water (probably ground water) from the dredge holes. Similar results were acknowledged by published material on this subject:

Dredge mining had little, if any, impact on water temperature (Hassler, T.J., W.L. Somer and G.R. Stern, 1986). In addition, the Oregon Siskiyou Dredge Study (SNF, 2001) states, "There is no evidence that suction dredging affects stream temperature."

In 1997, when existing State-wide suction dredge regulations were adopted by California, the State Water Resources Control Board enacted a State-wide exemption at that time for persons operating suction dredges in conformance with Section 5653 suction dredge regulations. This exemption was issued to simplify the permitting process for suction dredgers (many who visit from out of state and only suction dredge during a brief holiday or vacation), and also to not burden the State Water Resources Control Board or its Regional offices with applications from thousands of (very) small-scale gold miners who have a negligible impact, if any, upon water quality. This was somewhat reflected in the environmental Impact Statement (EIS) which was published by DFG at that time:

Suction dredging causes less than significant effects to water quality. (CDFG, 1997).

"Suction dredges, powered by internal combustion engines of various sizes, operate while floating on the surface of streams and rivers. As such, oil and gas may leak or spill onto the water's surface. There have not been any observed or reported cases of harm to plant or wildlife as a result of oil or gas spills associated with suction dredging" (CDFG, 1997).

The impact of turbidities on water quality caused by suction dredging can vary considerably depending on many factors. Factors which appear to influence the degree and impact of turbidity include the amount and type of fines (fine sediment) in the substrate, the size and number of suction dredges relative to stream flow and reach of stream, and background turbidities (CDFG, 1997).

"Effects from elevated levels of turbidity and suspended sediment normally associated with suction dredging as regulated in the past in California appear to be less than significant with regard to impacts to fish and other river resources because of the level of turbidity created and the short distance downstream of a suction dredge where turbidity levels return to normal" (CDFG, 1997).

As far as I know, the most comprehensive study to date concerning how water quality is affected by suction dredging was contracted by the EPA to analyze of the effects on mining in the Fortymile River in Alaska. The report stated:

"This report describes the results of our research during 1997 and 1998 into the effects of commercial suction dredging on the water quality, habitat, and biota of the Fortymile River. The focus of our work on the Fortymile in 1997 was on an 8-inch suction dredge (Site 1), located on the main stem At Site 1, dredge operation had no discernable effect on

alkalinity, hardness, or specific conductance of water in the Fortymile. Of the factors we measured, the primary effects of suction dredging on water chemistry of the Fortymile River were increased turbidity, total filterable solids, and copper and zinc concentrations downstream of the dredge. These variables returned to upstream levels within 80-160 m downstream of the dredge. The results from this sampling revealed a relatively intense, but localized, decline in water clarity during the time the dredge was operating" (Prussian, A.M., T.V. Royer and G.W. Minshall, 1999).

"The data collected for this study help establish regional background geochemical values for the waters in the Fortymile River system. As seen in the chemical and turbidity data any variations in water quality due to the suction dredging activity fall within the natural variations in water quality" (Prussian, A.M., T.V. Royer and G.W. Minshall, 1999).

Gold prospecting has been a productive activity in California since before it was even a State. And while I acknowledge that some of the earlier practices were harmful to the environment, suction dredging today is carefully regulated by DFG and other agencies to ensure that the overall impacts do not create any measurable negative impact.

With this in mind, I encourage you to please weigh the negatives against the positives when you make a decision concerning a renewal of your state-wide exemption for suction dredgers. While I understand that economic consequences are not your first concern, good leadership and responsibility to Californians require State agencies to take an honest look at the costs and benefits of the various policies which are being considered.

In this case, if you choose to not renew the state-wide water quality exemption for suction dredgers, I feel that you will eliminate an entire industry in your State; an industry which does a great deal to help support many rural communities; an industry that generates millions upon millions of dollars in income for California -and would continue to do so for the foreseeable future. I hope you will carefully consider what will be gained before you destroy that industry!

Thank you very much for considering my comments.

Sincerely,

James Hughes

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