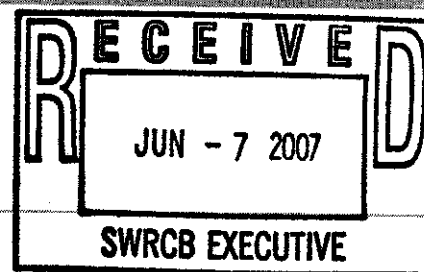


commentletters - Suction dredging and its impact on water quality

From: "Darryl Mansfield" <sport.pilot@hotmail.com>
To: <commentletters@waterboards.ca.gov>
Date: 6/7/2007 11:36:13 PM
Subject: Suction dredging and its impact on water quality



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

My name is Darryl Mansfield. I have lived in California for the last 50 years and have been an avid fan of the outdoors for the majority of my adult life. I enjoy fishing, hiking, gold prospecting, metal detecting, and flying. I am a retired state of California employee. As part of my gold prospecting hobby, I enjoy dredging and sniping. I belong to several prospecting clubs in both California and Arizona, and a number of us who prospecting in California use suction dredges under permit from the Department of Fish and Game (DFG).

I have been actively engaged in dredging, sniping, and fishing for the last 20 years. During that time, I have had ample opportunity to observe the impact upon water quality from the effects of suction dredging. It is my personal observation that when there has been any visual impact on water clarity, the impact has been minimal at most and has been only localized. As I am sure you are aware, this observation is supported a number of 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).

I generally operate a small dredge, generally a one with a 2-inch nozzle opening. I have dredge mostly in the upper American and Bear Rivers of California, but also have done dredging in Slate Creek, the Yuba river, and a number of other small rivers and streams in California as well. I can assure you from my personal observations, as well as people who were interested in what I was doing that discussed my hobby with me, that there was no increase in water turbidity at my dredge site. As I am sure you are aware, these observations are 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 substantial period of time. During recent years, they have been raising concerns about the possibility that the localized increased turbidity behind some suction dredges could possible contribute to raising water temperatures in the overall waterway. AS you know, no substantiation of this concern has occured, In fact, just the opposite is true. One study on the iimpact that dredging had on water temperature concluded as follows:

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."

I was personally directly involved with the California Environmental Quality Act (CEQA) process during 1993 and 1994 (and again in 1997), when existing State-wide suction dredge regulations were adopted by California. I recall that 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. As I recall, 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:

I have attempted to reasearch the matter of how water quality is impacted by suction dredging, and I have been unable to find information that lends suport to the position that it has a negative impact on water quality. What I have been able to find indicates jst the opposite. As far as I know, the most comprehensive study regarding the impact that dredging has on water qality was done at the request of the EPA. The purpose of that study was to comprehensively analyze the effects on mining in the Fortymile River in Alaska. In that report, the following statement appears:

"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).

While I recognize that it is possible that that a suction dredger could encounter an occasional patch of particularly-silty streambed, while dredging in a smaller-sized waterway, and that such activity could cause detectable increased turbidity levels some extended distance downstream, this would be an anomaly which seldom occurs. I believe that it is those people that oppose suction dredging, and mining in general, will focus on these very rare occurrences in an effort to substantiate their position, which in my opinion has little or nothing to do with the quality of water, the health of the fish and animals that depend on the water than it does with trying to restrict the use of America's public lands for recreational and commercial mining activities.

People who have the view that mining is bad in any form, will not be happy until they have been successful in stopping the mining of public lands in total. I and others would not want to see the Statewide exemption for suction dredgers go un-renewed just because of the possibility of a rare anomaly. There are several reasons to pause and consider:

- 1) The occurrence of excess turbidity by suction dredgers is so rare, there is no evidence that that I am aware of that suction dredging has had any harmful impact on fish or any aquatic species.
- 2) The burdensome and expensive requirement for suction dredgers to acquire a water quality permit would all but eliminate the activity in the State of California. DFG is already charging out-of-state visitors \$167.25 for an annual suction dredge permit. That's already a lot of money to spend on a permit for someone who is only going to visit for a few days or a week or two. Adding a burdensome water quality permit to the process will also discourage most Californians who presently enjoy the activity of suction dredging.

Gold prospecting has been a productive activity in California for hundreds of years. 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 its overall impact does not have 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 the 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 not to renew the state-wide water quality exemption for suction dredgers, I believe you will have a substantial and negative impact on the recreational prospector, and might even possibly cause the elimination of an entire industry in this 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 one that is an important part of this great state's heritage/ With the above in mind, I am hopeful that you will carefully weigh and consider what will be gained before you act.

Thank you for your time and consideration of these comments.

Sincerely,

Darryl Mansfield

6131 Fordham Way,

Sacramento, CA 95831

(916) 290-2520

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