# APPENDIX K: Private Citizen Comments (A - E)

**From:** "ajosborn tds.net" <ajosborn@tds.net>
**To:** <mstopher@dfg.ca.gov>
**Date:** 11/19/2009 1:26 PM
**Subject:** Dredging Literature
**Attachments:** Joseph-Greene-suction-gold-dredge-study.pdf

Geographical Scale of Small-Scale Suction Dredging

Mr. Stopher,

Here is a letter Joseph C. Greene wrote to the State Water Resources Control Board. This letter speaks specifically to the water quality aspects of suction dredging, and has a detail literature citation. I hope this is of some help to your EIR.

Sincerely,

Adam Osborn

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Anderson, CA 96007

(530)357-4981

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

June 6, 2007

Subject: **SUCTION DREDGE MINING**

Dear Board Members,

Thank you for allowing me this opportunity to comment on the water quality aspects of small-scale suction dredge mining.

As I have searched the scientific literature for studies on the effects of small-scale suction dredge mining on the environment I have learned that the preponderance of the published research studies have been directed towards assessment of its effect on the biology of the streams and rivers. In nearly every instance the results have concluded that the effects were less than significant.

In water quality terms some studies have discussed turbidity, water temperature, and suspension of heavy metals into the overlying water. I will focus my water quality comments on these three areas. But first I would like to put this issue in to perspective.

## GEOGRAPHICAL SCALE OF SMALL-SCALE SUCTION DREDGING

It has been observed that environmentalists opposing suction dredging use data gleaned from reports that studied effects of environmental perturbations that are occurring on a system-wide basis. For example, they would characterize the affects of turbidity from a suction dredge as if it would impact downstream organisms in a manner that system-wide high water flow events might. This approach is entirely inconsistent with the way in which suction dredges operate or generally impact their downstream environment.

The California Department of Fish and Game (1997) described typical dredging activities as follows' "An individual suction dredge operation **affects a relatively small portion of a stream or river**. A recreational suction dredger (representing 90-percent of all dredgers) may spend a total of four to eight hours per day in the water dredging an area of 1 to 10 square meters. The average number of hours is 5.6 hours per day. The remaining time is spent working on equipment and processing dredged material. The area or length of river or streambed worked by a single suction dredger, as compared to total river length, is relatively small compared to the total available area."

In the Oregon Siskiyou National Forest Dredge Study, Chapter 4, Environmental Consequences, some perspective is given to small-scale mining. "The average claim size is 20 acres. The total acreage of all analyzed claims related to the total acres of watershed is about ***0.2 percent***. The average stream width reflected in the analysis is about 20 feet or

less and the average mining claim is 1320 feet in length. The percentage of land area within riparian zones on the Siskiyou National Forest occupied by mining claims is estimated to be only ***0.1 percent***." The report goes on to say, "Over the past 10 years, approximately 200 suction dredge operators per season operate on the Siskiyou National Forest" (SNF, 2001).

A report from the U.S. Forest Service, Siskiyou National Forest (Cooley, 1995) answered the frequently asked question, "How much material is moved by annual mining suction dredge activities and how much does this figure compare with the natural movement of such materials by surface erosion and mass movement?" The answer was that suction dredges moved a total of 2,413 cubic yards for the season. Cooley (1995) used the most conservative values and estimated that the Siskiyou National Forest would move 331,000 cubic yards of material each year from natural causes. Compared to the 2413 (in-stream) cubic yards re-located by suction mining operations the **movement rate by suction dredge mining would equal *about 0.7% of natural rates***.

It has been suggested that a single operating suction dredge may not pose a problem but the operation of multiple dredges would produce a cumulative effect that could cause harm to aquatic organisms. However, "No additive effects were detected on the Yuba River from 40 active dredges on a 6.8 mile (11 km) stretch. The area most impacted was from the dredge to about 98 feet (30 meters) downstream, for most turbidity and settleable solids (Harvey, B.C., K. McCleneghan, J.D. Linn, and C.L. Langley, 1982). In another study, "Six small dredges (<6 inch dredge nozzle) on a 1.2 mile (2 km) stretch had no additive effect (Harvey, B.C., 1986). *Water quality was typically temporally and spatially restricted to the time and immediate vicinity of the dredge* (North, P.A., 1993).

A report on the water quality cumulative effects of placer mining on the Chugach National Forest, Alaska found that, "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 California Department of Fish and Game stated in its Draft Environmental Impact Report that "Department regulations do not currently limit dredger densities but the activity itself is somewhat self-regulating. Suction dredge operators must space themselves apart from each other to avoid working in the turbidity plume of the next operator working upstream. *Suction Dredging requires relatively clear water to successfully harvest gold* " (CDFG, 1997).

## ELEVATED TURBIDITY AND SUSPENDED

***Suction dredging causes less than significant effects to water quality***. The impacts include increased turbidity levels caused by re-suspended streambed 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).

Because of low ambient levels of turbidity on Butte Creek and the North Fork American River, California, Harvey (1986) easily observed increases of 4 to 5 NTU from suction dredging. Turbidity plumes created by suction dredging in Big East Fork Creek were visible in Canyon Creek 403 feet (123 meters) downstream from the dredges (Somer and Hassler, 1992).

In contrast, 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).

"During a dredging test carried out by the California Department of Fish and Game on the north fork of American River, it was concluded that turbidity was greatest immediately downstream, returning to ambient levels within 100 feet. Referring to 52 dredges studied, Harvey (1982) stated "...generally rapid recovery to control levels in both turbidity and settable solids occurred below dredging activity."

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."

The US Geological Survey and the Alaska Department of Natural Resources conducted a survey into dredging on Alaska's Fortymile River, which is a river designated as a wild and scenic corridor. The study stated, "One dredge had a 10-inch diameter intake hose and was working relatively fine sediment on a smooth but fast section of the river. The other dredge had an 8-inch intake and was working coarser sediments in a shallower reach of the river. State regulations require that suction dredges may not increase the turbidity of the river by more than 5 nephelometric turbidity units (NTU), 500 feet (=150m) downstream. In both cases, the dredges were well within compliance with this regulation."

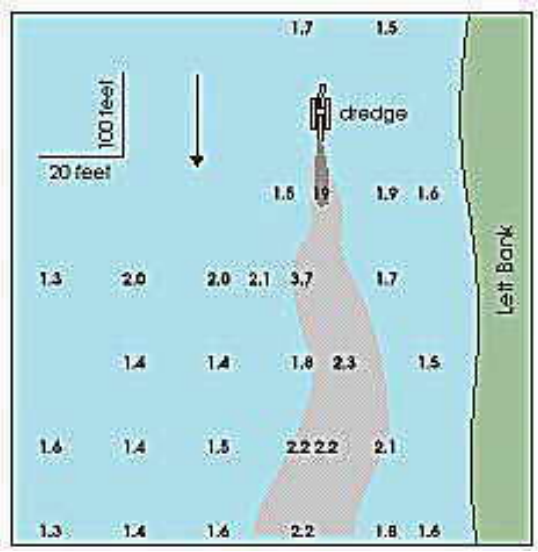


Figure 2. Results of turbidity survey behind an operating 10-inch suction dredge (site #1 on fig. 1). All numbers shown are in NTU, or nephelometric turbidity units; the standard unit of turbidity. The right bank of the river is off the edge of the figure. The approximate shape of the plume is shown in gray. Note that the figure is exaggerated 5x horizontally, so the plume is actually much narrower than it appears in the figure. To comply with State regulations, dredges may not increase the turbidity of the river by more than 5 NTU, 500 feet behind the dredge.

http://www.akmining.com/mine/usgs1.htm

Samples were collected on a grid extending downstream from the dredges as they were operating and compared to measurements made upstream of the dredges. One dredge had a 10-inch diameter intake hose and was working relatively fine sediments on a smooth but fast section of the river. The results of the turbidity survey for the 10-inch dredge are shown on figure 2. Turbidity values behind the 8-inch dredge were lower, because the smaller intake was moving less sediment material, and because the coarser sediments being worked by the 8-inch dredge settled more rapidly

The turbidity values found in the dredge studies fall within the range of turbidity values found for currently mined areas of the Fortymile River and many of its un-mined tributaries. Figure 3 shows the ranges of turbidity values observed along the horizontal axis, and the number of samples that fall within each of those ranges. For example, 25 samples had turbidity between 1.0 and 1.5 NTU, 22 of which were in a dredged area. The

highest turbidity value was from an un-mined tributary to Uhler Creek; the lowest from a number of different tributaries to the North Fork. As seen on the figure, there is no appreciable difference in the distribution of turbidity values between mined and un-mined areas.

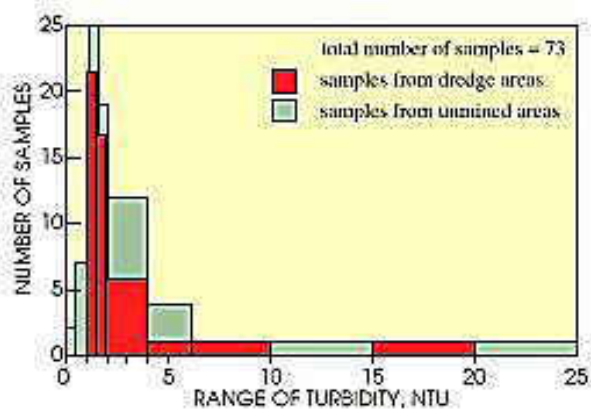


Figure 3. A comparison of turbidity values between mined and unmined areas shows that the suction dredge mining does not affect the turbidity of the Fortymile River system under the conditions studied. The highest turbidity values from the dredge areas are within 200 feet (60 m) of the back of the two operating dredges which were studied.

http://www.akmining.com/mine/usgs1.htm

In American studies, average turbidity levels have been shown to be between 5 and 15 NTU 5 meters below dredges. But even the maximum turbidity level measured in a clay pocket (51 NTU) fell below 10 NTU within 45 meters. Turbidity increases, from even large dredges on moderate sized streams, have shown to be fairly low, usually 25 NTU or less, and to return to background within 30 meters. The impact is localized and short lived; indicating minimum impact on moderate and larger waterways.

Within any waterway, sediment is primarily carried in suspension during periods of rainfall and high flow. This is an important point, as it indicates that a dredging operation has less, or at least no greater effect on sediment mobilization and mobility than a rain storm."

All of these research studies have concluded that only a local significant effect occurs, with it decreasing rapidly downstream. The studies have been wide spread, having been undertaken in Alaska, Idaho, California, Montana and Oregon.

The science supports *de minimus* status for $\leq$ 6-inch suction dredges. Turbidity is *de minimus* according to the U.S. Army Corps of Engineers.

“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).

Furthermore, individuals that have not, in fact, operated suction dredges may not realize that it is a self-limiting operation. The dredge operator must be able to see his work area to operate safely and manage the intake of the dredge nozzle. ***If high levels of turbidity***

***were to flood the dredger's work area and render him "blind" he would have to move the operation to another location***.

## INCREASING WATER TEMPERATURE

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).

## WATER CHEMISTRY

Concern has been raised that small-scale dredge operations may increase the metal load of the surface waters. Whereas dredge operations do re-suspend the bottom sediment, the magnitude of this disturbance on stream metal loading was unknown. It was unknown what affect the dredge operations may have on the transport and redistribution of metals—some of which (for example, arsenic, copper, and zinc) have environmental importance.

The U.S. Geological Survey and the Alaska Department of Natural Resources cooperated in a project, on Fortymile River, to provide scientific data to address these questions. This river is designated a Wild and Scenic Corridor by the Alaska National Interest Lands Conservation Act. Current users of the river include placer mine operators, as well as boaters and rafters. Along the North Fork Fortymile River, and just below its confluence with the South Fork, mining is limited to a few small suction dredges which, combined, produce as much as a few hundred ounces of gold per year. In this area, some potential environmental concerns have been raised associated with the mining activities, including increased turbidity of the river water; adverse impact on the overall chemical quality of the river water; and potential additions of specific toxic elements, such as arsenic, to the river during mining operations.

Field measurements were made for pH, turbidity, electrical conductivity (a measure of the total dissolved concentrations of mineral salts), and stream discharge for the Fortymile River and many of its tributaries. Samples were collected at the same time for chemical analyses, including trace-metal analyses

Water-quality samples were collected at three points 200 feet behind each of the two operating suction dredges. One sample was collected on either side of the plume, and one in the center of the plume. The samples were passed through a filter with a nominal pore size of 0.45 micrometers and acidified to a pH less than about 2. Results are shown in the following table. Samples 1A, 1C, 2A, and 2C are from either side of the plume behind dredges 1 and 2, respectively. Samples 1B and 2B are from the center of each plume. All concentrations given are in micrograms per liter, except pH, which is expressed in standard units.

The data show similar water-quality values for samples collected within and on either side of the dredge plumes. Further, the values shown in the table are roughly equal to or lower than the regional average concentrations for each dissolved metal, based on the analyses of 25 samples collected throughout the area. Therefore, ***suction dredging appears to have no measurable effect on the chemistry of the Fortymile River*** within this study area. We have observed greater variations in the natural stream chemistry in the region than in the dredge areas (Wanty, R.B., B. Wang, and J. Vohden. 1997).

| | | Side 1 | Dredge 1 | Side 2 | | Side 1 | Dredge 2 | Side 2 |
|---|---|---|---|---|---|---|---|---|
| | | **1A** | **1B** | **1C** | | **2A** | **2B** | **2C** |
| pH | | 7.7 | 7.6 | 7.8 | | 7.0 | 7.5 | 7.5 |
| Arsenic | | 0.3 | 0.3 | 0.3 | | 0.3 | 0.3 | 0.3 |
| Iron | | 110. | 110. | 110. | | 100 | 97 | 100 |
| Chromium | | 2 | 2 | 3 | | 3 | 3 | 3 |
| Cadmium | all less than 0.02 micrograms per liter | | | | | | | |
| Cobalt | | 0.07 | 0.07 | 0.06 | | 0.06 | 0.05 | 0.05 |
| Zinc | | 0.8 | 0.6 | 0.8 | | 1.0 | 1.0 | 1.0 |
| Lead | all less than 0.05 micrograms per liter | | | | | | | |

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).

## REMOVAL OF MERCURY FROM THE ENVIRONMENT

Looking for gold in California streams and rivers is a recreational activity for thousands of state residents. As these miners remove sediments, sands, and gravel from streams and former mine sites to separate out the gold, they are also removing mercury. This mercury

is the remnant of millions of pounds of pure mercury that was added to sluice boxes used by historic mining operations between 1850 and 1890. Modern day small-scale gold suction dredgers do not use mercury to recover gold during the operation of the dredge. Therefore, any gold that would be found in their possession would be that which was extracted from the stream or river they are working.

Taking mercury out of streams benefits the environment. Efforts to collect mercury from recreational gold miners in the past, however, have been stymied due to perceived regulatory barriers. Disposal of mercury is normally subject to all regulations applicable to hazardous waste.

In 2000, EPA and California's Division of Toxic Substance Control worked in concert with other State and local agencies to find the regulatory flexibility needed to collect mercury in a simple and effective manner. In August and September, 2000 the first mercury "milk runs" collected 230 pounds of mercury. A Nevada County household waste collection event held in September 2000 collected about 10 pounds of mercury. The total amount of mercury collected was equivalent to the mercury load in 47 years worth of wastewater discharge from the city of Sacramento's sewage treatment plant or the mercury in a million mercury thermometers. This successful pilot program demonstrates how recreational gold miners and government agencies can work together to protect the environment (US EPA, 2001).

Mercury occurs in several different geochemical forms, including elemental mercury, ionic (or oxidized) mercury, and a suite of organic forms, the most important of which is methylmercury. Methylmercury is the form most readily incorporated into biological tissues and is most toxic to humans. The process of mercury removal by suction dredging does not contaminate the environment because small-scale suction dredging removes elemental mercury. Removal of elemental mercury before it can be converted, by bacteria, to methylmercury is a very important component of environmental and human health protection provided as a secondary benefit of suction dredging..

## THE REAL ISSUE

The issue of localized conflict with suction dredgers and other outdoor recreational activities can be put into a more reasonable perspective using the data provided at the beginning of this report. For example, the total acreage of all analyzed claims related to the total acres of watershed is about *0.2 percent*. The percentage of land area within riparian zones on the Siskiyou National Forest occupied by mining claims is estimated to be only *0.1 percent*." The report goes on to say, "Over the past 10 years, approximately 200 suction dredge operators per season operate on the Siskiyou National Forest (SNF, 2001).

The issue against suction dredge operations in the streams of the United States appears to be less an issue of environmental protection and more of an issue of certain organized individuals and groups being unwilling to share the outdoors with others without like interests.

Management of the Fortymile River region (a beautiful, wild and scenic river in the remote part of east-central Alaska) and its resources is complex due to the many diverse land-use options. Small-scale, family-owned gold mining has been active on the Fortymile since the "gold rush" days of the late 1880's. However, in 1980, the Fortymile River and many of its tributaries received Wild and Scenic River status. Because of this status, mining along the river must compete with recreational usage such as rafting, canoeing, and fishing.

A press release from the U. S. Geological Survey stated, in part, the following, "The water quality of the Fortymile River-a beautiful, …has not been adversely impacted by gold placer mining operations according to an integrated study underway by the U.S. Geological Survey and the Alaska Department of Natural Resources.

Violation of mining discharge regulations would close down the small-scale mining operations. No data existed before this study to establish if the mining was degrading the water quality. **However, even with the absence of data, environmental groups were active to close down mining on the river citing unsubstantiated possible discharge violations.**

This study has found no violations to date to substantiate closure of the small-scale mining operations. The result is a continuance of a way of life on the last American frontier." (U.S. Geological Survey October 27, 1998). I have no doubt that this is the real issue currently facing small-scale gold suction dredgers in California.

Suction dredges do not add pollution to the aquatic environment. They merely re - suspend and re-locate the bottom materials (overburden) within the river or stream.

I hope this scientific research information I have provided will be helpful in your efforts regarding suction dredge mining and water quality. I thank you for this opportunity to submit this data.

Respectfully Yours,

Joseph C. Greene
Research Biologist, U.S. EPA **Retired**

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**From:** Alan Steinbach <steinbach.alan@gmail.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** Creek Hanauer <tcreek@sisqtel.net>
**Date:** 11/30/2009 3:37 PM
**Subject:** Please make moratorium on suction dredging permanent

As a sometime resident and property owner in the Salmon River drainage, I am totally opposed to ANY suction dredging of the entire drainage.
I realize that some people find it recreational to put on a wetsuit and stagger around in an otherwise peaceful creek that was placer mined over and over during the last century. Some people find it recreational to drive ATV's over cliffs and break their necks too. Some people find it recreational to drive kayaks over cliffs and break their necks...only thats called an extreme sport.
But kayakers or rafters pass over or thru salmon habitat, much as hook and line fishermen pass through fish habitat in the ocean.
Suction dredging destroys habitat, much as otter trawling destroys habitat in the ocean.
I wish people had enough common sense to realize that the age of suction dredging, or otter trawling, is over. Ignorance is not an excuse.
No suction dredging as a mining operation should be permitted in the entire Klamath River area, and I hope it can begin with the Salmon River Drainage.

Sincerely

Alan Steinbach PhD MD
Clinical Professor Emeritus, UC Berkeley.

**From:** Amber Shows <ambershows@yahoo.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 1:28 PM
**Subject:** I support banning suction dredging

Hi,
I've worked on the Scott and Salmon Rivers and have seen suction dredging in action. I support DFG in banning suction dredging to stabilize the limited spawning habitat the chinook and coho have left in the Scott River. I believe that banning it elsewhere will also benefit the aquatic ecosystem, removing one of the many major disturbances on the northern California rivers.
Thank you!
Amber Shows

Andrew Getz
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December 2, 2009

Mr. Mark Stopher
Environmental Program Manager
California Department of Fish and Game
601 Locust Street
Redding, California 96001

Dear Mr. Stopher,

Thank you for the opportunity to comment regarding the scope of the proposed Supplemental Environmental Impact Report for your Department's Dredge Permitting Program.

Please advise your environmental review document preparers that neither the plain language of CEQA §15382 nor your Initial Study's description of "deleterious effect" adequately addresses the subject environmental threat, for which a much lower threshold will be required, consistent with submitted documents in Leeon Hillman et al v. California Department of Fish and Game et al. The threshold for significance must include cumulative effects in the context of previous serious environmental effects, which must adequately be analyzed.

