

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

From: Keith White <wkwgold@caltel.com>
To: <commentletters@waterboards.ca.gov>
Date: Sat, Jun 9, 2007 11:30 AM
Subject: Comment Letter - Suction Dredge Mining

State Water Resources Control Board
Division of Water Quality
P.O. Box 100 Sacramento, California 95812-0100
Fax: 916-341-5620 email: commentletters@waterboards.ca.gov

6 June 2007

Dear Sirs,

My name is Keith White and I am a small scale miner. I have been panning and sluicing for almost 20 years. This last year I have finally gotten into dredging. I have followed the problems dredgers have had in the past, where people were trying to stop them from dredging. Of all the information I have read and the observations I have done (watching dredges) I see no damage to the river, stream or fish.

Some of the reports by the California Department of Fish and Game show the same (no impact on river, water quality or fish)

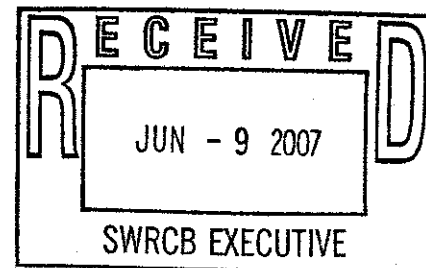
Truly a lot of the reverse, cleaning of the bottom of a river that doesn't run fast like it did before dams, more spawning beds for the fish, and deeper colder holes for the fish.

Here are ONLY a few studies done showing the effect of water quality and other benefits (which also have to be taken into account if dredging is going to be curtailed) of dredging.

A final report from an EPA contract for analysis of the effects on mining in the Fortymile River, Alaska 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 mainstem... 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).

/*Suction dredging causes less than significant effects to water quality*/. The impacts include increased turbidity levels caused by re-suspended stream bed sediment and pollution caused by spilling of gas



and oil used to operate suction dredges (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).

OTHER STUDIES,

Responsible suction dredge miners do not dredge stream banks (it is illegal). Dredging occurs only in the wetted perimeter of the stream. Therefore, it is unlikely suction dredging will cause a loss of cover adjacent to the stream.

Solar radiation is the single most important energy source for the heating of streams during daytime conditions. The loss or removal of riparian vegetation can increase solar radiation input to a stream increasing stream temperature. Suction dredge operations are confined to the existing stream channel and do not affect riparian vegetation or stream shade (SNF, 2001).

Suction dredging could alter pool dimensions through excavation, deposition of tailings, or by triggering adjustments in channel morphology. Excavating pools could substantially increase their depth and increase cool groundwater inflow. This could reduce pool temperature. If pools were excavated to a depth greater than three feet, salmonid pool habitat could be improved. In addition, if excavated pools reduce pool temperatures, they could provide important coldwater habitats for salmonids living in streams with elevated temperatures (SNF, 2001).

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 states, "There is no evidence that suction dredging affects stream temperature" (SNF, 2001).

Increases in sediment loading to a stream can result in the stream aggrading causing the width of the stream to increase. This width increase can increase the surface area of the water resulting in higher solar radiation absorption and increased stream temperatures. Suction dredge operations are again confined to the existing stream channel and do not affect stream width (SNF, 2001).

Stream temperature can also increase from increasing the stream's width to depth ratio. The suction dredge operation creates piles in the stream channel as the miner digs down into the streambed. The stream flow may split and flow around the pile decreasing or increasing the wetted

surface for a few feet. However, within the stream reach that the miner is working in, the change is so minor that the overall wetted surface area can be assumed to be the same so the total solar radiation absorption remains unchanged. /*Suction Dredging results in no measurable increase in stream temperature*/ (SNF, 2001).

"Small streams with low flows may be significantly affected by suction dredging, particularly when dredged by larger dredges (Larger than 6 inches) (Stern, 1988). However, the California Department of Fish and Game concluded, "current regulations restrict the maximum nozzle size to 6 inches on most rivers and streams which, in conjunction with riparian habitat protective measures, results in /*a less than significant impact to channel morphology*/" (CDFG, 1997).

I could put a whole BOOK of reasons dredging does no damage to rivers or streams, yet I find no credible reports that say otherwise.

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.

Thank you for your time.

Keith White (wkwgold@caltel.com)
6892 Hackett CT
Valley Springs CA 95252