Very truly yours,

Andrew Getz

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | ANDREW HALL |
| Mailing Address: | BOX 161 DOUGLAS CITY CA. 96024 |
| | |
| Telephone No. (optional): | |
| Email (optional): | |

**Comments/Issues:**

SB 670 IS AN ILLEGAL LAW ACCORDING TO FEDERAL LAW.

I HEREBY GIVE NOTICE TO STATE OF CA. I WILL BE SEEKING DAMAGES (TAKINGS)

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

**From:** "Khayat, Andy" <Andy.Khayat@Micrel.Com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** "Andy Khayat" <andykhayat@hotmail.com>, <bradmacy@pacbell.net>
**Date:** 12/4/2009 12:01 AM
**Subject:** RE: Dredge EIR Study Comments
**Attachments:** EIR Study Plan Comments.doc

Hello Mark,
Please use this version. I found a typo needed correction.

Please include my comments in your Dredging EIR Study considerations.
Thank You,
Andy Khayat

To: Mark Stopher California Department of Fish and Game

Subject: Suction Dredge Permitting Program, EIR - CEQA Scoping Comments

From: Andy Khayat

Attached are my comments and recommendations for the EIR – CEQA Scoping

IV. Biological Resources:

*Heavy Metal Contamination*

Heavy Metals are already present in the stream sentiment. Gold Dredging does not introduce any new amount of Heavy Metals into the stream environment. These toxic metals every year get disturbed and significantly moved during Winter and Seasonal Storms. Gold Dredging can remove Lead and Mercury from the stream bed forever. **Can the study have a section that focuses on the benefits of Toxic Metal Removal for the benefit of the aquatic food chain (and any other affected food chain) and stream bed environment?**

**Can the study consider Long Term effects (including potential long term reproductive mutations over many years) of leaving toxic metal laden sentiment in the stream bed to all aquatic and sentiment borne species?**

**Can the study compare Toxic Metal water levels during Seasonal Storms against Gold Dredging activity, and contrast that against the potential for removal of Toxic Metals from the environment altogether?**

**Can the study consider a DFG project for incentivizing and actively working with Dredgers to reclaim Toxic Metals from the environment in an on-going basis?**

III. AIR QUALITY:

Air Quality and Greenhouse Gases in Californina environments should be considered as a whole. Thus when a person is Camping and Dredging, that same person is no longer

generating Greenhouse Gases when commuting to work and home and is not using energy in an office with Computer, Servers and Incandescent Lights Burning…**Can the study consider the Net Benefit of Dredging Activity weighted against the typical daily generation of pollutants and Greenhouse Gases in a person's non-dredging day activities?**

V. CULTURAL RESOUCES

Cultural Resources and Archeological sites are already protected by law. Dredging State wide laws should simply prevent Dredging from disturbing such sites. **Can the study review and simply observe existing state laws to the findings and recommendations rather than ban Dredging altogether state wide due to normally a localized issue?**

I. AESTHETICS

Park Rangers at the Butte Creek Recreational Area can attest that I have taken out more trash than I bring in when I gold mine. Gold miners represent a very small number of people up in the hills. **Can the study compare "Typical" or "Average" campers and fishermen to Gold Miners instead of reviewing the impact of any general population in the mountains?**

Thank you again for considering my comments. Please feel free to call me at any time.

408-474-3679 California Office

480-703-2464 Cell Phone (480 area code is correct)

Best Regards,

Andy Khayat

To: Mark Stopher California Department of Fish and Game

Subject: Suction Dredge Permitting Program, EIR - CEQA Scoping Comments

From: Andy Khayat

Subject: Attached are my comments and recommendations for the EIR - CEQA Scoping

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480-703-2464 Cell Phone (480 area code is correct)

Best Regards,

Andy Khayat

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**From:** "Khayat, Andy" <Andy.Khayat@Micrel.Com>

**To:** <mstopher@dfg.ca.gov>

**Date:** 12/3/2009 8:49 PM

**Subject:** Suction Dredge Impact Study - A Personal Request

Hi Mark,

I would ask that the Environmental Impact Report for Dredging make at least some consideration for the benefits of Heavy Metal Reclamation. This seems interestingly absent (rather one sided) from the planed study.

There is no mention of where "the Mercury discharge" comes from. As you know Mercury and Lead comes from the river bed where it has resided for years (in fact more Lead and other toxic metals are deposited each year by fishermen and hunters). Subterranean insects which fish consume live in this environment. Dredging is the only practical way it can be

removed.

I personally have removed pounds of Lead and ounces of Mercury from the streambeds which will now and forever be Prevented from having an impact on any life forms.

The study so far described turns a blind eye to the good things that Dredging has to offer. Things like:

1. Personal Recreation for the Dredger
2. Monetary Impacts to Northern California Economy
    a. Sale of equipment
    b. Sale of camping supplies
    c. Food bought by visitor to the small remote towns
    d. Gold value mined and spent in the California Economy

The study also make no mention of what is the impact size of Dredging versus other human activities like Overfishing, Diversion of Waterways, Dams, Camping, Hunting etc...Aren't some of these much bigger dangers to aquatic life?

Everything I read on the study being proposed seems horribly one sided

by not considering these other things. I am saddened that my son and I,

and my friends can no longer enjoy something I looked forward to each

and every year....A two week vacation in Gold Country.

I hope things will be studied fairly and objectively to protect

everyone's interests and rights. After all we are part of the wonderful

California experience too!

Thank You for your time and consideration of the other side of the

equation.

Regards and Good Luck,

Andy Khayat

To: Mark Stopher California Department of Fish and Game

Subject: Suction Dredge Permitting Program, EIR - CEQA Scoping Comments

From: Andy Khayat

Attached are my comments and recommendations for the EIR – CEQA Scoping

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Best Regards,

Andy Khayat

How can a survey be taken if there are no dredges allowed? You can't believe that one can be studied if both parts of the survey are not in the water at the same time? When we used our dredge, we have watched the fish swim behind and literally wait for the worms, .haglamites, eels and other fish food to come to them. As you should know the fish population changes from year to year, from all types of environmental reasons.

We pay our taxes on our property every year, pay our permit fees for the use of our dredge and feel that we have the right to use the dredge in our spare time, which we have little. We maintain the river and the land around. We pull out fishing tackle, lots of lead, line and other debris. It has been said that there is mercury in the river, for as long as we have been partaking in the river we have never came across any.

We have found that dredging is actually good for the river and the fish. It cleans the silt from the gravel and rocks , which is making new gravel beds for the fish to spawn. It is not moving any rocks that mother nature isn't going to. We dredge with the environment in mind.

We have read publications that state how bad dredges are, from our experience that is not the case, netting fish is much more damaging to the fish population. We also understand that the moratorium was signed due to the mighty dollar. The "SURVEYS", outcome was probably already predetermined before it has been taken. How can a survey of this type take two years without the factors in place?

Dear Sirs:

I am sending this letter and the photos as a follow up to the meeting I attended last month. The photos of the salmon were taken on or around September 28, 2009 off the bridge on Hwy 96 at the mouth of the Scott River before it join the Klamath River, after the bill had been passed to stop all suction dredging in California. These salmon were just circling in around in a hole made by a suction dredge, waiting to swim up stream. The hole was a cool resting place for them not a killing field as the Native Americans and the Environmental Groups have accused the miners of making.

The other photo is the majority of metal and lead that I have accumulated this year. I and most of the miners I've spoken with feel that we are helping the river environment by dredging up these metals and taking them with us when we finish dredging. As for the mercury, it adheres itself to the gold in the sluice box. Mercury is a heavy metal as is gold; it doesn't travel very far in the box. If anything, we are helping the river environment and its inhabitants, not harming.

I attended a meeting with the Fish and Game in Redding CA, the head speaker stated that he didn't know exactly how a suction dredge operated. He also stated they closed down the suction dredging before they could study the workings of a dredging operation. I feel if a **GOOD** study is to be done, a Fish and Game official that is involved in the study needs to join one of the miners on a mining claim to see exactly how a suction dredge operates. Any materials accumulated can be put right back into the river to stay within the law. I'm sure any dredge miner would be willing to help the Fish and Game with this study project.

The Native Americans are saying that we dredge up ancient mercury from the bottom of the rivers which is another way we are killing the fish. This is FALSE. If mercury is dredged up 98% of it stays in the suction dredge, sounds like a pretty good percentage to me. What have they done to clean up the river and waterways to save the fish?

Why hasn't a study been done on the fish caught and an autopsy study done to see the percentage of mercury inside the fish? If the Native Americans are so afraid of the mercury we are dredging up that is in the fish they net, why would you want to eat them or sell them to the public????? Since suction dredging has been closed down the Native Americans have stated that this has been a plentiful year for salmon and achieved their salmon quotes early in the season. At the mouth of the Klamath River the fishing was re-open due to the large amount of the salmon population. I've also heard that the salmon run was one of the best in the quite a few years. I guess I didn't realize that a salmon population could grow so quickly within a month or so of closing down suction dredging, I thought it might take a few years to build up a fish population??

I would be more than happy to help out in the study in anyway I can. I would be available to do a suction dredge study if needed. Any of the miners I know would be willing to assist you in your study; all you need to do is ask.

Thank you

Avery Rathburn
PO Box 721
Seiad Valley CA 96086
530-496-3371

**From:** Barbara Lyss <bbarly@yahoo.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 6:47 PM
**Subject:** Dredging moratorium

The dredging moratorium should become a permanent prohibition.

I have had personal experience of dredging upstream from my house. It creates deep holes in the stream bed, changes the course of the stream, creates so much silt that the water is muddy and one is unable to see the bottom. What does this do to all the aquatic life--not just the fish? Dredging along stream banks weakens tree root systems and causes them to fall. Unlawful dredgers have spewed rocks and mud onto stream banks and there is nobody to enforce the law. The dredges create noise pollution. There is trespassing and littering of gas cans and other debris on private land. There is trespassing to move their equipment in and out of the creek/river.

Dredging is just a hobby. It is an unnecessary activity. Do those people dredging even make enough to pay for all their equipment?

Dredging should be outlawed. Let them find another hobby.

**From:** sam adams <benwconrad@yahoo.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/17/2009 9:21 PM
**Subject:** Response to Public Scoping

Mark Stopher
11/17/2009
Department of Fish and Game

My Letter today is in regards to the post card I received notifying me of Public Scoping Meetings. As I am unable to attend due to the short notice I am unable to make arrangements to attend but I feel that it is crucial that I respond. I am President of the Santa Rosa Gold Diggers, a partner on two claims that are too difficult to work without a dredge, and out $47.00 for a dredge permit.

Aside from being a complete waste of time, tax payer money, violating the United States and California Constitutions and a host of other laws these proceedings are unfounded and redundant. This Legal Battle has been fought about once a decade, and that is why there are already several environmental impact reports on file. These reports have scientifically proven that dredging "has no significant effect on the environment". According to Claudia Wise a former EPA scientist of 32 years there are several environmental benefits to dredging.

First, by breaking up and sorting the gravels the dredges give trout and salmon populations refreshed spawning gravels to lay there eggs in.

Second, the dredge holes provide artificial refuge for fish to rest while traveling upstream. The deeper and colder the water is in these the better it is for the fish. By this logic we should no longer be required to fill in our dredge holes when we are done.

Last but not least, the removal of Lead and Mercury from our rivers. The sluice box on a dredge catches 98% of lead and mercury that passes through it, and miners alert the EPA of large deposits of mercury.

The old methods of hydraulic mining, bucket dredges and arsenic solution separation are long gone. These were environmental disasters. That is why they were ended, but dredging has survived because it has shown more benefits than impacts. Also, this could not have come at a worst time. We have historically high unemployment and gold prices, and dredging the most profitable method of small scale mining is outlawed. Dredging directly and indirectly is estimated to contribute almost 100 Million to the California economy. Please lift this moratorium it is unfounded and baseless. Dredging is already properly regulated and seasons are properly coordinated with the fish spawning cycles.

Benjamin W. Conrad

November 27, 2009

Attn: Mark Stopher

I attended your scooping meeting in Sacramento. One of the questions asked was whether you, your staff or your consultants have actually seen a suction dredge in operation. The answer seemed to me that you have not seen a suction dredge in operation and of course now you cannot because it is unlawful to do so.

I would like to explain my dredge operations as done on my placer claim. First of all, I have obtained a permit from the DFG for over 30 years and have followed the rules set forth by the permit. In addition, I have filed a plan of operation with the Forest Service and have followed their rules. I have never questioned the rules set forth by the DFG or the Forest Service. I thought the rules were fair and reasonable.

My operation is a one-man operation. I work my claim about 30 days a year. I only run my dredge about two hours per day. The rest of the day is devoted to moving rocks around by hand. My four-inch dredge is rated, by the manufacturer, to move four or five yards of sand and gravel an hour. If it really could moved that much per hour, I would be a rich man. If I move more than a yard or two a day, I would be surprised.

The creek I have been working for over 30 years was a dump for a hydraulic operation in the 1860's. The miners moved millions of yards of sand, gravel and clay from the top of the mountain to the creek. I do move some clay when dredging but try to keep it at a minimum. However, Mother Nature, in one rainstorm, will move many times more than I do. For example, I was at the claim one weekend in May and I rained so hard that the creek rose 6 to 8 inches do to the amount of runoff. The creek actually turned yellow because of the amount of clay moved by the rainstorm.

One thing you might look into is the amount of acreage being dredged by permit holders and compare it to the acreage of all waterways open to dredging. I do not know how many people hold a permit and a mining claim. Perhaps you should ask permit holders if they also are claim holders that way you could estimate the acreage involved, as each claim is usually 20 acres. Just a thought.

Bill Kafka
PO Box 84
Avery, CA 95224

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | BILL KAFKA |
| Mailing Address: | PO Box 84 Avery, Ca 95224 |
| | |
| Telephone No. (optional): | 209 7951226 |
| Email (optional): | VINOMAKER2006@YAHOO.COM |

| Comments/Issues: |
|---|
| see attached |

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

SUCTION DREDGE PERMITTING PROGRAM
Subsequent EIR – CEQA Scoping Comment Form

Billy Stanford
PO Box 911
Waterford, CA 95386
Tel. #: 209-874-2411
Email: Stihlbill@gmail.com

COMMENTS / ISSUES:

1. It appears that large scale operations, controlled by corporations and/or municipalities, are exempted from the new dredging regulations whereas the individual AMERICAN CITIZEN trying to make an HONEST living is prevented from doing so by certain special interest groups.
2. According to the water quality study done by Joseph C. Greene, Research Biologist, U.S. EPA (Retired), (http://www.icmj.com/UserFiles/file/recent-news/Joseph-Greene-suction-gold-dredge-study.pdf) "The issue against suction dredge operations in the streams of the United States appears to be less an issue of environmental protection and more of an issue of certain organized individuals and groups being unwilling to share the outdoors with others without like interests."
3. Since 1980, my experience and my own eyes have witnessed a steady decline in the number of dredges on the Salmon River in Northern California **and** a steady decline in the number of fish on Salmon River. I have witnessed a tremendous increase of recreational users such as kayakers, rafters, and marijuana growers as well as increased gill netting at the mouths of the Salmon, Klamath and Trinity rivers. COMMON SENSE indicates that the problem is **not** dredging but **is** directly related to harvest practices of the Salmon and possibly the hazardous waste left along the river banks by kayakers and recreational users. Recreational users are not required to have porta-potties or sanitary waste facilities whereas ALL miners are required to have such.
4. If dredges were deleterious to fish, then the number of fish should have increased exponentially with each years decrease in dredging.
5. Why is it that money from the general fund is not allowed to be used for administration of a federal AMERICAN RIGHT to make an honest living, but yet this same money is allocated to special interest groups giving them funding to eliminate our rights and attacking our economy this very country was founded on; the ability to make an honest living by the individual American?
6. I would like to offer the use of my mining claims on the North Fork of the Salmon River for additional on-site studies or research.

We are all AMERICANS and share this wonderful country. Special interest groups are only concerned with their individual agendas at the expense of all others affected.

Which is more important; the special interest group's agendas or the rights of American Citizens to make an honest living and share this planet with ALL species through education and respect?

Thank you,

Billy Lee Stanford 12/2/2009

**From:** Bob <morganhorses@gmail.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/14/2009 12:28 PM
**Subject:** Comment on Suction Dredge Permitting Program

November 14, 2009

To: Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

From: Bob Atwood
PO Box 9561
Bakersfield, CA 93389

RE: Comment on Suction Dredge Permitting Program on the Suction Dredge Permitting Program.

Dear sir,

I believe Suction Dredge mining should be banned in California. I worked with salmonids from 2006 to 2008 in the Mid Klamath watershed. I conducted salmon spawner surveys and saw first hand the devastation caused by the dredge miners. Organizations like the New Forty Niners had a complete disregard for Salmonid fisheries. I saw many dredge miners with open five gallon cans of gas balanced on rocks in the middle of streams. I saw mounds of garbage and piles of human waste at miner camps on the Salmon river in northern california. One miner with a claim could have 6 buddies camped out with him during the summer impacting the environment. Many of these miners were from out of state and I met one from Holland and one from Switzerland.

One instance last year was of particular concern. On upper Indian Creek by Happy Camp we were to conduct a Salmon Spawner survey in Fall. The New Forty Niners had touted this section of river as having a lot of gold to its members during the summer. About a mile of prime salmon spawning habitat had been wiped out. Salmon like to spawn in the gravels in the tail outs of pools. The dredge miners had made small rock dams at the end of each pool to raise the water level so their dredge could work. Then they suctioned out all the spawning gravels and spit them out in the riffle below the pool. Afterward, the pool was deep with just large rocks in the bottom and no gravel. The gravel was in the riffles between pools now. Salmon don't spawn in riffles since their eggs would just be washed out and killed in a storm. So for 2008 this prime stretch of river had the spawning area destroyed. This is at a time when commercial fishing was banned and the population of salmon in California was in a major decline.

Sincerely,
Bob Atwood

November 16. 2009

Mr. Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding. CA 96001

Dear Mr. Stopher:

I am writing this letter after our phone call today regarding suction dredging in the waters of California. I have been involved in suction dredging since 2001. In my experience I have removed pounds of old lead, mercury and many cans and bottles from the rivers and streams. I have observed fish off all sizes moving in and around the suction nozzle and around the discharge end of the sluice box. At no time have I ever seen a fish be harmed in any way. Also note that while dredging, the miners clean up the river bottom and create pools for fish to congregate in. I believe the miners are improving the habitat for all creatures living in the waters. If preservation of the fishery is the goal, by limiting the dredging season in the small creeks from May 15 to October 1 the fish would not be affected during spawning periods. Since fish typically do not spawn in the larger rivers it makes sense to keep dredging open year round in those areas. Fishing should be monitored more closely. I believe the Indians have a right to subsistence fishing for their families but I don't believe they should be able to use modern nets to fill trucks with fish that are caught so far up the river that they taste like mud and that nobody want to eat. If a fish makes it up the river a certain distance they should be able to exist without human interference. I think they should be left alone to do what they do for the survival of the species. The fish should not be exploited for the harvesting of roe and carcasses left along the river banks.

The local economies benefit from mining activities by way of retail sales and tourism as well as the state sales tax generated and permit fees incurred. The jobs created by the mining industry are plentiful and benefit the people of this country; not those overseas, to sustain our families.

I am happy to volunteer my time to this effort in a constructive way.

Sincerely.

Bob Fish
833 Humboldt Street
Eureka. CA 95501
707-616-3845

**From:** "Bob Hendy" <bob@jllandscape.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/2/2009 8:52 AM
**Subject:** suction dredging

Hi Mark,
Just wanted to give my input to the subject of dredging.
Having fished for steelhead,salmon, and trout most of my life, from the Santa Ynez river to the Rouge to the Salmon river in Idaho, and also dredged most of my life, I'm 60 I feel that I should respond.
Although human activity of any kind does have an impact on the environment, I feel that we as miners are continually singled out for other factors that affect the environment and fish in general.
First of all I think the main issues are as follows:
Water quality
The presence of mercury in the streams of the mother lode
The breeding of hatchery fish and their survivability
Stream bed disruption
The state of streams that are controlled by dams

The water quality issue is of course up to mother nature, droughts are one cause, release of water into stream beds is another. I think that most people don't have a clue as to what a natural stream or river looks like. In times of floods or rapid snow melt streams run fairly wild,cut banks,take down trees, scour the bed, deposit gravel beds for fish to spawn in, and so forth.

The mercury issue is complex,most miners hate it and try to avoid it,it covers the gold that is recovered and is hard to remove.
I have encountered pound of it in the main river stanislaus, removed it and turned it in to the hazardes waste collection site at toulumne county.
Some program needs to be set up state wide to collect it,even if it contains gold, the state, the federal government is doing virtually nothing to help solve this matter.And it is not going to go away until it is removed!

Currently most stream flows are controlled for flood protection and water retention, most of the streams that I have mined in are in poor condition due to this control, no banks are being cut,gravel redisposition is virtually nil, and places for fish to spawn in are being replaced by large cobble, not a happy place for fish or their food source. It is similar to not letting natural fires burn,controlling them and then having a big fire wipe out all the existing trees.
These beds need disruption from time to time, dredging does tis on a very small scale.
We as miners realize that dredging during spawning periods should be prohibited,and no change in that policy should change. We as miners are also fishermen!

Thanks for the opportunity to share my thoughts
Sincerely
Bob Hendy
Sonora Calif

**From:** Bob Madgic <bmadgic@charter.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/19/2009 11:48 AM
**Subject:** STOP suction dredging

Mark Stopher,
I fully support the ban on suction dredging, which injures our waterways and our fishes. Persons should not have a" livelihood" or engage in practices that damage public resources, it's that simple.
Uphold the public trust as your first priority.
Bob Madgic, author, A Guide to California Freshwater Fishes.

From: brad macy <bradmacy@pacbell.net>

To: <dfgsuctiondredge@dfg.ca.gov>

Date: 12/3/2009 11:02 PM

Subject: Input on EIR for gold dredging in California

Attachments: Dredge.doc

Mark Stopher

California Department of Fish and Game

601 Locust Street

Redding, CA 96001

I have attached my input on the environmental effects of gold dredging. Please submit my input to the EIR committee.

Thank you.

Brad Macy

To: IER Investigating Committee for Gold Dredging in California.

From: Brad Macy

I would like to give my input into the discussion of the environmental impacts of gold dredging.

**1. In regards to <u>water toxicology</u>:**

The investigation should look into the long term positive effects of the removal of heavy metals from the stream by gold dredgers. I remove on average over 10 pounds of lead, 10 pounds of rusty iron, and 1/2 pound of mercury from the rivers per year. Multiply this by 3500. This equals 35,000 pounds of lead and iron, and 1750 pounds of mercury removed from the rivers each year! There is speculation that gold dredging is the cause of increased mercury levels in fish. The investigators should question this. I recommend asking these questions:

a. Is there, in fact, an increase in heavy metals found in river fish now compared to previous years ?

b. If so, could these metals be increasing in fish because they are slowly forming water soluble salts over the years (since being placed there in the 19th and early 20th centuries)?

c. If elemental mercury is in fact breaking down into water soluble salts, what is the future impact of this breakdown in the tributaries and do we need to remove it now?

d. Could removing these heavy metals by gold dredging actually be an economical way to rid our tributaries of heavy metals?

**2. In regards to Climate change and air quality.**

I think we all know that 3500 small engines running a few weeks a year are not going to affect climate change. It does not take a rocket scientist to figure that out.

**3. In regards to biological resources and fisheries.**

The 1997 EIR already found a positive impact on the spawning of salmon related to dredging. New reports should be analyzed with care as climate change, regulatory and economic factors, and decreased water resources in general may be having much more of an impact on fish populations than gold dredging.

**4. In regards to geomorphology and aesthetics.**

I can only speak for myself and those who I know dredge for gold. I always take out more trash than I produce when I gold mine. Gold miners represent a very small number of people up in the hills with four wheel drives. I would ask the following questions:

a. What percentage of campers do gold dredgers represent?

b. What percentage of 4 wheel drive vehicles on the off roads do the gold dredgers represent?

c. Are other hobbies such as "off road vehicles" ei. quads, dirts bikes, etc. be causing irreprable damage to these roads.

I appreciate your consideration of my comments. I would be glad to participate in any way possible to assist in the process. Please feel free to call me at any time.

Sincerely,

Brad Macy

**From:** <camaro1963@aol.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/4/2009 10:17 AM
**Subject:** Please allow dredging

To whom it may concern,

I live on auburn revene creek and when they let water out and it stirs up the bottom of the creek it does not seem to bother the fish. I see no difference in them allowing more water to flow or nature who dumps huge amounts of water in that creek at one time as to someone stirring up the water alittle bit and have it settle. When they let the water out it takes days for the water to clear, you can't even see an inch into the water.

I personally do not own a dredge, but Bob the placer county fish man said it's better for the fish if the silt is not there for them to lay their eggs. I think the environmentalist have gone to far and are now interfering with peoples lives. Please do not restrict this at this time. Sincerely Brenda Kuffel 540 Coyote lane Lincoln CA. 95648 (916)434-0212

**From:** <camaro1963@aol.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/4/2009 10:21 AM
**Subject:** Suction Dredging Permitting Program

To whom it may concern,

Please do not cancel dredging, I do not think the little bit a dredge stirs up as much as nature and man letting water out of a dam does. I see Auburn Revene change all the time and it does not seem to bother the fish. When it rains really hard or they release more water it has to do more than what dredging does. The fish even with what nature does comes back. Please keep California gold history alive stop the environmentalist from controlling everyone's lives. Sincerely Brenda Kuffel
=

**From:** "Brian Hill" <bhill@igc.org>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/30/2009 6:08 PM
**Subject:** Input regarding mandated review of Suction Dredging

Dear Mark Stopher;

Please find below my comments and documentation regarding suction dredging. I have dredged for about 30 years, and I am quite sure that suction dredging could have little or no negative impact on waterways, and regulations could be designed so that dredgers could help restore degraded waterways as they mine. I suggest considering pilot studies which would result in regulations which are educational and that direct miners to mine in ways that not only not harm waterways but improve degraded ones. I am willing to participate in any such studies, especially if a project which would remove detrimental sediment as part of the mining process. I am a founder of the recent 'responsible mining' movement (see www.communitymining.org ).

The bill passed which put a moratorium on suction dredging is based on several incorrect assumptions;

1. Mercury is not dormant on the bottom of waterways, some of it travels with what dredgers call annual flood gravel, mercury naturally oxidizes in the water and enters the food chain, and dredgers DO NOT re-introduce mercury as part of the dredging process, rather they collect 98+% of the mercury in their sluice boxes because mercury is almost as heavy as gold it stays in the sluice boxes and is not re-introduced to the river. Almost none re-enters the waterway. The exact amount could be determined with testing as I have proposed below, and as is mandated by the existing moratorium. Therefore, dredgers remove most of the mercury (native and human introduced) from waterways. Dredgers with 8 inch dredges in the Trinity River regularly recover pounds of lead from bullets and sinkers each day and ounces of mercury.

2. The Fish and Game carefully regulates where dredgers can work. Miners are never permitted to dredge in spawning area, so the charge that dredges suck up salmon and steelhead eggs is another undocumented accusation.

3. The following may be the most ignorant accusation: Dredges suck up salmon and steelhead with their suction hoses. I have dredged for 30 years, and I can assure you it is almost impossible to suck up a salmon/trout with a dredge - they feel the current from the suction and simply swim away. Rather, there are always local trout and fry that hang around the dredge and feast on the little critters loosened up by the dredging process.

Gary Stern, mid 1980's Master student at Humboldt State, completed a Master's thesis on the effects of suction dredging (Stern, G. R. 1988. Effects of suction dredge mining on anadromous salmonid habitat in Canyon Creek, Trinity County, California. M.S. Thesis, Humboldt State University, Arcata, California, 80 pp) and spent a whole summer with the dredgers on Canyon Creek (a tributary of the Trinity near Junction City). I was one of the dredgers who volunteered his operation for Gary's study. A related study was published as "Impacts of Suction Dredge Mining on Anadromous Fish, Invertebrates and Habitat in Canyon Creek, CA., by Thomas J. Hassler, William L. Somer and Gary R. Stern, California Cooperative Fishery Research Unity, U.S. Fish & Wildlife Service, Humboldt State University, Final Report 1986.

Gary's conclusion states that, "if dredge mining regulations are observed, the effects of small gold dredges on the stream and fish habitat are minimal. Most dredge miners seemed to be concerned about the fish and stream habitat, but did not know what they should or should or should not do when dredging. If we can inform more dredgers about the habitat needs of salmon and trout, they can not only avoid damage, but perhaps improve stream habitat for fish." (personal letter from Gary Stern, 8/8/1988)

Following is a list of tested and untested techniques to improve degraded waterways.

Ecological or Restoration Mining

Rivers, streams and possibly reservoirs can be mined to bedrock using appropriate size suction dredges and possibly larger equipment in major waterways like the Klamath so that valuable minerals, aggregate, clays and top soil can be collected and marketed. Simultaneously, the biotic habitat of degraded waterways can be improved/restored in the following ways:

1. In stream gravel can be loosened and cleansed so as to improve spawning habitat and intra-gravel flows so important for cooling, filtration and aeration of the water. It may be possible to replace the current practice

of putting spawning gravel into waterways by simply dredging over-sedimented spawning areas when spawning is not taking place to remove the sediment, leaving only the best spawning gravel. Specially designed suction dredges can separate gravel from sediment, and the sediment can be pumped out of the existing waterway. I have done this.

2. Removal of sediment from waterways and restoration of degraded bench areas, esp., tailing piles left by early mining. Tailing piles and sediment pumped up to the bench from the existing waterway can be combined to restore riparian zones so important for the health of waterways.

3. Construction of permanent rock weirs on bedrock.

4. Construction of in stream deflectors.

5. Pool rehabilitation and construction.

6. Establishment of optimum pool-riffle ratios.

7. Rip-rap construction of stream banks which are threatened by erosion and undercutting.

8. Rehabilitation and/or creation of spawning areas.

9. Removal of mercury and lead.

10. Creation of rock islands.

Thank you for taking the time to consider this input.

Yours truly,

Brian Hill

8760 Platina Road

Igo, CA 96047

530-396-2305

bhill@igc.org

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | Brian Negri |
| Mailing Address: | 3125 Copper Creek Dr<br>Redding CA 96002 |
| Telephone No. (optional): | 530-224-0822 |
| Email (optional): | bmnegri@msn.com |

**Comments/Issues:**

Hi Mark. My family has had a mining claim in Plumas Co for over 45 years. We mine 3-4 days a year and I would guess we move 4-5 cubic yards of material with our dredge. Simply put, I feel a lot of the 3000 suction dredge permits are small miners like myself and as a whole, have little effect on the streams/rivers. - Especially when looking at the effects of run off from the winter.

I believe (although could be wrong) that this bill was somewhat involved with the natives in Klamath and the effect on salmon. Our claim is located at 5500 ft, and our course have no salmon there.

It seems to me that there is a much more multifactorial approach to the fish problem in California. Miners have not, and will not be so influential in this issue. Collectively we can't do as much as mother nature does in the winter, and I hope the DFG will realize that. Thank You.

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name | Brian Stevens |
| Mailing Address: | 369 Buck Ave |
| | Vacaville CA 95688-3844 |
| Telephone No. (optional): | 707 447 2636 |
| Email (optional): | |

**Comments/Issues:**

1. I noticed that your SEIR does not address concerns of streams that are dammed downstream, regarding a) fish migration, b) Water flow migration c) dams effect on turpidity d) life cycle of upstream fish insects?

2. The SEIR does not address any beneficial aspects of Suction Dredging. eg trail maintance to prevent erosion of soil, removal of contaminents from stream and camp site, removal of dead or dieing trees.?

3. Will SEIR address chemicals that migrate to stream's via gravity etc.?

4 Will SEIR address the lost of a Cultural lost of a California heritage the entrepreneural independant miner?

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

November 13, 2009

Comments on Initial Study Suction Dredge Permitting Program Subsequent EIR

Dear Mr. Stopher:

Enclosed are a few comments on the above Study.

5.1 Overview The reference to recreational dredging has to be changed. The dredging community is a prospecting community. We fall under the Federal Mining Law of 1866,1870 and 1872 .
5.58 Location Your comment about most dredging takes place on private lands or unpatented mining claims. You should include that the unpatented mining claims are on Public Lands.

I find it impossible to comment on Environmental Factors Potentially Affected that are to be a potentially significant impact. I noted that nowhere in the comments that Suction Gold Dredging is deleterious to fish. I find it interesting that there in no reference to the DFG'S reference in the Hillman et al v California Fish and Game that suction Gold Dredging IS deleterious to fish. I will comment if possible, when you determine if the Environmental Factors Potentially Affected that are to be a potentially significant impact are deleterious to fish. Also note that all studies that were used in the 1994 EIR did not indicate that Suction Gold Dredging was deleterious to fish.

For your information: An environmental impact report (EIR) must contain facts and analysis, not just the bare conclusions of the agency. Gray v County of Madera, 67 Cal. App. 4th 1099, 85 Cal. Rptr. 3d 50 ( 5th Dist 2008)

Thank You

Bruce Emerson

Bruce Emerson
22700 Johnson Valley Rd.
Foresthill, Ca. 95631

**From:** "clwactivist@juno.com" <clwactivist@juno.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/30/2009 2:41 PM
**Subject:** Suction Dredging in Northern California

To: Mark Stopher, Environmental Program Manager and Jordon Traverso, Deputy Director for Communications, Education and Outreach

From: Carol Wright, 546 Juniper Street, Chico, CA. 95926, (530) 343-8737

Re: Public Scoping for suction dredge permitting program.

I am writing as an interested party, former thirty year resident of Siskiyou County, and frequent visitor to the many rivers and streams of Siskiyou County. I am totally opposed to permitting of suction dredging in the rivers and streams of Northern California. The extreme disturbance to habitat and stream and bank area wildlife should be of major concern to all who value the watersheds of this area. All suction dredge mining and the use of any suck equipment in any California river, stream or lake, regardless of current permit issued by DFG is under a moratorium (SB670).

California rivers, streams and lakes are under considerable stress due to warmer temperatures, human populations, resource extraction, and natural and unnatural causes that are difficult to control. Suction dredge permitting is not difficult to control and should be excluded from the mix of other causes of environmental changes. The low levels of water in Northern California and the severe decline of fish populations are evident to the most inexperienced observer.

DFG must conduct all relevant environment reviews and should conclude that the ban on dredging must continue.

Sincerely,

Carol L. Wright

**From:** carole eagan <caroleeagan33@hotmail.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/15/2009 9:57 AM

Mr. Stopher

Dredging cleans the rivers of mercury therefor it benefits the salmon habitat, I hope you will recind SB670.

Thank You

A concerned voter

Carole Eagan

---

Mark Stopher



CA Dept. DFG

Suction Dredging

Dear Mr. Stopher:

I have dredged on New River for 32 years. The season for dredging has been cut from approximately 6 months to the current 3 months (Jul 1 - Sept. 30th). I agree that the timing is necessary for salmon smolts to be out of the area. I ask that consideration be given to extending the season to the end of Oct. and that Quimby Creek be placed on a year round basis.

BENEFITS OF SUCTION DREDGING:

Compaction:

Compaction of gravel is broken up at no expense to taxpayers. When gravel settles and stabilizes it is ideal for spawning.

Mercury:

Hydraulicking was done on the high bar on my current mining claims. I have dredged below several hydraulic dump chutes and I have never encountered "elemental mercury" in all of my years of dredging on New River. I have recovered occasional gold flakes with mercury on them.

Lead:

I remove any lead recovered from the river. Sometimes it is several pounds.

Aquatic life:

I have started to dredge in an area I previously had worked and the aquatic life was abundant, especially worms. Some people believe that this has created an artificial environment but I believe it is highly beneficial.

Dredging holes:

While New River has a diverse amount of deep and shallow holes, steelhead use the dredging holes to rest in espescially in warmer weather on their way upstream.

POSSIBLE NEGATIVE EFFECTS:

Temporay clouding of the river downstream from worksite, entrainment of caddisfly and stonefly larvae. My experience has shown that these populations have not been affected but have flourished.

I have never observed a trout being entrained by the power of my dredge. On a rare occasion I have observed a small trout 2-3 inches go into the intake following a piece of food I stirred up (this is very rare). The more usual entrainment is the small trout that was gut hooked by a fisherman and drifts downstream into the dredge. Doubtless some people will blame the dredge.

POSSIBLE NEGATIVE EFFECTS cont.

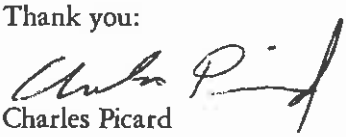
I believe the brown trout is harmful to salmonids. It is non-indigenous to the U.S. and I think was introduced into the Trinity River system about 1877. I would like to see the brown trout included in this EIR or study.

Conclusion:

I believe the current regulations are adequate and the DFG biologists know what they are doing. The necessary regulations (3 months on New River) does preclude this from being commercial regardless of the size of the dredge. It is hard for me to understand with the current fiscal problems that this activity would be stopped by our politicians and the money required to be expended for the study of an activity that has been studied many times previously.

Please put me on a notification list of progress and scoping meetings and of the draft EIR for review..

Thank you:



Charles Picard
4775 Goodwater Ave
Redding CA 96002

e-mail
ccpicard@sbcglobal.net

To Whom it may Concern:

The increase of suction dredging over the past several years has been an unregulated disaster for the Salmon and Klamath Rivers. As a business owner in Somes Bar, Volunteer Fish diver in the Salmon River, and riverside land owner in Orleans, I have seen firsthand the negative effects of the suction dredgers, most notably the club members belonging to the New 49ers of Happy Camp.

1st let me say that as a general store owner I saw no negative effect of banning the dredging this past year. In fact we had our best summer yet of our 6 years operating. There is much more money being spent locally by swimmers, kayakers, and those seeking solitude & quiet. All of these user groups are negatively impacted by the loud motors of the suction dredge.

2nd After swimming the rivers this past fall doing salmon surveys as a volunteer for the USFS, it is shocking to see the damage caused underwater. Car sized holes in the stream-bed, often in the tailouts of pools which are the only places salmon & steelhead can spawn. I have also seen gas cans left by the side

of the river, and riparian rocks and vegitation ripped up or cut through in the search for gold. These special public lands should not be sold out to one user group at the detriment of all others.

Finally as a riverside landowner in orleans our quiet riverside home has had its tranquility shattered the past couple of summers by the full time use of a suction dredge in the river by our property. Again, it seems unjust that one user group should be able to ruin the local environment at the expense of all others.

Thank you for listening to my concerns.

Chris Hatton
Sonora Bar, CA
(530) 469-3350

Clifford C. K
27205, Bonny
Redding CA.
November. 3(

Mr. Mark Stopher
Cal. Dept. of Fish + Game
601 Locust Street
Redding CA 96001

Mark

This is to inform you of my experence l
a suction dredge on the Trinety ~~Redd~~ Ri
near Big Bar Calif. and on Humbug Cree
near Yreka Calif, here I have acctuly :
off and on the last four years.

Twelve years ago I work four day a
a camp cook on a claim on the trinety river
Near Big Bar Calif., part of my job was
pick up beer bottels, can, and other tra
left by the "Big City Scum" that used
beaches of our Claim wile on "Vacat

These are the same people that say
are killing fish and distroing their eggs "Wi
any profe~~the~~thing." I never saw any fish K
by the six inch dredge being used, but
Number of fish feeding on what was
from the rock and sand was a wonderful S

My experances on the Humbug Creek
were even better, we removed some murr
not much, gold, Junk, and cleaned the
of the Creek on the years that have fa

We have had to clear up the claim from hunters, campers, and just gene pubtic. These are the same people tha say we mudy up the creeks & Rivers, the fish eggs & Kill fish, "Not True".

Dredging is done after all fish e have hatched, I have never to this seen any fish Killed by our 4" dredge the 6" dredge I was around on the Tr river.

It seems that the people that complane the most are the Indeic who want our money spent in there and Not in the Towns & stations in area we are dredging.

These women that live the Bay and complane how the dredging Kilies have gotten the public up set over dre

What I would like to Know is will fish and Game of Calif. really tel the truth that Dredgeing & removel of Brush from the creek banks is better Cleaning the creeks and permoting bett fish habetat.

I'am a fisherman and I've seen the differance.

P.S. Over

Richard Nelson

Mark if you would like to talk to
Me give me a call at 530-917-3540

**From:** "Mining property" <noanswer@aol.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/24/2009 5:17 PM
**Subject:** Copper , Iron and Gold claims in Chile

**From:** "Craig Lindsay" <craig.lindsay@comcast.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** <Jerhobbs2@Verizon.net>, <pat@keeneEng.com>, "Craig Lindsay" <clindsay@c...
**Date:** 12/3/2009 9:08 PM
**Subject:** Comments on Scoping Documents - DFG Proposed SEIR

Mark and Team,

#1 Please include letter from: Joseph C. Greene, Research Biologist, U.S. EPA, Retired addressed to State Water Resources Control Board, dated June 6, 2007. I could not find it in the literature search spreadsheet nor mention of it in the Literature Review September 2009. Please add as other comment letters to SWRCB were included in literature search as mentioned under Methodology 3-1 in Literature Review. (If you need the pdf I can provide)

#2 Ref pg 19 Section 5.5.8: No mention is made of river property held by single owners. As a river property owner, it is my best interest to maintain and not contaminate what I own. Although we are possibly few in number it is an unmentioned group.

#3 Ref pg 20 Section 5.5.10: The sentence, "It is unknown whether this behavior is typical of suction dredge miners.", seems to damn by innuendo. One could easily replace suction dredge miners with campers, overnight rafters, kayakers, especially as I have observed the last two groups using the river banks on my and surrounding properties as latrines.

#4 Will the effects to the native "fish" (as defined to include benthic animals, mollusks, amphibians, etc) populations by suction dredging be judged on the basis of specific river basins and those segments of a river delimited by dams? For example, much of the surveyed research papers mentioned, specifically target anadromous fish species, the North Fork of the American upstream from Lake Clementine has not seen a migrating fish since 1936.

#5 How will the various factors that have "a potentially significant impact" in a given river system be weighted and integrated into the draft SEIR? e.g. is noise a bigger irritant to certain groups than a substantial adverse event on a scenic vista? How is the judgment call made?

#6 Also no mention is made of infrequent catastrophic river flows i.e the flood years of 1986 and 1997 as it pertains to major effects on stream bed changes, gravel deposition, damage to riverine habitat and effects on wildlife; will this be addressed or is the SEIR specific to human activities exclusively?

#7 How will the assessment of potential adverse effects be applied, as it relates to the evolution on the river system, over what time period? As an example the North Fork of the American was totally different in 1848 with no human intervention, as compared to 1868 after extensive hydraulic mining as compared to 1928 with no dams as to how it is in 2009? Are the effects of a single dredging season to based at the end of the season or after next Springs changes.

Thank you for your consideration
Craig A. Lindsay
14 Lourdes Court
Sacramento, CA 95831
cell 916-813-0104
craig.lindsay@comcast.net

PS Will you be forming groups that include private citizens during the draft SEIR period? If so, I would be greatly interested in participating.

**Public Comment on California Department of Fish and Game Notice of Preparation for Suction Dredge Mining and Rule Making Process**

To Mark Stopher Dec 1, 2009
California Department of Fish and Game
601 Locust
Redding Ca. 96001

Mr. Stopher

I appreciate the opportunity to participate in the rule making process for suction dredge mining in the state of California.

The purpose of this comment is to inform the DFG that in the process of doing their Environmental Impact Study (EIR) to promulgate Suction Dredge Regulations for the State of California, the DFG should consider the impact that all classes or groups of people who participate in outdoor activities have upon the environment. To do otherwise would unfairly focus on the mining community.

Truth is that members of the Mining Community are conscientious stewards of the environment. Dredging activities help in a significant way to remove trash and toxic materials that others leave behind and are less likely to harm the environment than "Any Other Group". Numerous studies show that suction dredge mining has little "If any" impact on the environment. Only when you segregate suction dredge activities from the entire equation does it appear to have any measurable impacts, but of course all human activity has some impact upon the environment. Question is to what degree? What about the forces of Nature and runoff, how does this impact the environment? What effect does the rise and fall of water flows from Dam releases have upon aquatic life? It must all be put in a proper perspective and not be taken out of context. A major limitation to the

current NOP is the non existent conceptualization and measurement of suction dredge activities compared to other outdoor activities and the balance that Nature will ultimately restore.

This oversight may very well lead to a bias conclusion.

If the DFG were to only focus on suction dredge mining activities in their SEIR and overlook all other groups of the same class (those who engage in outdoor activities) such as rafters, hikers, fishermen, campers, 4wheelers, trail riders, horse back riders, mountain-bikers, boaters ect. and the impact that their activities have upon the environment along with the other factors previously mentioned, is "Discrimination".

Discriminatory practices take many forms, they usually involve some form of exclusion or rejection of particular groups of individuals, in this case they involve the inclusion of a particular group segregated from all other groups of the same class. And since suction dredge miners are in the extreme minority of that class they have unwittingly become a target of discrimination through selective functionalization.

The above example is but one way our "Trusted Public Servants" gain acceptance for radical reforms. Radical change is often not secured through extensive inclusion, but rather through selective inclusion or exclusion of groups targeted for change. Other tactics that are often used to influence the outcome include but are not limited to, deleting stages in the process, including new stakeholders, alternating the process sequence, suppressing issues, and controlling the kind of influence exerted by reform leaders.

By consciously including and excluding target groups reform leaders can secure that the radicalness of a reform is preserved in the formulation process. The use of these tactics in essence, leads to a "Prosecution" of the targeted group. This prosecution may sound reasonable on the surface, but; as so often is the case, becomes mere "Propaganda" when other mitigating factors are introduced into the equation.

The seemingly unending and corrupting influence of money and power, both in business and politics that frequently deviate from normative expectations has activated the public consciousness about ethics. They are also well aware of how those mostly unstated pre-suppositions render the average person vulnerable to contrived interruptions of those expectations. Ordinary people simply do not expect their public servants to treat their sovereignty with a total disregard for well-established norms of civility and due course of law. Neither do ordinary persons of reasonable prudence expect those in positions of public trust to outrageously betray that trust.

In managing ethically, public servants are required to be impartial, to exercise procedural fairness, and to "Support and Defend" the rights of those to whom they serve. Having the highest ethical standards presumes more than compliance with the law, including administrative law: it requires a culture or an intuition in decision-making by administrators based on fairness, transparency and accountability and a sense of the public interest, as well as the careful exercise of the legal authorities delegated by Government. They are also expected to know the limits of that authority and honor it.

Clearly, political leaders, administrative agencies, other organizations and their employees need to improve the ethicality of their actions. This will in turn provide an important opportunity for them to once again retain the public trust by refraining from unethical behavior and decision making. The idea that a civilization could sustain itself on the basis of such a transgression is an ethical, spiritual, and metaphysical monstrosity. It means conducting the economic affairs of man as if people really did not matter at all.

Respectfully, Submitted

Craig Wise

MARK STOPHER
CALIFORNIA DEPARTMENT OF FISH AND GAME
601 LOCUST STREET
REDDING, CAL. 96001

NOVEMBER 16, 2009

RE: IMPACT REPORT FOR SUCTION DREDGE PERMITTING

I have been a gold dredger for close to 30 years and have enjoyed my second career.I am a person who is what I believe is in tune with the environment. I am very interested in fish habitat. While dredging I watch fish in my tailing pile eating worms and grubs while dredging. I believe that this is healthy. I also believe that over the years I"ve looked were I have dredged and note that fish can spawn in an area that has been dredged. Cleaned gravel helps I'am sure. My work at my claim is proof of responsible dredging. We believe that the number of fishing licences should be limited to fewer licences per year, monitoring the Indians netting processes. (should not able to stretch nets all the way across the river to catch fish). I believe that mining (dredging) is a federally mandated right and should be controlled as it has been in the past by a simple permit

The experiance that I have had over the years is extensive, and I am a reponsible dredger. I see this as another right being taken away. We the people aren't going to be taking this lying down.

I believe that the season for tributaries should be open to dredging from May 1st. to October 1st. other parts of major rivers need to be open all year around, depending apon the river and its habitat.

Also, the financial impact on the country would be quite large to companies that support the mining industry , taxes and all others that support our industry.

respectfully,

Danny e Knapk

DAN KNAPEK
1314 BROADWAY
EUREKA, CA. 95501
(707)443-9534

**From:** Dan Miller <bonaro123@yahoo.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/29/2009 8:01 PM
**Subject:** Suction dredging comments

To: Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, Ca 96001

I am writing in support of suction dredge mining.
I will be brief as I am sure the talking point of most of what I have to say has been covered at length by others.

I have been closely involved with the struggle over gold dredging for many years. It is plainly obvious that the resistance to this activity is NOT supported by good science but instead by tribal and fisherman interests who have gathers a following of passionate yet uninformed environmentalists.

- Dredging has never been proven to kill a single fish, only presumptions exist, not one dead fish. Salmon are in comparable decline in rivers where gold does not occur, the only common activity here is fishing.
The purpose of most fishing is to kill the fish. Logic should lead you to the fisherman if you want to control how many fish are killed.

- Dredging does not pollute. The pollution (mercury, lead fishing sinkers and bullets, iron, etc) is already in the river left by other users. Dredges capture and remove these materials wil very high efficientcy.

- Suction Dredging has alredy been legally classified as De Minimus by the federal government.

Thanks,

Dan Miller
1910 Maple Valley rd.
Olympia, WA 98512

11-15-09

To Hoom This may Concern I would like to know who makes up these Fony Baloney Rules in Calif Cause is / DAMN SURE NOT The Tax Payers, ANY Fool knows Salmon Dont Run in The Mountains And further more Lots of streams in The Sierras Have so much Over Berden The Trout Dont Have Enough Pools To survive in The Fish move in Before operation is Done, NOT To mention The Fish Hang Around The Sluice Box waitin for a meal So with That The Enviromental Groups Pushin This again Dont Have A Clue How Thing Realy work including Logging in The Sierras. Small scale Mining under six inches Does Nothing But Good For The ~~Enviormen~~ Environment And further more I want A Free Permit When This is Resolved For Loosing Half Of The 2009 season, Someone Needs To stand up For The Tax Payers in California, But I Guess People Paid By The Government Better not Rock The Boat, Right !! Thank You For your Time.

Dana London

Not Happy with California Enviormental Politicks !

TO:

MARK STOPHER
CALIFORNIA DEPARTMENT OF FISH & GAME
601 LOCUST STREET
REDDING, CALIF.
96001

FROM:

TOMMIE GRAVELY
POST OFFICE BOX 1641
QUINCY, CALIF.
95971

TO WHOM IT MAY CONCERN,

WHAT YOU DID BY TAKING ARE RIGHTS AWAY WAS WRONG BY TAKING THE DREDGING PERMITS AWAY. BECAUSE THE SALMON DO NOT RUN UP HERE. ENFORCING THE NO DREDGING LAW UP HERE IS ALL WRONG. THE SEASON WAS CUT IN HALF AND WE DID NOT GET ARE MONEY BACK, WHY!!! DREDGING DOSE NOT DAMAGE THE RIVERS & CREEKS & STEMS.

11-18-2009

The Bottom Line is we need are money Back. Also we need are Right to earn Back. This is the USA not some place were we do nothing But what we are told.

A lot of familys depend on money EARN In Gold to EAT and Live.

And By the way Quincy Have NO Samen So explane to my kids I can not do x-mess B-days Because of the Samen

A Real Reason. Not a Suit

**From:** "Dana Nichol" <dana.nichol@sbcglobal.net>
**To:** "DFG Suction Dredge" <DFGSUCTIONDREDGE@dfg.ca.gov>
**Date:** 11/23/2009 3:32 PM
**Subject:** Re: Question from West Sac scoping mtg

OK, thanks for the clarification Mark. Have a nice Thanksgiving!

Regards,
Dana

----- Original Message -----
From: DFG Suction Dredge
To: Dana Nichol
Sent: Monday, November 23, 2009 3:11 PM
Subject: Re: Question from West Sac scoping mtg

Dana

I believe the question pertained to whether a legislator could introduce a bill to authorize DFG to provide refunds of suction dredge fees for 2009. I don't recall that was exactly my response. I think I said that refunds would require legislation and the public is free to contact legislators to see if that is feasible. At one point I thought such legislation was going to be introduced but we have not seen it. I think I also said that as time passes it seems to me less likely that such legislation would be successful.

>>> "Dana Nichol" <dana.nichol@sbcglobal.net> 11/18/2009 9:19 AM >>>
Hello Mark: I attended the November 17 Suction Dredge scoping meeting in West Sacramento. During the comment/question card session, Michael Stevenson from Horizon was reading people's questions and you were answering them. I was trying to write everything down and was distracted by my own notetaking and missed something you said.

All I caught was that your answer was: "that would make a great piece of legislation if you could find someone to carry it...I don't know why no one has thought of that before?"

I didn't hear what the question was. Can you recall what is was?

Regards,
Dana Nichol

**From:** Dave Mack <dcmccra@attglobal.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 12:29 AM
**Subject:** Volume calculations on suction dredges
**Attachments:** Dennis Maria.pdf; Volume Capacity of Suction Dredges.doc

The New 49'ers
27 Davis Road, Happy Camp, CA 96039
(530) 493-2012 www.goldgold.com

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

SUBJECT: Volume calculations on suction dredges

Dear Mr. Stopher,

Our comments are attached as Volume Capacity of Suction Dredges.doc; We have also attached a supporting document from Dennis Maria, a retired Department biologist.

I'm sorry this is a little long with the links. But I feel it is some of the most important input you are going to receive at this phase.

Thank you,

Dave McCracken

**State of California** **The Resources Agency**

# Memorandum

Date: December 3, 2009

To : Mr. Nick Villa

From :**Department of Fish and Game** - Watershed Biologist, Siskiyou County

Subject: Suction Dredge Activity Tour, Salmon River (Sept. 15, 2003)

The purpose of this memo is to inform you of my recent tour of the mainstem Salmon River to investigate suction dredging activity in the lower Salmon by New 49er members (the New 49ers is a local mining association headquartered in Happy Camp headed by Mr. Dave McCracken). As you know, there have been a number of calls received by you, Craig Martz and myself from concerned locals related to this dredging activity. My primary purpose of setting up this tour was to get together with some of the principles involved to determine what the concern was about as it related to impacts to fish.

On Monday September 15, which also happens to be the last day of the dredging season on the Salmon River, I, accompanied by my supervisor, Senior Fishery Biologist, Bob McAllister, and seven personnel of US Forest Service (representing Six Rivers National Forest and the Klamath National Forest), two members of the New 49er Mining Club of Happy Camp, California (President Dave McCracken and a work associate of his) and a representative from the Salmon River Restoration Council (Mr. Peter Brucker) toured three of the most active New 49er dredging sites in the lower approximately 15 miles of the Salmon River. The following is a summary of my observations.

At the lowermost site approximately 1-mile upstream of the Klamath River we saw three small inactive dredges. There were approximately 7 or 8 dredge holes with the largest estimated at 15 feet in diameter and approximately 4 feet deep. Below each of the dredger holes was a relatively short plume of fine sediments that had fallen out. The habitat in this reach of the river was primarily a run with little if any cover associated with the wetted channel (no cover of any kind was noted in the channel reach except limited amounts at the edges of the channel. The dredge holes created the only discernable juvenile rearing habitat (rearing & escape cover) that I could see from our high vantage point above the river. This rearing habitat consisted of "clean" unimbedded cobbles that covered the dredger pool substrate (see photo in e-mail attachment).

The substrate throughout this reach was comprised of mostly cobble which appeared to have a relatively high degree of embeddedness (estimated at 30-40%). In addition, I saw no gravel

accumulations associated with any of the dredge holes created at this location. There exist documented instances that unstable spawning gravel mounds created by dredgers below dredge holes have been used by anadromous salmonids only to be lost by high winter flows washing these gravel mounds away. My files indicate little, if any, spawning occurs in this reach of the Salmon River. Peter Brucker, who has been involved with numerous spawning surveys on the Salmon River over the past number of years (> 10 yrs.) agreed that this reach of the Salmon River is not typically used for spawning. Consequently the relatively light accumulation of fines observed at this location, the general lack of rearing habitat (cover) in this reach and the relatively high temperatures found here (usually in excess of 70-73 degrees F) makes it unlikely that the current dredging impacts will significantly or substantially harm anadromous salmonid spawning habitat or juvenile salmonids within this reach. In fact, for an area which had been dredged all summer long, I saw relatively innocuous disturbance to the existing habitat. As Mr. McCracken indicated to the group, his mining club membership age averaged 63 years, tended to use dredge intakes of 3 to 5 inches which is less than the maximum dredge intake size allowed (i.e., 6 inches) and didn't really work all that hard at dredging. In a reach consisting of mostly cobble, much of the dredging at this location required hand work in order to remove the cobble overburden and therefore dredging progress was relatively very slow. Mr. McCracken indicated that the amount of total riverbed disturbance we all observed at this location the day of our tour; which took the full 2 ½ months of the dredging season to accomplish I might add; could have been matched by Dave McCracken working alone using a 6-inch dredge intake over a two week period. Having seen Dave McCracken is past dredging operations, I believe him.

Our second stop on the Salmon River was at a large road turnout located less than ½ mile downstream of "Sixmile" a large flat located a short distance upstream of Duncan Creek. The river location at this turnout was a relatively short 200-yard river reach that the New 49ers used this summer to provide training to club members. It was the training of twenty-one New 49er members all at one time at this location during the summer that I believe really got the local Salmon River community concerned. The large influx of dredger "trainees" and their vehicles inundated a generally quiet area typically used by locals for recreating (swimming, sun bathing, etc.) on the river. As with the lower dredging location, I saw a few dredger holes that caused me little concern from a biological standpoint. It did not appear to be an anadromous spawning reach area, (i.e. it was a reach of river that has bedrock dominated streambanks with a substrate consisting predominantly of cobble-size rock. Because of the steeper gradient in this reach of the Salmon River, relatively high velocities prevented the accumulation of fines at the dredger pool tailouts. Accumulations at the tailouts consisted of cobbles too large for use by spawning anadromous salmonids.

On the day the dredger training occurred at this location, up to 6 dredges were said to have been operating pretty much simultaneously. During that training exercise Peter Brucker indicated he stopped in to check out what was going on. He indicated to our tour group on the 15th when asked about turbidity levels he saw that it appeared to him that the turbidity level was "not all that bad" in the first riffle immediately below the river reach where numerous dredges were being simultaneously operated within an approximately 200 yard stretch of the river immediately upstream. After further discussion by the group, Dave McCracken indicated that he was going to limit the number of members he would train at any one time at any one location on the Salmon River to no more than 5 or 6 people and that any group of folks larger than that would be trained in

the Klamath River.

A short stop was made at the "Sixmile campsite to discuss the problems associated with the inundation of campers "taking over" what was once a day use area that locals used to access the river. This area was being used by club members for extended overnight camping which was allowed under a "special use permit" issued by the USFS to the New 49er Mining Club. Apparently this location was a popular area for locals including a popular place for nude sunbathing. Mr. McCracken indicated that it was not his Mining Club's intention to exclude local use of this area and generally agreed to work with the Salmon River Restoration council to reduce conflict between locals and New 49er members over the use of this location.

The fourth and final stop was made approximately 4 miles below the Forks of Salmon, the most upstream reach dredged by New 49er members this year (2003) according to Mr. McCracken. One relatively fresh dredge hole located in the live stream just upstream of a large deep hole was seen at this location along with another small wetted hole that was located on a gravel bar and which was isolated by 30 feet or more from the flowing river channel. The river velocity at the location of the dredge hole in the live channel was too fast for salmon or steelhead spawning to occur. The fast current in this dredge hole reach consequently did not allow for any fine sediment deposition or gravel size bedload deposition to accumulate below the hole. It is suspected that any fines brought to the surface during dredging would end up in the large deep pool located about 50 yards downstream. This area appears to be very popular for "high-bankers". Moss growing on the rocks within the winter bankful area of the channel traps and holds flakes of gold. Dredgers scrape this moss of the rocks and wash the moss off in buckets and either pans the gold or runs it through a small sluice box onto high ground outside the live channel where it is allowed to percolate back to the river. There was no evidence that any water used in high-banking operations at this location returned directly into the river which would be a F&G violation.

In summary, although there were a number of other issues of concern brought up related to dredging (e.g., fuel spillage, waste management by overnight camping, etc.), I saw nothing that would be considered a violation or that would have a significant impact to the fishery or significantly negatively impact the overall biotic community of the Salmon River. This year's dredging activities by New 49er members was isolated to three or 4 river reach locations on the lower Salmon River. I would estimate that the amount of dredger disturbance on the mainstem Salmon River by New 49er members represents at most about 2 to 3 % of the entire mainstem Salmon. Nearly most of the disturbed areas we saw during our tour were in areas not suitable for spawning and with very limited rearing potential. Most summer steelhead and spring chinook holding that occurs during summer months is mostly restricted to the North and South forks of the Salmon and their tributaries and in Wooley Creek. Wooley Creek is currently off limits to all dredging actvities.

The remaining concerns expressed by folks on the tour was the cumulative effects of dredging in the Salmon and the possibility of gold prices continuing to increase thereby increasing the likelihood that dredging activity will spread dramatically throughout the Salmon River watershed. I suggested that perhaps a study is in order to determine the cumulative effects related to a relatively high concentration of dredgers working in a finite reach of the river. I agreed to hold a meeting in January with USFS biologists, Salmon River Restoration Council members and New

49er leadership to discuss a study proposal to help answer he cumulative effects question and to iron out past and expected future conflicts between locals and dredgers before they arise.

Dennis R. Maria
Associate Fishery Biologist
Mid-Upper Klamath River Watershed

Call me if you have any questions at 841-2552.

Dennis Maria
Associate Fishery Biologist

cc: C. Martz, B. McAllister, D. McCracken,

# The New 49'ers

**27 Davis Road, Happy Camp, CA 96039**
**(530) 493-2012 www.goldgold.com**

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

**SUBJECT:** Calculating volume capacities correctly in the suction dredging EIR

Dear Mr. Stopher,

I have spent most of my adult life working within the suction dredge industry in California. I also was part of the industry working group which assisted in preparation of the EIR that was completed in 1994. I have extensive experience in suction dredging. I have personally developed many of the innovations within the industry. I have also developed the most productive, standardized teamwork procedures being used within the industry. I have been involved with commercial dredging projects all around the world, and am generally regarded as a leading expert in the field.

I have also owned and operated The New 49'ers Prospecting Association for the past 23+ summer mining seasons in California. As part of my duties, I have trained hundreds of people in underwater mining techniques. I have also devoted countless hours observing members of our association (dredging) in hopes of improving the amount of gold that they find. As we have more than 2,000 active members, and I have devoted much of the last 23+ summers either teaching or watching them, it would be safe to say that I have a lot of practical experience in this field. I have written the best-selling manuals and produced the best-selling video presentations (worldwide) on suction dredging. Both federal and California State courts have acknowledged me as an expert in the field of suction dredging.

**Your Volume Calculations are Grossly Incorrect**

In going through your Initial Study SEIR, I see that quite a lot of work was invested into projected volume capacities of the different sized dredges. I can see by the conclusions that the authors have relied largely upon the promotional materials being advertised by dredge manufacturers. This is unfortunate; because for the most part, they have completely overlooked the true nature of streambed construction. While it is not my

purpose to be confrontational here, this is to inform you that the authors' lack of understanding of what actually happens underwater with the dredging process grossly undermines other important parts of your Initial Study SEIR

With few exceptions, the conclusions within the Initial Study SEIR assume that the places where dredgers operate consist of streambeds which are almost entirely made up of classified sediment or gravel, all or most which can easily be sucked into a dredge suction nozzle. Under this theory, the authors predict that larger hose size and more horsepower will proportionately increase volume capacity.

There is a mention about some rocks and cobbles being normally stacked off to one side of the dredge excavation. But the concept is treated as some small part of the process, rather than the controlling factor of the entire process.

These conclusions, along with your volume projections, do not meet reality in the field. They also tend to demonstrate that the authors have a gross misconception of what is actually involved in the dredging process.

Since the Initial Study SEIR is entirely concerned with impacts resulting from the dredging process, in good faith, I am going to invest my best effort here into providing you with a thorough explanation.

Rather than completely rewrite the material, I am going to copy some text out of my books on the key subjects here. I am also going to provide you with some links to important articles which I have written on the different matters involved; articles which provide images which will help with visual demonstration. These are the definitive work on these subjects which have been in existence for many years. It is not something I just put together for your EIR process. This is out of the text book material being used to teach suction dredging all over the world.

For starters, because everything that happens underwater comes back to this, let's please describe the streambed material which dredgers normally have to deal with:

## HARD-PACKED STREAMBED
**(Chapter 3, Gold Dredger's Handbook)**

> A hard-packed streambed consists of material which has been seated tightly together during a major flood storm as the water force and turbulence tapered off enough to allow a bed to form.
>
> During a large flood storm, water forces can and will rip apart existing streambeds and wash the material downriver in a flow of slurry. It is this flow of heavy material across the bedrock which cuts the channel deeper over geologic time. Once streambed material is placed into a slurry-flow during a major flood storm, most gold that is present will quickly work its way down to the bottom of the material which is in fluid motion. That gold will then be directed down the waterway along its own path, washing directly across the stationary surface of the

bedrock, or across the top of a stationary layer of hard-packed streambed that is not being moved by the storm.

Different rocks, having different sizes, weights, and shapes, have different resistances to the flow of water. By resistance, I mean holding power against the flow of water and slurry during the flood storm. Said another way, it would take more force of water to push a heavier rock than a lighter one, or a rounder one compared to a flat rock.

How a rock is positioned in the stream of water and slurry also determines its "holding power" or resistance, to the water's force. A rock positioned in one direction will have a given amount of surface area to absorb the thrust of the storm flow. The same rock, positioned in another way, will be more streamlined to the storm's thrust. So the same rock might have more or less holding power depending upon its position in the flow, as shown in Figure 3-2.

*Fig. 3-2. The same rock, positioned differently along the bottom of the waterway, may have a different amount of holding power against the water's flow during a flood storm.*

Therefore, as a rock is being pushed along the bottom of a waterway by the storm's flow, it has a greater chance of becoming seated if it gets into a more streamlined position, as shown in Figure 3-3.

*Fig. 3-3. Most key rocks within a hard-packed streambed will be positioned in a streamlined direction against the flow.*

During the peak flow period of a major flood storm, there is probably too much water force and violence for very many rocks to seat themselves permanently along the bottom of the waterway. But as the rains or snow runoff diminishes and the water forces let up, there will be a time when rocks can begin seating themselves and start building a bed. This is when hard-packed streambeds are formed.

Since we are talking about it, it is important to point out that since gold is so much heavier than streambed material, it will seat itself along the bottom of the waterway long before the streambed starts forming. First the gold deposits itself along the surface of whatever the storm flow is washing across. That could be bedrock, or it could be a stationary layer of streambed which has not been torn up by the storm. Then, when the storm flow begins to diminish, a new bed builds up over top of the gold. This is the main reason why you find most high-grade pay-streaks concentrated at the bottom of hard-packed streambed layers.

In the building of a natural streambed, rocks are usually seated as their own resistance to the thrust of the water becomes great enough that they become seated. In a rather constant stream of flow, this often occurs when the rock is positioned to the point of least resistance to the flow. Thus, streambeds are formed with most of the rocks positioned to the least resistance to the flow of water.

Actually, most of the key rocks within a streambed were seated in place because of some vacuum that was created as a result of the dynamic interplay between the rock, the underlying stationary surface and the flow of water. Rocks actually get

sucked into the vacuum and automatically position themselves to the least resistance of the flow. If a rock cannot fit into a hole well enough to resist the flow, it will get washed away, leaving room for another rock that will perhaps fit better. As such, a natural streambed will actually construct itself to withstand the greatest possible storm flow that it can hold up against.

*Fig. 3-4. Several rocks seating on bottom (top view).*

Once several rocks have become seated side by side, as demonstrated in Figure 4, newer places are created between them where other rocks can then seat themselves; and the bed builds itself upward, as shown in Figure 3-5, with most of the rocks positioned to the least resistance of the water's force.

*Fig. 3-5. Streambeds form with most of the key rocks pointing into, and slightly downward, to the storm flow.*

As the streambed is formed, smaller pockets are created between the rocks because of their different shapes. As the beds build upward, smaller-sized rocks are sucked down into the vacuums created by these new pockets, and they then become seated there. Then gravel fills the pockets between the rocks, and sand and silt fills the spaces between the gravel-sized material. Every available space within the bed is filled tightly with material, and the entire structure gets packed tight as shown in Figure 3-6.

*Fig. 3-6. The bed forms with smaller-sized material becoming seated and filling in all the spaces between the larger-sized rocks.*

Entire beds construct themselves along the bottom of waterways during major flood storms. Then, at some later time, another flood, causing another huge increase of water force and turbulence, can wash the entire bed away, only to have another bed form again once the storm flows taper off. In this way, riverbeds are formed and swept away again and again by various floods over geologic time.

It is vital for gold dredgers to be very familiar with what hard-packed streambeds look like in their natural state. **Because most pay-streaks will be located along the bottom edge of hard-packed streambeds.** To help you understand what hard-packed streambeds look like, sometimes you can find exposed natural streambed along the edges of an active river or stream. Please see Figures 3-7 and 3-8.

*Fig. 3-7. Side view of natural streambed.*

*Fig. 3-8. Natural streambed left high and dry up just below the trees.*

If you drive along a river road, you often can see the older streambeds right alongside the road where construction cuts have exposed the hard-packed material.

*Fig. 3-9. Natural streambed exposed by road construction.*

Sometimes these old streambeds can be found where ancient streams and rivers used to, but where existing waterways are not present.

The question is often asked, what is the difference between natural and virgin (I prefer to call it *original*) streambed***?*** ***Original streambed*** is a naturally-formed hard-packed layer that has never been disturbed by man. It is a place that has never been mined before. You will not find <u>any</u> man-made objects underneath or inside of original streambed, although you often find them lying on top. All of the gold that has been deposited underneath existing original streambed still remains there today. We find a lot of original streambed at the bottom of some of the deeper rivers in California where the early-timers were not able or willing to go.

Natural streambed is <u>any</u> hard-packed layer that has been formed by a major flood storm. While this includes original material, it also includes any layer of streambed that has been formed by flood storms during the time since portions of some rivers and streams were mined by earlier generations of gold miners.

It is important to understand that a major flood storm can redeposit new hard-packed streambed and entirely new placer deposits into an area which has already been gone through by earlier mining activities. Any area which formed rich pay-streaks during the past is likely to do so again if more gold is washed down into that area by a more recent flood storm (like the great flood of 1964 in most of the western states)..

As an example, the riffles within a sluice box will recover gold again and again after they are cleaned out. It is just a matter of washing new gold-bearing material over the riffles. A proven gold-bearing waterway will react in much the same way**.** Therefore, it usually makes little difference whether an area had been mined by the early-timers. A new major flood storm (since the earlier mining took place) reshuffles new and remaining gold within the waterway and can create new opportunities in the very same areas which were mined by earlier generations of miners.

Those areas which were once heavily mined by the early-timers were usually mined because they contained rich pay-streaks. Most often, those geologic conditions which formed the original pay-streaks have not changed. Those very same factors which caused gold to concentrate there once, may have caused gold to concentrate there again during any of the major storms which have occurred in the area since the earlier mining activity took place.

So it can be greatly to your advantage to know where earlier miners recovered a lot of gold. The very same areas are often paying gold dredgers just as well or better today. You do <u>not</u> have to find original streambed material to find a rich gold deposit. **Most often, though, you <u>do</u> need to find hard-packed streambed. The storm flow dynamics that created the hard-pack will also have created pay-streaks underneath the hard-pack.**

**This is important:** *If you are finding hard-pack, then no miner has been there before you since the major flood storm occurred that created the hard-pack and any gold deposits which may lie underneath.*

You should <u>not</u> expect to find very much gold in lose streambed material or sand. For the most part, this type of material is moved around and deposited in the river

during smaller storms which are not large enough to transport important amounts of gold within the waterway.

**Remember:** *Almost all of the high-grade gold deposits within the waterway were put in place by major flood storms.* Such storms almost always left a layer of hard-packed streambed covering the gold deposits. Those deposits will remain covered up and protected there until exposed again by later major flood storm, or discovered by a suction dredger who dredges a sample hole down to find the bottom of the hard-packed layer.

So your sampling target is almost always to reach the bottom of hard-packed layers.

**This is important:** While the authors of your Initial Study SEIR might go out into the field and find some places where sizable deposits of loose sediment or gravel could be sucked through a dredge, it is a near certainty that they will not recover any gold from that type of stream-bottom material. This is because light gravel, sand and silt within most California waterways will generally be found to have an average specific gravity of around 3.5. Deposits of these types of material generally form during lower water periods or light storm events.

Natural gold has a specific gravity of around 19. It is, with a rare exception, around five times heavier than the average streambed material found in most California waterways. It requires a major flood event to move gold down a waterway. The force must be enough to tear up hard-packed streambeds (your biologists use the term "armored"), and then lay them down again as the storm subsides. These streambeds are made up mostly of rocks that are too large to be sucked up into the (any size) suction nozzle of a dredge. So, contrary to the conclusions set forth in your Initial Study SEIR, if 80% of a streambed consists of rocks that are too large to fit into a suction nozzle, greater horsepower will not increase volume production. In fact, too much suction power makes it more difficult to control the nozzle around so many obstacles!

For you to gain a better understanding of this, I ask that you please read the following two articles:

**Major Flood Storms & Pay-streaks:**
http://www.goldgold.com/stories/stormspaystreaks.htm

**Prospecting for Gold in Hard-packed Streambeds**
http://www.goldgold.com/stories/hardpackstream.htm

Contrary to the (volume) assumptions made by the authors of your Initial Study SEIR, rather than going down to the bottom of a stream or river and just sucking up gravel or sediment, the suction dredging process mostly is about freeing (sometimes the beds are very tightly locked or glued together), moving and correctly placing cobbles and boulders that are too large to go up the suction nozzle.

Since it is vitally important that you understand what really happens during the dredging process, I ask you to please read the following two articles:

**Production Gold Dredging**
http://www.goldgold.com/stories/productiondredging.htm

**Teamwork in Production Gold Dredging**
http://www.goldgold.com/stories/teamproduction.htm

Please understand that there is a purpose to the viewpoint which I express in the two articles listed just above. The idea is that increased volume allows:

1) Sample holes to be completed more quickly so that high-grade deposits can be found more often, if at all, and;

2) Once a high-grade deposit is located, more volume of production will allow the dredgers to recover more gold.

If you read my (extensive) writings on the subject of volume capacity in suction dredging, you will never find any explanation (about volume capacity) consistent with the conclusions within your Initial Study SEIR. All of my explanations about volume are concerned with the breaking free, movement and proper placement of the rocks which are too large to be excavated through the dredge nozzle. On average, using an 8 or 10-inch dredge (nozzle opening would be 8-inches) this comprises at least 75% (maybe 85%) of the material which makes up a normal hard-packed streambed. This means that at least 75% of the material or more must be moved out of the way by hand (or a mechanical winch in the case of boulders).

If you are in good athletic condition, ask yourself how many cubic yards of rocks you can move some distance underwater while fighting the current; maybe one?

When I say *"moved out of the way,"* I am discussing a very substantial subject. This is because there are many variables. Deeper excavations require the oversized material to be moved further to the rear of the excavation. That requires more time and effort on every rock. Otherwise, as the hole is excavated deeper, there will not be room for the additional oversized material which must be removed. Sometimes, the dredger must turn around and move the rocks out of the way to make more room (or they begin sliding back into the excavation). Sometimes the rocks need to be moved out of the way several times. A slanted taper must be maintained at the back of the excavation so that some rocks which are too heavy to lift can be rolled up and out of the excavation. This all takes time and work.

It is vitally important that you understand that all of this work is straight physical labor. It consists of using pry bars to free rocks, and then lifting, packing, tossing, rolling or winching them out of the excavation. **This is the dredging process.** Only the smaller-

sized material (which can fit into the suction nozzle) is sucked up into the dredge. The suction-part comprises only a small fraction of the overall dredging process. You are only sucking the material contained between the overwhelming volume of oversized material.

Nearly every California waterway is cool enough even during the warmest months of the year that a wet-suit is required if the dredger wants to spend more than just a short time dredging. Wearing a wet-suit requires the addition of a substantial amount of lead weight so the dredger can remain heavy and stable upon the bottom of the waterway. Otherwise, you don't have footing and leverage to move things around in a current of water. While each person is different, the average amount of weight required is 60 pounds. I personally wear 75 to 100 pounds, depending upon how fast the Klamath River is flowing where I choose to dredge.

So, in addition to the effort required to move oversized material, every dredger is also laboring against the floatation of the wetsuit (which is spread out across the whole body), and the downward pressure of the heavy weight belt (which is concentrated around the waist; mostly on the person's back), and the force of the moving water (which wants to wash the person downstream); and he or she is trying to maintain balance and control while working against all of these things together along a very uneven bottom. Any experienced suction dredger will tell you that the process is 100% labor. Any beginner will tell you it is brutally difficult.

As I outlined in the articles above, success and forward-progress all depends upon how effectively a dredger is able to move the oversized streambed material out of his or her excavation. The amount of effort required to be good at suction dredging is comparable to the most competitive of physical sports. A combination of competitive wrestling and heavy weightlifting would be similar in the type of physical activity. By this, I mean getting out on the mat with someone else and trying to win.

There are many variables which will affect dredge volumes. For example, in locations where a large percentage of the streambed is made up of boulders and/or larger-sized rocks, a dredger can actually produce more volume using a smaller-sized dredge hose. This is because a smaller hose is easier to manipulate around in tight places. Smaller-size dredges can also often get more accomplished when used in fast-water areas (because it is too difficult to hold a larger-sized suction hose against a fast current). On these subjects, I ask that you please read the following two articles:

**Boulders & Winching Techniques**
http://www.goldgold.com/stories/boulderwinching.htm

**Fast Water Dredging**
http://www.goldgold.com/stories/fastwaterdredge.htm

Before the moratorium was imposed this past season, I was personally dredging in a section of fast water (Klamath River) where I devoted nearly all of my time and effort just trying to maintain a position out in the fast water (and then regaining the position when it was lost) so every once in a while, I could suck up a small amount of pay-dirt from around single cobble-sized rocks which were glued to the bedrock. Each rock needed to be broken free with a bar while I held the suction hose between my knees to keep it from being washed away. Most of my effort was just holding a position out in the river. While my gold production made the effort worthwhile, I estimate that my total volume production was less than 3-cubic feet per day. Streambeds tend to be very shallow or non-existent in fast water areas. Sometimes the gold is in exposed cracks or pockets in the bedrock with no streambed on top.

So, experience and effort does not always relate to the volume of streambed material that is sucked into a dredge.

I have also been in many situations where progress depended upon a winch, rather then the size of a dredge. Most often, when big rocks are involved, success is not related to volume production through a larger-sized dredge. I have been known to spend an entire day just trying to winch a single rock out of my way – and failed to do it!

On the subject of volume, one thing that was completely overlooked in your Initial Study SEIR is the experience of the dredge operator. As discussed above, I personally have a great deal of experience in either teaching and/or observing (thousands) of suction dredgers. Placing all the points I made above in perspective, I can tell you with certainty that volume capacity has a lot less to do with the size of the dredge, than it does with the following two factors:

**1) Experience:** With a rare exception, beginners spend most of their time either flailing around in the water trying to keep their balance, moving the oversized material just far enough to suck the gravel out of one small place and becoming overwhelmed with rocks so they cannot make further progress, or working on freeing plug-ups from their suction hose or venturi. Plug-ups are a very important subject here. So I ask that you please read the following article:

**Knocking Out Plug-ups**
http://www.goldgold.com/plugups.htm

I have spent countless hours watching beginners using up nearly all of their time and (limited) physical effort trying to free plug-ups (with 60-to-75 pounds of lead strapped on their bodies). This is because a beginner has not learned which rocks, or combination of rocks, to not suck up the nozzle. There is quite a substantial learning curve in this process! An average beginner, using a 5-inch dredge, cannot expect to process more than just a few cubic feet of material through his or her dredge in a full day of work. That's the reality. Talking about a "full day of work" brings us to the second factor:

2) **Capacity to do physical labor:** We performed an industry-wide survey of active gold miners during 2008 to our email action list of approximately 12,000 subscribers. We performed a similar survey about 10 years ago. Both surveys came out with the same average age of prospectors today -- which is 57 years old (this is also the average age of our New 49'er members).

The survey also showed that 62 % of our average New 49'er members purchased suction dredge permits during 2008. The New 49'ers have more than 2,000 active members. This means approximately 1,240 of our New 49'er members purchased California suction dredge permits during 2008. According to the graph published in your Initial Study SEIR, this is more than half of the suction dredge permits you issued during that year.

Since all or most of our New 49'er members spend time dredging or otherwise prospecting along mining properties which I personally manage along the Klamath River and its tributaries in Siskiyou County, I have a very good perception of how much dredging is taking place and what the impacts are. In fact, I am certain that I have a better perception than anyone else, since I personally am the person that goes around to see what the members are doing and how well they are recovering gold. This has been true for the last 23+ years of my life. The main reason for this is because I am the person who promotes and manages the activity. Therefore, I am also the person who many of our members hold accountable when the volume of gold they are finding does not meet their personal expectations. Disappointed members make me uncomfortable. So I do my best to go out and help when I can.

Prior to being an underwater miner, I was a navy SEAL. I passed through BUDs training class 76 right at the downturn of the Viet Nam war. Training was so difficult at that time, only 7 of the 57 pre-qualified trainees that started my class made it through the training. I was one of those 7 guys. So I have a very realistic perspective about what it takes to complete a difficult mission; especially when the task requires intense physical output.

I can tell you with absolute certainty that the reason most suction dredgers do not recover as much gold as they hope for, is that they usually are not physically fit enough to complete very much of the work that is required. I face this difficulty on a continuous basis as I try and assist our members. The physical activity is so demanding that it is on the order of placing a person (who has done no pre-fitness training) in the ring with someone else to have a wrestling contest until both persons collapse from physical exhaustion. Ask any person who has gone out dredging (with a serious intention of getting any amount of meaningful work accomplished), and that person will certainly tell you it was the hardest work he or she ever did. Now, place our average member (57 years old), who, as an American, has, for the most part, not had to perform hard physical labor for the past 30 years or so, out in the river or stream where he or she can strap on 60 pounds of lead and try to do some serious dredging – or to even get him or herself underwater to dabble at it just a bit.

**The work is brutal!**

Several years ago, when The New 49'ers opened up around 6 miles of the Main Stem Salmon River to our members, quite a few of our members rushed over there and placed their dredges in the water. Mr. Stopher; you will remember this, because it was your office that fielded all or most of the complaints by local residents who believed (they said) that we were harming the environment by having too many dredges on the Salmon River.

At the same time, from my side, I was receiving a lot of complaints from members that there was no gold present on the Main Stem of the Salmon River. After a while, all of the noise (from both sides) prompted me and my right-hand man (Craig Colt) to swim the entire 6-mile stretch of Salmon river with mask & snorkel to see what had actually been done by our members. From the local perspective (the people complaining to you), we expected to find the bottom of the river all torn up. The mystery we were trying to resolve is why our members were not finding any gold.

And it did not take long to figure out the mystery. The Salmon River has very clear water. You can see the entire river bottom across from one side to the other. If you are looking, it is impossible to miss any excavation made by a dredge. Through our survey of 6 miles, Craig and I only found 13 excavations in all. Only one excavation was significant. The person had been following a shelf of bedrock with shallow streambed using a 6-inch dredge; he was working hard; and he was recovering gold. In all, he had processed maybe 10 cubic yards of material in a month or 6 weeks of work**. None of the other 12 dredge excavations we found were larger than a wash tub!**

Here is the answer to the mystery and a hard reality within our field: Just because a dredge is floating on the water does not mean it is being started. Just because the dredge is started does not mean that any meaningful amount of excavation is being done.

All dredge operators are not equal. While it does not seem like it to someone without direct experience, I can tell you with authority that there is a very substantial learning curve to master before a beginner is able to make good, steady progress through a hard-packed streambed. There are many variables. Physical fitness is the starting point. Most Americans are not physically fit enough to enter a competitive wrestling match. Those few that are, still must to learn which rocks not to suck up or they will spend 50% or more of their physical effort just trying to free plug-ups from their suction hose. And that is just the beginning of the learning curve.

Those (very) few of us who actually know how to do it have kind of a running joke along the Klamath River that more dredges sit idle than run; and most that run only run a few hours per week, at most. I suggest you talk to your wardens to confirm this. Most suction dredges sit idle, providing additional shade and shelter for fish. That's it!

There is a reason I have taken so much time to explain all this to you. This is because you are attempting to perform an Environmental Impact Report on a very specialized activity that you know very little about. By the amount of work invested, I'm sure you are doing your best. But you are grossly misinterpreting the dredging process in the way

your Initial Study SEIR has attempted to project volume capacities (and, therefore potential environmental impacts) by taking the maximum volume capacities which are advertised by dredge manufacturers (which are projections based upon sucking sand at water level, at sea level) and multiplying those numbers by an average number of hours and days which were derived in a DFG survey of dredgers during 1994. This compilation suggests that there is no person involved with your EIR team that has any real experience operating a suction dredge in pursuit of gold. That's too bad. But it does not need to be fatal.

To obtain a better idea of volumes, I suggest you please have your team view my DVD presentation, **"Successful Gold Dredging Made Easy"** (http://www.promackmining.com/mining_supplies/cart.php?m=product_detail&p=12). I would like to submit this DVD at no cost as input to your process. This way, even if you have not done the activity on your own, you can watch me perform the activity at optimum speed in clear water using a 5-inch dredge excavating a dredge hole in hard-packed streambed. Please just reply back and tell me how many DVD's I should send, and to where?

When watching the underwater dredging process, please watch what I must do to make any progress (nearly all the effort requires the movement of oversized rocks). If you watch, you can directly estimate how much of the streambed material is excavated by the dredge (maximum 15%?), and how much must be moved out of the excavation by hand in a mild current which I have to fight. While the video makes the process look easier than it is, believe me when I say that the video demonstrates the process as fast as it will go using a 5-inch dredge (if anyone can do it faster than my demonstration, I have yet to meet him). Regardless of what the voice says on the video, if you look, you can gauge the amount of volume being moved. You can also gauge the percentage of volume which is being processed through the dredge (this is the part that most of the environmental concerns are about).

If you do this, you are going to come to my personal conclusion, based upon observing half of your permitted dredgers in California: **It's a drop in the bucket!**

My best estimate is that under the best of conditions using my 8-inch dredge by myself, I personally can process one-to-two cubic yards of material in a full day of dredging. Only about 15% of that material passes through the dredge. The other 80-to-85% is simply rocks being moved out of the way by hand. Once the initial excavation is established, those rocks are used to fill in the hole behind me as I move forward.

Our average dredging-member of The New 49'ers (more than half the permits the Department is issuing) uses a 3-inch, 4-inch or 5-inch dredge. Most use 4-inchers. Very few use larger dredges. While there is an occasional exception, our average member using a 5-inch dredge produces only 20% of what I can do using the very same dredge. I am an animal with 30 years experience in pursuit of high-grade gold deposits at the bottom of fast-moving rivers. Under normal circumstances, I can process a cubic yard

using a 5-inch dredge. Only about 15% of that goes up the nozzle. Cut that number in half using a 4-inch dredge.

Since the average age of prospectors outside of The New 49'ers is also 57, I suggest average production capacities in other areas will be about the same. The work is the same wherever you go!

This means that the average dredger (most who hold permits don't operate their dredges most of the time) processes less than $1/5^{th}$ of a cubic yard through his or her dredge on the days that he or she operates. Yes; there are exceptions in the case of younger, more experienced, aggressive suction dredgers (like me). But these are a very small minority. You cannot use the few aggressive dredgers to characterize the figure of 2,500 dredge permits (2008). This would be grossly inaccurate. And even if you did, you would still need to downsize your projections by many times. You guys are way off the mark on this!

The last Department representative I am aware of who took a real practical interest in the actual impacts from suction dredging along the Klamath River and its tributaries (where half the State's permitees are operating) was Dennis Maria out of your office in Yreka (he's now retired). But, in response to all the complaints by locals to your office concerning New 49'er dredging along the Salmon River several years ago, Mr. Maria conducted an extensive investigation and concluded that he could establish no significant negative impact from the accumulated activity. I will attach Mr. Maria's formal report along with these comments to the same email.

In conclusion, your Initial Study SEIR needs modification to describe the suction dredging process as it actually is, along with the difficulties and many variables which are involved. It should acknowledge how physically demanding the activity is and how little the average dredger actually gets accomplished underwater. It should acknowledge that only approximately 15% of the material is small enough to be sucked up into a dredge. Nearly all of the work involves moving clean rocks around on the bottom of the waterway.

Having trained, supervised or observed thousands of suction dredgers, it is fair for me to say that the average dredge permit holder can get more accomplished and recover more gold with a pick, pan and shovel, than he or she can do with a suction dredge. I know it seems like it ought to be different. But if you have any doubts about what I have stated here after watching my DVD, I would be pleased to set an appointment with you this next season in Oregon and let you see for yourself.

That's just the way it is. I hope you are listening.

Sincerely,

Dave McCracken

Dredging is not just a matter of going down to the bottom of the waterway and sucking up some sediment as you have projected in your Initial Study SEIR. Since we are discussing the very activity which the document is concerned with, I am suggesting here that you need to go back and make some important corrections, especially where you have projected volumes.

If you would like to sign up for our free monthly newsletter, just click here: http://goldgold.com/newsletterform.htm

**From:** Dave Mack <dcmccra@attglobal.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 12:30 AM
**Subject:** Biological conclusions from 1994
**Attachments:** Biological conclusions from 1994 EIR.doc

The New 49'ers
27 Davis Road, Happy Camp, CA 96039
(530) 493-2012 www.goldgold.com

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

SUBJECT: Biological conclusions from 1994

Dear Mr. Stopher,

Our comments are attached as Biological conclusions from 1994 EIR.doc.

Thank you,

Dave McCracken

# The New 49’ers

**27 Davis Road, Happy Camp, CA 96039**
**(530) 493-2012 www.goldgold.com**

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

**SUBJECT:** Retaining biological conclusions from the 1994 suction dredging EIR

Dear Mr. Stopher,

I am president of The New 49’er Prospecting Association, and have actively managed the program in Siskiyou County since 1986. We have 2,000 active members. The results

from a survey we performed last year shows that our active members comprise around half the number of suction dredge permits which you sold during 2008. This letter is a close representation of many conversations I personally have had with members of our Association. I believe it represents a full consensus of all our members.

As you may know, our organization was directly involved with the earlier EIR process which was finished in 1994. In case you didn't know, that EIR was actually attempted three times. The first two attempts failed because the Department staff members who initially worked on the process refused to be objective as required by the CEQA Process. Rather, they attempted to use the CEQA process to reach a desired outcome – which was elimination or reduction of suction dredging regardless of the real impacts.

I personally felt that the third attempt, however, was done quite well. By "quite well," I mean that the Department staff who were involved made every effort to include stakeholders, used integrity to get the bottom of all the issues, and worked out regulatory solutions which mitigated real problems while imposing regulations upon our industry that we were able to work with. The process cut through the rhetoric and worked out solutions based upon the best available science of the time.

The reason for this letter is that we see in your Initial Study Suction Dredge Permitting Program document that it appears as though you are going to completely ignore the biological discussions and conclusions which made up most of the science that supported the 1994 EIR document. Unless we are misunderstanding the nature of your Initial Study Suction Dredge Permitting Program document, it appears a though the Department intends to ignore all or most of the work that was invested in the biology during 1994. It appears as though you intend to begin the biological discussions all over again from the beginning.

There are several reasons why we are voicing strong concern over this:

1) First and foremost, an <u>exhaustive</u> amount of work has already been invested in all those biological issues by the Department and by all the stakeholders. Many of the persons involved with that process have since either passed away or retired. Although, last time I visited the Resources Department, Stephanie Coupe was still there. She personally participated in all or most of the process which resulted in the Final EIR during 1994. I strongly encourage you to call her (916 654-3830 is the number I have on file for her) on the subject of how much work it was to finally achieve some balance on the biological issues based upon best available science, and weigh those with all of the other concerns to ultimately reach a balance. Perhaps she can advise you where you might save a lot of work and trouble in this new process.

   The reason we are voicing concern is that your Study Suction Dredge Permitting Program document appears to identify every known potential impact concerning suction dredging; but to a very large extent, completely ignores other information, often within the very same studies, which placed those impacts in perspective (localized and not significant to the larger waterway). This gives us a perception that

we are going to have to start all over again from the beginning as if all the earlier work from the 1994 EIR is being deleted. That would be very unfortunate!

As we have asked our attorney to comment on our behalf concerning the legal and political history which has brought us to this point, especially concerning the baseline you have chosen, we won't repeat his material here. But we do want to express a strong concern that we believe it would be disrespectful (to all of the earlier Department staff and countless others who have already worked on this) for the Department to discard all or most of the biological discussions and conclusions included within the earlier EIR which have supported our industry since 1994. We would prefer to see these discussions and conclusions acknowledged, with only those being taken up again where new information or circumstances make it necessary. This will save the Department and the various stakeholders countless hours re-debating issues which have already been resolved.

2) Since 1994, we have built up a $60 million annual business in California, all upon the foundation of the 1994 EIR, the pillars which are mainly founded within the biological discussions and conclusions therein.

   This is probably not necessary; but as input to this process, we are hereby incorporating all of the biological discussions and conclusions which are contained within the Final EIR from 1994. We are also requesting that in any place where the Department believes the biological conclusions should come out differently in your Draft EIR, that you please take the time to explain the exact reasons why, based upon best available science and factual data (rather than speculation).

Thank you very much for your attention to this mater!

Sincerely,

Dave McCracken

**From:** Dave Mack <dcmccra@attglobal.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 12:30 AM
**Subject:** "Recreational" suction dredging
**Attachments:** Recreational suction dredging.doc

The New 49'ers
27 Davis Road, Happy Camp, CA 96039
(530) 493-2012 www.goldgold.com

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

SUBJECT: "Recreational" suction dredging

Dear Mr. Stopher,

Our comments are attached as Recreational suction dredging.doc;

Thank you,

Dave McCracken

# The New 49’ers

**27 Davis Road, Happy Camp, CA 96039**
**(530) 493-2012 www.goldgold.com**

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

**SUBJECT:** The term “Recreational” in the suction dredging EIR

Dear Mr. Stopher,

I am president of The New 49’er Prospecting Association. I have actively managed the program in Siskiyou County since 1986. We have 2,000 active members. The results from a survey we performed last year shows that our active members comprise around

half the number of suction dredge permits which you sold during 2008. This letter is a close representation of many conversations I personally have had with members of our Association. I believe it represents a full consensus of all our members.

As we are aware that Jerry Hobbs of Public Lands for the People (PLP) has already provided substantial input on this and related subjects, we only want to make some brief comments which we do not believe have been fully addressed.

I personally have been managing a very active mining association for 23+ years. So I have a very unique perception concerning this term "recreational mining."

I believe PLP already pointed out that the federal government has already weighed in on this matter, agreeing with our position that the federal mining law does not distinguish between a person who is pursuing a serious mineral discovery, and a person who is pursuing the activity as something he or she simply enjoys doing. All Americans have the right to pursue mineral discovery whether they enjoy it or not. It does not matter what term others decide to place on the activity.

I can give you many, many examples over the past 23 mining seasons where we have had members that were mainly just out enjoying the great outdoors with their families, with the hope of finding gold as a side benefit. Then, by luck or otherwise, when the person(s) discovered a valuable deposit of gold, I have never seen a time when the priorities did not immediately change.

Gold is very valuable. In all my years, I have never seen any miners (serious or otherwise) out there giving gold away. Every time someone turns up a valuable deposit, regardless of what the person's program was before, he, she or they become deadly serious about recovering the gold out of that deposit.

While it is seldom so dramatic, I have seen a 70-year old man become violent over a rich gold deposit (that he did not even know existed the day before; he was "just enjoying the outdoors"), when someone else tried to move in on his discovery. Once real gold gets into play, it no longer matters that the person believed he was "just doing it for fun," or just doing it part time.

So while it is true that some people (initially) pursue gold dredging as an outdoor adventure activity that could be classed as "recreational" in some circles, the main difference is that:

1) The federal mining law allows every American to go out and search for minerals no matter what your primary motivations are, and:

2) Regardless of the person's initial motivations (it could be a hiker who is not even looking for gold), once a valuable discovery of gold is made, the person has a vested property right to recover the value out of that deposit.

These things are what make gold prospecting and suction dredging totally different than the other types of outdoor activity and recreational programs which the Department manages or oversees in California.

The reason we raise the issue is that we see this "recreation" term tossed around a lot, especially by anti-mining activists. Sometimes the Department uses the term, as well. Sometimes, the term is mistakenly used to class us as "just recreationalists." That's a mistake.

I can tell you with authority that no matter who it is, and no matter what their initial motivations were, once someone locates a rich gold deposit, it all becomes about the gold (recreation, if any, is no longer the primary motivator).

While we understand that the Department is assigning itself "a project" for the purposes of creating a State-wide EIR that will create a set of regulations allowing a certain blanket level of activity, we request that you please be mindful that the individual dredging operations are not really the State's, and they are not really "recreational" in the same matter as you would consider other outdoor activities. **These are mineral exploration and developments.**
Make no mistake about it. As gold prices just keep going up and up, the volume of gold required to make a person (very) serious is actually quite small.

Sincerely,

Dave McCracken

**From:** Dave Mack <dcmccra@attglobal.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 12:53 AM
**Subject:** Mercury issues and suction dredging
**Attachments:** Dave letter, mercury.pdf; Letter from Joseph Greene.pdf; Declaration_of_Claudia_Wise.pdf; Mercury issues with suction dredging.doc

The New 49'ers
27 Davis Road, Happy Camp, CA 96039
(530) 493-2012 www.goldgold.com

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

SUBJECT: Mercury issues and suction dredging

Dear Mr. Stopher,

Our comments are attached as Mercury issues and suction dredging.doc. We have also attached three other documents directly related to the subject.

Thank you,

Dave McCracken

# The New 49'ers

**27 Davis Road, Happy Camp, CA 96039 (530) 493-2012 dcmccra@attglobal.net**

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

20 June 2007

Dear Sirs:

My name is Dave McCracken. I have been active in suction dredging since 1979 and am generally considered an authority on the subject. I have consulted for companies and governments all over the world concerning suction dredging, including, Borneo, Sumatra, Cambodia, Thailand, Philippines, Papua New Guinea, Madagascar, South Africa, Guinea, Venezuela, Costa Rica and elsewhere. I have published and produced most of the authoritative books and video material on the subject of suction dredging. As I have devoted most of my adult-life to activities related to suction dredging, I am very qualified to speak on the subject. I have been recognized as an expert on the subject in the California State Courts and in Federal Court.

Suction dredging is not the only area that I am an expert. I also have extensive experience in utilizing gravity methods to recover fine gold, mercury and gemstones – especially in recovery systems used by suction dredges.

More background about my experiences concerning suction dredges and recovery systems can be found on my consulting web site at http://www.promackmining.com/. I have written extensively on the subject of recovering fine particles of heavy metals and gem stones with the use of suction dredges. One excellent article on the subject can be found at http://www.promackmining.com/differentsampling.htm.

Since some of the concerns being expressed at your June 12th workshop had to do with the Water Board's recent report named "Mercury Losses & Recovery," I have taken the time to review that report. Thank you for allowing me this opportunity to comment. Having conducted many similar testing projects myself, I would like to express some of my own concerns about the report:

1) Any sampling report should include a section which clearly defines the equipment that was used and how it was used. All suction dredges are not equal in their ability to recover fine particles of heavy metals; especially floured mercury! In addition, there should be some discussion about how the dredge was set up (slope setting of the sluice box, speed of engine operation, etc.), and how fast the raw material was fed into the nozzle (overloading reduces efficiency of recovery).

Without some explanation about how these variables were managed, it is impossible to assess the value of the final outcome.

I can see in Figure 8 that the samplers were using an old-style Keene dredge that employed the use of a header box. Those types of dredges have been out of production for about 15 years. Most modern suction dredges are now being constructed with flare-jets, rather than header boxes. There is a huge difference in the potential affect upon any liquid mercury which would be dredged up. Header boxes subject the full force of dredged material to a dramatic reverse in direction, slamming everything down onto a classification screen and subjecting all dredged material to enormous violence. This could potentially cause liquid mercury to flour. Flare jets gradually diffuse the speed of dredged material as it is washed into the recovery system. This would not be likely to flour mercury.

So while the Water Board's suction dredge testing may have caused some flouring of liquid mercury (it also may not have), a modern flare-jet suction dredge would be far less likely to cause flouring in the very same test scenario.

2) In going through the report several times, it still is not clear to me if adequate testing was completed on the raw material (before it was dredged) to see if floured mercury was present there. If that was done, there should be some clear language in the report about it.

   The reason is that the report seems to draw a conclusion that the dredge was actually causing the flouring. That is a very important assumption that must be proven by the testing!

   It is strongly possible that the suction dredging did not cause any of the flouring; that the floured mercury was present in the raw material in the first place. In fact, the report seems to suggest that it was. Figure 7 shows a pan which includes floured mercury that was panned (not dredged) from creek gravels.

   All I can do is suggest that you read my article at http://www.promackmining.com/differentsampling.htm on the subject of fine particle recovery. Mercury flouring can reduce particle-size all the way down to a micron. It is unreasonable to assume that a suction dredge, without special modification, will recover 100% of floured mercury that has been disbursed throughout streambed gravels.

   The big question is not whether a normal newer-version suction dredge will recover 100% of floured mercury. It is whether or not the dredge itself is the cause of the flouring. I believe, if you do careful testing, using a more modern suction dredge, you will discover that the dredge is not the source of the flouring.

3) Your report also suggests that mercury is migrating down California's waterways during flood events. I am certain that Mother Nature's storms (enormous

violence at the bottom of waterways) create more flouring on liquid mercury than anything else in the system.

The reason this is important, is because it suggests that we should remove as much of the liquid mercury from the river systems as possible at every opportunity. Because today's liquid mercury along the bedrock may be tomorrow's floured mercury disbursed all throughout the streambed gravels where it will become much more difficult to extract from the system.

While the Water Board will make its own conclusions in this respect, my own opinion is that is far better to have suction dredgers remove 98% of the mercury from California's river systems, than to leave all the mercury in the system so that it can continue to migrate downstream and further poison our water and food. This is especially true if the 2% loss in your tests turns out to be flouring which is already present in the gravel. Because in that case, suction dredgers are merely moving some floured mercury aside (which is already in the system) while they are in the process of removing 98% of the remaining mercury from the system.

4) I know the water board already knows this, but it still needs to be said: In a cooperative arrangement, suction dredgers are the only group in existence that can presently assist the Water Board and other authorities to locate mercury hot spots at the bottom of California's waterways. **Maybe such hot spots, once identified, should receive a special designation because of the dangers.** I would be more than happy to assist you in the development of dredging equipment that will recover 100% of the floured mercury from such locations.

It is important to note that most of the places where dredging takes place are not mercury hot spots. Up here on the Klamath watershed, the only mercury recovery that I am aware of is the occasional bit that we find attached to our gold. I'm sure we recover 100% of that, because the mercury is attached to gold, which is quite heavy.

Since most areas do not contain substantial amounts of mercury, mercury does not pose a water quality issue under the vast majority of circumstances. It would seem that the best solution is to locate the hot spots and use more sophisticated technology to clean those up. I am willing to assist the Water Board in this effort.

Thank you for considering my comments!

Dave McCracken

# Greene Environmental Services

**33180 Dorset Lane**
**Philomath, Oregon, USA 97370-9555**


December 2, 2009

The Honorable Governor Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814
Fax: 916-558-3160

Dear Governor Schwarzenegger

## PLEASE VOTE NO ON BILL 670 (anti-suction dredging legislation)

I am a research biologist. I live in Philomath, Oregon. I worked for about 32 years as a research biologist for the United States Environmental Protection Agency, starting when that agency was known as the Federal Water Quality Agency, and I retired from the E.P.A. in 2002. Among other assignments, I measured and evaluated water soluble toxicants from Superfund sites. I spent about four years during my career with the E.P.A. serving as a faculty member at Oregon State University in Corvallis, Oregon on an intergovernmental exchange program and developed a program and a laboratory for the practice of ecotoxicology, the science of determining the toxicity of samples of effluents and other environmental contaminants by measuring the reaction of living organism assemblages to such samples. I have served as a chairman of testing committees for the American Society for Testing and Materials. I have chaired a number of international symposia, workshops, and congresses in my field as well as been an invited speaker to numerous national and international professional scientific meetings in my field.

Looking for gold in California streams and rivers is a recreational activity for thousands of state residents, and a part-time or full-time job for hundreds more. As these miners remove sediments, sands, and gravel from streams and former mine sites to separate out the gold, they are also removing mercury. This mercury is the remnant of millions of pounds of pure mercury that was added to California rivers by historic mining operations between 1850 and 1890. Modern day small-scale gold suction dredgers do not use mercury to recover gold during the operation of the dredge. Therefore, any mercury that would be found in their possession would be that which was extracted from the stream or river they are working.

Taking mercury out of streams benefits the environment. Efforts to collect mercury from recreational gold miners in the past, however, have been stymied due to perceived regulatory barriers. Disposal of mercury is normally subject to all regulations applicable to hazardous waste.

In 2000, EPA and California's Division of Toxic Substance Control worked in concert with other State and local agencies to find the regulatory flexibility needed to collect mercury in a simple and effective manner. In August and September 2000, the first mercury "milk runs" collected 230 pounds of mercury, most of which came from suction dredge miners. A Nevada County household waste collection event held in September 2000 collected about 10 pounds of mercury. The total amount of mercury collected was equivalent to the mercury load in 47 years worth of wastewater discharge from the city of Sacramento's sewage treatment plant or the mercury in a million mercury thermometers. This successful pilot program demonstrates how recreational gold miners and government agencies can work together to protect the environment (US EPA, 2001).

In Washington State, over the past four years, the Resources Coalition and other small- scale miners associations have turned in 127 pounds of mercury and eight pounds of lead for safe disposal. This year, Ecology staff attended miners' rallies in Oroville and Monroe, explaining the state's program for proper disposal of lead and mercury.

In a September 18, 2007 news release from the Washington State Department of Ecology Brian Dick, a manager with Ecology's hazardous waste and toxics reduction program stated, “That is 127 pounds of mercury no longer

contaminating Washington's waterways or being accidentally spilled". He continued, "The miners have responded with great enthusiasm and have worked with Ecology to get the word out to their members about our collection program." The results of this program further support the results of the 2000 EPA and California's Division of Toxic Substance Control program.

Mercury occurs in several different geochemical forms, including elemental mercury, ionic (or oxidized) mercury, and a suite of organic forms, the most important of which is methylmercury. Methylmercury is the form most readily incorporated into biological tissues and is most toxic to humans. The process of mercury removal by suction dredging does not contaminate the environment because small-scale suction dredging removes elemental mercury. Removal of elemental mercury before it can be converted, by bacteria, to methylmercury is an important component of environmental and human health protection provided as a secondary benefit of suction dredging.

A 2005 staff report published by the State Water Resources Control Board, Division of Water Quality has raised quite a stir in the environmental community. This report concluded that a 4-inch gold suction dredge captures 98% of the mercury it sucks from the environment. It further states that portions of the 2% of mercury that escapes from the suction dredge is floured (*i.e.*, in small particles), and that such mercury may travel many miles downriver where it may settle and become available for biological action by bacteria where it will be converted into methylmercury. I have reviewed this report in detail, and the parent material that was test-dredged in this study was already mercury contaminated; the researchers did not fully quantify the particle sizes of mercury in the sample. It seems obvious that the materials tested already contained floured mercury. Furthermore the site dredged was an area where mercury was accumulating or puddling. This site is not typical of areas in which gold dredges operate and does not represent what a miner would usually encounter..

This is consistent with other literature in the field. For example, a report titled “Preliminary Report on Mercury Geochemistry of Placer Gold Dredge Tailings, Sediments, Bedrock, and Waters in the Clear Creek Restoration Area, Shasta County, California” (Ashley et. el., 2002), states: “Mercury in sediment and tailings is associated with fine size fractions”.

Furthermore, the suggestion that the floured mercury, regardless of the source, would remain suspended for miles below the dredging site is not supported by any evidence of which I am aware, and is refuted by indirect evidence.

A study by the U.S. Geological survey reported that “mercury concentrations in Sulphur Creek, CA water and sediments decreased rapidly downstream from hot springs and mine areas indicating that mercury is not effectively transported during low stream flow” (Rytuba, Janik and Goff, 1966).

In 1997 a study of gold dredging impacts was undertaken in the Fortymile River, Alaska. In all of the suction-mined sites studied, dredges were operated by experienced miners. This study evaluated the impact of operations from 8- and 10-inch gold suction dredges. (Each 1-inch increase in the diameter of a dredge hose results in the doubling of the volume of material moved). In relation to the 4-inch dredge used in the California State Water Resources Control Board study, the Alaska 8-inch dredge moved 4-times more volume of material.

Sampling was performed at fixed transects above and below the dredge locations. At the site using the 8-inch dredge, “the primary effects of water chemistry 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. The impact of suction dredging on water clarity and heavy metal concentrations may be greater or lesser than we measured, depending on the type of material the dredge is excavating”. Although mercury was not measured in this study the physical/chemical facts would indicate that suspended mercury would not travel farther than the measured plumes of this study (*e.g.*, 8-inch dredge produced a plume from 80-160 m downstream of the dredge).

If we use copper and zinc as indicators of metals suspension within the water column we find that elevated concentrations fell to background concentrations 80-160 m downstream of the dredge. The density of copper and zinc are 8.94 and 7.14 $g/cm^3$ respectively. The density of mercury is 13.534 $g/cm^3$. Therefore, all other things being equal, the greater density (weight) of mercury would insure that it would fall out of suspension sooner that copper or zinc. Also, all of these water quality samples were associated with a turbidity plume.

Even if the metals were somehow associated with particulate matter or sediment within the plume the metals still returned to background concentrations within 80-160 m downstream of the dredge.

The CA State Water Resources Control Board staff report presented results from a study conducted in a well established mercury "hotspot" in the American River—that is, a place where relatively large quantities of mercury from historic gold mining operations has come to rest, at least temporarily. Such spots can persist for many years before river flows release the materials further downstream to form new hotspots. The effects of dredging into a mercury hotspot has little relevance to ordinary gold suction dredging along the many miles of rivers and streams throughout the Western States. Generally, miners occasionally find very small quantities of mercury in their collected materials. What mercury is collected is usually bound to (amalgamated with) other metals, including gold.

On balance, suction dredges provide a net environmental benefit by removing nearly all of any mercury they encounter. If not removed, such mercury will slowly but eventually migrate downstream, dredging or no dredging, to areas where it is more likely to be converted into methylmercury. To the extent that regulatory authorities would prefer to leave the mercury in place for removal by public agencies at public expense when and if such activity is a budget priority, they might require reporting of hotspots (many are already well-known) and forbid suction dredgers from operating in them. Inasmuch as public authorities have no better method to remove the mercury than suction dredges, this seems pointless.

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Sincerely, Joseph C. Greene

Research Biologist

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SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF ALAMEDA

| | |
|---|---|
| LEEON HILLMAN; CRAIG TUCKER; DAVID BITTS; et al.,<br><br>Plaintiffs,<br><br>v.<br><br>CALIFORNIA DEPARTMENT OF FISH AND GAME; DONALD KOCH; and, DOES 1-100, inclusive,<br><br>Defendants. | CASE NO. RG09 434444<br><br>**DECLARATION OF CLAUDIA J. WISE IN OPPOSITION TO MOTION FOR PRELIMINARY INJUNCTION**<br><br>**Hearing:**<br>Date: June 9, 2009<br>Time: 9:00 a.m.<br>Judge: Hon. Frank Roesch<br>Dept: 31<br><br>Trial Date: None Set<br>Action Filed: February 5, 2009 |

I, CLAUDIA J. WISE, declare:

1. I have recently retired after 32 years of civil service with the United States Environmental Protection Agency as a Physical Scientist/Chemist. I have been a member of many scientific projects over the years starting my federal career in the Fish Toxicology arena and ending it with the Salmon Restoration division. I have worked on projects ranging from urban fish populations and fish avoidance testing to eelgrass habitat and global climate change. I have been and remain a strong proponent of protecting the environment. My Curriculum Vitae is attached to this Declaration.

2. I have been involved in temperature surveys on the Klamath River in California in regards to suction dredge activity and existing conditions of refugia. We have found specified natural refugia to be no better in many cases to that of dredge made refugia. I am currently, involved in preliminary planning to evaluate the effects of dredging on mercury.

3. I have studied a plethora of peer reviewed papers too numerous to list here regarding effects of suction dredging on the environment. Most have come to the same conclusion of insignificant or de minimus environmental impact that is local and temporary in its effect on the streams inhabitants.

4. It appears that although there are many peer reviewed journal articles written that support this conclusion giving the proof already at hand that the dredging community is not significantly harming the environment or the fish this issue is re-surfacing in this Court. My experience regarding suction dredge mining is that the fish are very happy to feed from the dredged spoils presented to them and rest in the dredge holes left much like in natural refugia. I have never seen or heard of any harm that has come to any fish present during suction dredging activities. California Fish and Game currently have rules and regulations that do regulate dredging out of situations that would be harmful to fish, such as, spawning seasons.

5. Suction dredges are being used by government agencies to remediate stream conditions in some cases. According to the National Oceanic and Atmospheric Administration (2006) ("NOAA"), Duck Creek, a surface water body in Alaska, is impaired by urban runoff from non-point source pollutants including, heavy metals, hydrocarbons, iron flocs and excess nutrients. This small coastal stream originates from a spring that drains runoff from Mendanhall Valley, a relatively high residential and business area. Historically there were runs of nearly 10,000 chum salmon

and Coho runs of about 500 fish in Duck Creek. Currently the chum run is extinct and the Coho run consists of only 20 fish. Restoration at Duck Creek involves the development and implementation of bioremediation methods to restore water quality and anadromous fish habitat in impaired streams. NOAA scientists attempted to correct the degraded conditions by using high-pressure jet pumps and suction dredges to remove fine sediment from the streambed.

6. I have spent much time over the last 4 years studying mercury effects on the environment in relation to suction dredging activity. Specifically, there was concern expressed regarding a paper published by the California Water Board's Water Quality Division (Humphreys, 2005) ("Board"). This paper discussed mercury losses and recovery during small-scale suction dredging.

7. The suction dredge community could provide the state with a source of help that is willing to do what they do best. Prospect for GOLD! In the event that suction dredge miners run across a hot spot of mercury, the miners would be willing to hand it over to a collection facility if such a facility existed. The Board's Water Quality Division report (Humphreys, 2005) idea of paying the miner's for their efforts would help

facilitate this plan. The cost would be much less than what is presently being spent on remediation activity that is less effective.

8. The Water Board has spent a lot of time and money on mercury remediation projects with limited success though in 2001 EPA, Region 9 located in San Francisco, California did collect mercury from miners very effectively. Collections of mercury are currently happening in Oregon and Washington through the states respective Division's of Ecology and with even greater success at miner's rallies.

9. During the first EPA, Region 9 mercury "milk run" in 2000 agency personnel were able to collect 230 pounds of mercury from miners. The total amount of mercury collected was equivalent to the mercury load in 47 years worth of wastewater discharge from the city of Sacramento's sewage treatment plant or the mercury in a million mercury thermometers. (US EPA, 2001.)

10. Over the past four years, the Resources Coalition and other small-scale miners associations in Washington have turned in 127 pounds of mercury and eight pounds of lead for safe disposal with the help from the Washington Department of Ecology. Ecology staff attended miners' rallies in Oroville and

Monroe, explaining the state's program for proper disposal of lead and mercury. (ENS) 2007

11. The mining community of today is, in my opinion, the only group that is in a position with the technology to help out at a very economical price to the public. Any residual mercury remaining after dredging a location is that much less to worry about in our nations waterways.

12. In reviewing Humphrey's (2005) comments regarding possible problems associated with collecting mercury via suction dredging methods, It is right to look to the suction dredge community for help locating hotspots and removing mercury from the river systems. In my opinion the data provided in the report by Humphrey's (2005) did not demonstrate any clear conclusions that would prohibit the State from allowing this activity. On the contrary, in the discussion of results it was stated that a suction dredge in the American River was able to collect 98 percent of the measured mercury processed through the dredge. The results may have been higher if the investigators had been using a dredge with the modern jet flare design. Even 98 percent is a huge plus for the environment and it would be irresponsible to not allow mercury to be removed from the rivers and streams whenever it is found.

13. In Humphreys report (2005), the author expressed concern for the loss of a small portion (2%) of the mercury from the back end of the sluice box. In the conclusions it was stated that the amount lost constituted a concentration more than ten times higher than that needed to classify it as hazardous waste. Yet 98 percent of the mercury was now secured and the process did not add any mercury to the system that was not already present. The small fraction lost, because of its density, would relocate back onto the river floor buried in the sediment close to where it was removed while dredging.

14. Mercury is continuously moved every winter in high storm events. Since the cessation of hydraulic mining, accumulated sediment from hydraulic placer mining has been transported to the Sacramento-San Joaquin Delta and San Francisco Bay by sustained remobilization (James, 1991). Providing a program to collect mercury from miners would aid the Water Board's mission of reducing mercury contamination in the deltas and bays where mercury methylation is a large concern.

15. Mercury can become floured. Alpers (2005) described this as, "gravel and cobbles that entered the sluice at high velocity caused the mercury to flour, or break into tiny particles. Flouring was aggravated by agitation, exposure of

mercury to air, and other chemical reactions". In this case he was referring to a hydraulic mining sluice that contained materials that were roaring down a mountainside and fed by giant water cannons (monitors) that were used to breakup the gold bearing deposits.

16. In the test described by Humphreys (2005) a small portion of floured mercury was collected in the sediments as they escaped the sluice box. This mercury whether floured before it entered the sluice box or not would still be in elemental form. Regardless of surface area it would be no less toxic then the other 98 percent suggested should be left in place.

17. Aside from grossly polluted environments, mercury is normally a problem only where the rate of natural formation of methyl mercury from inorganic mercury is greater than the reverse reaction. Methyl mercury is the only form of mercury that accumulates appreciably in macroinvertebrates and fish. Environments that are known to favor the production of methyl mercury include certain types of wetlands, dilute low-pH lakes in the Northeast and North central United States, parts of the Florida Everglades, newly flooded reservoirs, and coastal

wetlands, particularly along the Gulf of Mexico, Atlantic Ocean, and San Francisco Bay (USGS 2000).

18. If not collected the mercury is guaranteed to end up farther down stream, and eventually in the delta or the bay, where methylation is a real environmental problem.

19. In my opinion it would be a highly irresponsible management practice to leave a large portion of mercury in the rivers and streams because of unrealistic concerns for the lesser amount moving only a short distance away from an operating dredge. Most likely if floured the movement of fine mercury would extend no farther than 50-feet off the end of the sluice box. That would relate to the distance a turbidity plume might extend downstream from a small-scale suction dredge.

20. However, if the mercury was left in place the next storm event would surely move it downstream closer to, and eventually into, the bay and delta. In fact, according to Humphrey's study in 2005 mercury was seen moving down stream and re-deposited on bedrock already dredge cleaned. The important fact here is mercury was flowing down stream in a suction dredge free zone during lower river flows than take place under high winter river conditions.

21. It is unclear from reading the Humphrey's report whether, or not, the floured mercury was already present in the river sediments. If one were to study the picture in the report that showed the results of panning materials from a nearby creek it does appear that was the case. Because the study was conducted in a seriously contaminated area it is impossible to determine what portion of flouring of mercury was caused by the crash box design of the suction dredge in use. If indeed the crash box caused the flouring then using a more modern jet fare type suction dredge should improve mercury recovery.

22. More study is required to see if reducing the amount of floured mercury would be enhanced by utilizing the modern jet flare style suction dredge. The jet flare which is widely in use today, in the suction dredge mining community, is the best equipment available for collecting fine gold and because of this design and the density of mercury 13.53 grams per cubic centimeter (g/cm3) it would be more effective in collecting mercury particles with little disturbance that would result in further breaking the mercury particles down.

23. It is most important to reduce the total amount of mercury in the streams and rivers and its transport downstream

into the bays and deltas. This is defined as a part of Total Maximum Daily Load ("TMDL") goals.

24. We know for certain that mercury is transported downstream throughout the winter season during high water events. Therefore, anytime there is the possibility for the removal of mercury by miners it should be undertaken and supported.

25. In my opinion suction dredge mining is beneficial to the rivers and streams in California.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 15th day of May, 2009 at Albany, Oregon.

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CLAUDIA J. WISE

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# The New 49'ers

**27 Davis Road, Happy Camp, CA 96039**
**(530) 493-2012 www.goldgold.com**

2 December 2009

Mark Stopher
California Department of Fish & Game
601 Locust Street
Redding, CA 96001

**SUBJECT:** Mercury issues and suction dredging

Dear Mr. Stopher,

On the chance that the Department has not yet received them, I am attaching several important files concerning mercury and suction dredging:

A) A letter from myself dated 20 June 2007 to the California State Water Resources Control Board concerning the report authored by Rick Humphries about his suction dredge recovery testing within a mercury hot spot.

B) A letter from Greene Environmental Services dated December 2 2009 to the California Governor, also on the subject of mercury.

C) A Declaration made by Claudia Wise on 9 June 2009, also very much on the subject of mercury.

As these documents speak for themselves, I will only summarize several of the important points here and make a few comments:

1) Having quite a substantial background in this area, I can tell you with certainty that the dredge Mr. Humphries used in his experiment, even though of the older design which created more turbulence in a "crash box," did not flour the very small percentage of mercury that he discovered in the dredge tailings. The period of time it takes for dredged material to pass through a dredge's sluice box is only a few seconds. While that could potentially break mercury down into smaller-sized goblets (which Mr. Humphries did not find in the dredge tailings), it requires a prolonged period of violence to succeed in breaking mercury down into particles so small as to become the size of flour.

Since Mr. Humphries neglected to test the raw material (the material that was fed into the dredge), he was not able to determine if the floured mercury already existed prior to the

dredging, and was perhaps just too small in size to receive a 100% recovery rate in the dredge's recovery system.

The very same report by Mr. Humphries showed an image of mercury (partially floured) that he panned out of a waterway without the use of a dredge, and the report also acknowledged that he returned later to the very same place where he dredged during the test and found more mercury there. In light of these two findings, a reasonable conclusion would be that mercury is continuously migrating downstream from hot spots, at least during flood events.

While we could debate over how productive it is to remove 98% of the mercury (with a suction dredge) from a mercury hot spot, anti-mining activists have tried to make a big issue that suction dredges are busy out there flouring mercury. We do not accept this. And we believe that careful testing will prove that suction dredges do not create an environment with enough extended violence to flour mercury. We would be pleased to participate in further study along this line. But until further study is done, we ask that you please refrain from accepting an incorrect, unproven theory that suction dredges contribute to mercury-flouring.

2) It has been suggested, even by some people within the scientific community who ought to know better, that because Rick Humphries was only able to recover 98% of the mercury in the dredge he was using, all suction dredging across the State should be stopped.

First of all, I want to point out that Mr. Humphries performed his dredge test in an established mercury hot spot, a location where he described seeing puddles of mercury along the bedrock!

As far as I know, there have been no studies to identify or characterize the levels of mercury within California's waterways outside of just a few identified hot spots. The vast majority of California's waterways do not contain mercury hot spots (we know, because dredgers are not finding mercury in most places).

Just because some isolated places of concern exist should not mean that the entire State should be shut down. That line of thinking will not facilitate an economic recovery in California! Make no mistake about it, there will become a point where continued economic downturn will also affect employment which requires government revenue. The time ti find reasonable balance between the need to protect the environment, and the need to create wealth-substance has arrived.

It has also been suggested that before dredgers should be allowed to dredge within an area, they should first be forced to pay for required, certified sampling in advance to make certain hazardous levels of mercury are not present. I have been involved with two such certified testing programs in concert with the USFS and US F&W agencies, and it is quite clear that the time and costs involved with this sort of testing would basically amount to a prohibition against suction dredging. That is not the answer.

We need to discuss mitigation measures during the occasional times when some dredger does turn up a mercury hot spot. We look forward to working closely with you on this issue.

3) Please take special note of the comments which Claudia Wise made (in number 17 of her Declaration) concerning the type of environments where mercury is convertible to Methyl. She points out that environments which are ripe for methyl conversion are normally very far away from the places where gold dredging is taking place. This needs further study; because if methyl conversion is not a concern within the immediate area, serious consideration should be given to the use of standard suction dredges to recover at least 98% of the mercury from known hot spots.

Please find my attached comments on this subject.

Sincerely,

Dave McCracken

**From:** "Dave Payne" <dapayne@sisqtel.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 5:29 PM
**Subject:** Suction Dredging on California Rivers

Mark Stopher
Ca Dept of Fish & Game
601 Locust St.
Redding, Ca 96001

Ca Dept of Fish & Game,

I would like to cast my vote for making the moratorium on suction dredging in California rivers permanent.

I have watched for thirty years the riparian habitats become degraded by the activities of suction dredgers. Dredging is a consumptive activity that leaves lasting scars on the landscape. Trails are cut through riparian vegetation; trash is left scattered about; ropes are left in the river; trees are girdled by cables; and unofficial campgrounds spring up where folks camp for months at a time for free on public lands.

In my town of Happy Camp; dredgers operate in Elk Creek, the town's water supply! That is criminal in my book. They also operate in the South Fork of Indian Creek fouling water quality in world class swimming holes.

To me, it seems like suction dredging in the river creates areas devoid of invertibrate aquatic life. These are the same invertibrates that feed the fish. I envision these areas like a clearcut on the bottom of the river or stream bed. How long does it take these areas to be recolonized with aquatic invertibrates?

I just do not see how the hobby of a few old timers can be allowed to reek havoc on the fisheries of California and mess with the jobs and well being of commercial fisherman up and down the west coast.

I applaud the Department for taking action and placing the moratorium in effect. I have noticed a marked difference along the Klamath River without the dredges. No lines to floating platforms, no gas containers, no oil slicks, no toilet paper fields, and no shanty towns along the river. Thanks for making that happen.

Abandoned dredge holes are another issue I have with suction dredging. Wading fisherman, rafters,and other river users have fallen into these hidden traps with sometimes disastrous results. It seems to me that the Department of Fish & Game could be held liable for serious injury or even death since you guys issue the dredge permits.

I enjoy California's rivers and creeks from a raft and or kayak. It is a literally a breath of fresh air right now to experience our rivers without the sights, sounds, and smells of the operating suction dredges. I would hope this experience will last into future.

Thank you for allowing me to comment on suction dredging in California.

Dave Payne
Happy Camp, Ca

11-30-09

# My Comments ON Dredge Permitting

TO Whom IT MAY CONCERN

Leave us ALONE your TAking

Are JOBS AWAY From us. Let

US Dredge we DONT HURT ~~Any~~ ANYThing.

We JUST ADD Wealth, WITH OUT INFLATION

THEN we ~~put~~ IT right BACK INTO The Economy,

Buy LOCAL AND ~~Keep The~~ money Flowing.

SO Let US Dredge AND Keep EVERY Thing

COOL.

Thanks — Rec. — Dredger

DAVE VANDERVIFT

HCR #2 Box 3905

TRINITY CENTER CA.

96091

**From:** David Gorsuch <davidgorsuch@sbcglobal.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/7/2009 10:18 PM
**Subject:** Suction dredgepermit program

Dear DFG, I hope this meeting will have a good outcome for us recreational prospectors on using small suction dredges.As a resident of Calif. for 52 years I would hate to see one of our greatest history era's of the gold rush go away.I have educated my kids on the great outdoors of California. As a recreational gold dredger since 1983, we have since cleaned many areas of the American river of trash, mercury (left by the 49rs) from the river bottom and lead fishing sinkers, all removed and recylced at approved outlets.We need to keep the tradition of our State so many who come after us can enjoy the outdoors. Many families depend on the dredging season to make ends meet. And the counties need the income from the prospectors, hotels ,hardware stores,camping supply store's and diners. My kids grew up using outdoor prospecting activities. I hope we can all work together on a soulution for all to enjoy in this great state of California, The land of the
free and home of the brave. Please keep the suction dredging seasons open. Already prospectors are talking about dredging in Oregon in the next seasons, we need to keep the jobs here in California. Thank you for the chance to talk on this subject. David Gorsuch Salida, Ca.

# SUCTION DREDGE PERMITTING PROGRAM
## Supplemental EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | David L. West |
| Mailing Address: | 9410 Brookpark Rd Downey, CA 90240-2478 |
| Telephone No. (optional): | (562)861-4158 |
| Email (optional): | Scotbroom@aol.com |

**Comments/Issues:** PLEASE REFER TO WHAT DFG STAFF HAS TO SAY ABOUT THIS NEW SUCTION DREDGE PERMITTING PROGRAM THAT OUR GOVERNOR SIGNED INTO LAW. DFG KNOWS MORE ABOUT MINING LAW THAN ANY OF THE LAWYERS THAT WRITE NEW ONES.

IN THE TIME OF STRESS PEOPLE ARE GOING TO BE PUT OUT OF WORK THAT WILL FURTHER HURT THE ECONOMIC HEALTH OF CALIFORNIA.

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

**From:** david quinn <dmq2u@yahoo.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/17/2009 2:00 PM
**Subject:** Permit Program

Mr. Mark Stopher:

I was unable to attend last nights scoping meeting in W. Sacramento, however I would like to give you some input into a few ideas that I have. My partner and I have two placer claims that cover one mile of the S. Fork of the Yuba. We have mined the same general area on and off for nearly thirty years.
We would have no problem paying more $$ for a yearly permit if that will help. The moratorium was brought about by some miners and Indians behaving badly on a river that is 200 miles away from us that we had nothing to do with. Does DFG need to look at certain areas for more restrictions than others? As far as the mercury questions, our claims contain no free mercury that we have found and very little amalgamated gold. However there are deposits of free mercury that we can point out in sections of the S.Fork.
I am sure that we could be of some help in the future IF someone decides to come in and clean up problem areas. We have met with David Lawler of the USGS and discussed this same idea. I hope that the EIR is done in a timely fashion so that we may get back to doing something that we love so much. If we can be of any assistance please contact us.
530-798-0769

**From:** dennis wellington <djwellington@hotmail.com>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 11/11/2009 10:25 AM
**Subject:** Response to Suction dredging

Subject: Response to Notice of Preparation of a Draft Subsequent Environmental Impact Report

Prepared by:
Dennis J. Wellington
PO Box 1963
Marion NC 28752
330.518.5394

11 November 2009

I am a past resident of California, I learned to Pan and dredge for gold after observing it in the 1970's, the thought that this historic method of family fun is about to end is disturbing to me.
It is of my opinion that the initial study contains generalities and inferences detrimental to the dredging community and that this document is anti-dredging upon the reading of the document.

The substance of the first sentence of a paragraph leads the reader to gather the opinion that the "dredger or dredging" is bad for the environment and the lands of California. Even if the paragraph will and mostly does concludes the effect of dredging is minimal or even helpful to the environment the reader is left with the adverse feeling.

It has been noted for years that many readers browse the first sentence and gather their opinion from that small sampling of information. I personally learned this manner of writing in 1990 from the Federal Government.

Would not answering the courts that's based on the population involved (Percentage of population dredging) that there was NO IMPACT or negligible impact on the environment.

This regulation is meant to govern such a small percent of the total population of the state that it is similar to enforcing laws on microbes. The US Census Bureau has stated that the population of California is approximately 36.5 million. Based on that rounded number and the information in section 5.3 Number of Suction Dredgers. Based on these numbers 3400 dredgers out of a population of 36,500,000. The percentage of the population that is involved in Gold Dredging is less than .00932% of the population. Yet according to the initial study this amount of the population wrecks havoc on the environment?

Then lets say that 1% of those people are irresponsible that is a whole .0000932% of the population. Is this really a valid amount of the population to regulate? Do they really make that much of an impact on the environment?

In section VII, discussing Fire and Police it is stated that a .05% of calls affecting dredgers as Less than Significant Impact, if that is true for this section should that same scenario apply to the dredging community on whole?

Throughout this document it infers that Fish and Wildlife can not enforce current regulations, yet in this time of financial struggle it is important to regulate this population.
Canoist, Kyakers,bikers and off-roaders do more damage to the environment than a dredger, and they are a larger portion of the population. I was recently in Kern, Los Angeles and San Bernadino Counties observing the campers and the people using the outdoors. In one instance I observed motorcyclist chasing desert quail and running them over. I tried to call DFG, but no cell phone signal. This one act was more damage than the entire population of dredgers could do to the environment in one year. More than one I observed draining hose from campers discharging questionable water directly into the environment.

In section 5.5.10 the statement "While many suction miners adhere to these basic rules and responsible behavior,Department wardens have observed camps strewn with household garbage, industrialwaste, large gas barrels, dilapidated vehicles, and human waste (1994 EIR; Sierra Fund2009)", Just the use of this statement infers conjecture that this encampment was a dredger, not a miner, a motorcycle riding camp or even a boater. This regulation is supposed to be exclusive to dredging but in numerous locations in the base document "Bad campers" are described to pass a bad reflection on dredgers.

• Potential impacts of suction dredging

The impact of the .00932% of the population engaging in dredging is minimal at most, and by the content of the initial study, dredging is in effect more of a benefit that a detriment.

It has been stated that the dredgers deconcretize the gravels in streams and creeks. Thereby assisting the native species in finding food, setting up brooding areas.

The movement of rocks and trees around (not out of the stream) helps to create pools that in DFG has stated is a benefit to the species involved.

Economic enhancement of local rural businesses by the visitation of the dredging community.

The continued enforcement of dredge size benefits current and future dredgers and the community as a whole.

• Scope and range of alternatives

1. Since this regulation only effects .00932% of the population, one alternative that is financially sound, and is effective is to modify the initial study to realistically relate to the environmental effects that the dredging population actually does little damage and more good for the environment instead of the way it is currently written to suggest that the recreational dredger is wrecking havoc on the environment such as the major mining companies have done.

2. In section VII. HAZARDS AND HAZARDOUS MATERIALS; Mercury is mentioned many times. While dredgers recover a majority of mercury in the area they are dredging, no reclamation centers exist to turn in such finds. It could be possible to set up a reward for the recovery of mercury. While the author was discussing this important fact, they failed to mention that the miners moss held the mercury as it passed thru the sluice system.

3. I personally recovered 3.9 pounds of mercury during the 2009 season on the east coast

• Types or approaches to the regulatory updates

1. When a regulation affects a extremely small part of the population, it should be appropriate to recind,

revoke or modify such regulations to accurately reflect the impact of the population on the environment, and the cost benefit of regulating such minimal impact situations in the state.
2. Make the wording common to the working man. For example use harmful instead of deleterious. My degree is in IT not biology, the readers should not have to read a document with the assistance of a dictionary.

• Information regarding deleterious effects to fish

1. A regulation must be for a real identified species.

2. The use of terms to identify species that may exist, could exist, should not be used.

3. Do accurate assessments with REAL recreational dredgers, Use members of the GPAA(Gold Prospectors of America), the LDMA (Lost Dutchmen Miners Association) or the New 49ers group. To see the real effects of dredging if it needs to be done. I have watched the Federal government refuse to use subject matter experts and use individuals who just bought equipment and had no experience or training. Most dredgers learn from others before spending thousand of dollars on equipment.

• Types of activities to be regulated under the Department's suction dredge permit

1. Regulate the size of devices
2. Seasonal closing of certain creeks and streams as need for truly endangered species.
3. Maintain the permit process so that accurate records may be kept for future issues that may arise.

Dennis Wellington
Somewhere in America

**From:** Speedo <23kau@snowcrest.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 10:18 PM
**Subject:** DEAR SANTA CLAUSE

#1 SUCTION DREDGING IS 98%OF MY INCOME, I LIVE IN AN AREA WHERE ALMOST ALL JOBS HAVE EVAPORATED RECENTLY ( EVEN THE SMALL TEMPORARY ONES ) I INVESTED MY WHOLE WORKING ADULT LIFE INTO THE EQUIPMENT AND CLAIMS TO DO THIS AND 8 HOURS BEFORE I TURNED 62 YOUR AGENCY SHUT ME DOWN. I WANT MY CONSTITUTIONAL RIGHTS RESTORED.

#2 I WAS A VOLUNTARY FIREFIGHTER AND MEDICAL FIRST RESPONDER WITH THE DOWNRIVER VOLUNTARY FIRE CO ( I HAD TO RESIGN WHEN YOU SHUT ME DOWN) I WAS A MEMBER OF TRINITY CO GRAND JURY WHICH I WANTED TO DO AGAIN AND SUCTION DREDGING WAS THE ONLY WAY I COULD DO THEM AS I HAVE NO RETIREMENT TO SURVIVE ON AND THE FUTURE IS VERY BLEAK

#3 YOUR FIGURES ON AMOUNTS OF MATERIAL MOVED IS OUT OF ALICE IN WONDERLAND!!!!!!! IF I COULD MOVE A FRACTION OF THOSE AMOUNTS I WOULD HAVE ZERO WORRIES RIGHT NOW!!!!!! GOLD IS NOT ASSOCIATED WITH JUST SAND AND NEITHER IS MERCURY.---------- IF YOU WANT TO SOLVE THE MERCURY THING FIRST STOP THE WHOLESALE BURNING OF THE FORESTS ( METHALMERCURY ) AND GET THE WATER RESOURCES BOARD TO QUIT WASTING WATER WITH BIG FLUSHES IN THE SPRING AND REPLACE IT WITH 3000CFS FLUSHES FOR 3 TO 4 DAYS EVERY 5 WEEKS IN THE SUMMER MONTHS IT WILL DROP THE FLOURED MERCURY BACK UNDER THE GRAVELS AND ANY MICROSCOPIC MERCURY WILL GO TO THE OCEAN ALONG WITH THE MINERALS AND ORGANICS THE OCEAN NEEDS TO FERTILIZE THE LIFEFORMS ---------THAT FEED THE FISH.

PAY ME A CONSULTING FEE AND I CAN SOLVE YOUR FISH DECLINE PROBLEM AND YOUR LAKE ALGAE CHOKE PROBLEM. FIRST GIVE ME BACK MY CONSTITUTIONAL RIGHTS TO LIFE LIBERTY AND PURSUIT OF HAPPINESS

DENNIS ZSIGO
BOX 672
BIG BAR. CA
530-623-2630

**From:** Don Allan <don@nrsrcaa.org>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**Date:** 12/3/2009 1:02 PM
**Subject:** suction dredging

Please ban this destructive and harmful practice which is degrading water quality and fish habitat and which thoroughly destroys the benthic invertebrates that fish and amphibians feed on. At a time when gold is reaching all-time high price levels, there will be an increase in suction dredge mining unles the California Department of Fish and Game takes a strong stance and bans this practice. Our salmon fisheries are in dire straights and fisheries closures due to small run size is having a significant negative impact on coastal communities, fishing families, and support businesses. I know CDFG's mission includes recovery of endagered species and banning suction dredge mining is an important component of insuring that instream habitat and water quality conditions are not degraded by commercial activity.

Thanks for yur consideration.

Sincerely,

Don Allan
821 Second Ave., Trinidad, CA 95570

To Who it may Concern; Nov. 30, 2009

I Don Bruechle have been suction gold dredging in the sate of California sience 1979.

While dredging I have removed 1 to 5 pounds of mercury every year From the rivers.

Also 5 to 20 pound of Lead (Fishing Sinkers, Shotgun Bird Shot, Ballets From Guns, Lead From old tin can seals & Batteries.). I melt the lead into Dive weights.

While dredging I also remove aluminum cans & Plastic Bottles which I haul to the dump. It is my expierence that dredgers Leave the riven & Forest cleaner.

Years past youn Redding F&G Biologists have inspected my operation on the East Fork of the New River in trinity County & Felt that my dredge tailing gravels were Better For Spawning than the Langen rocky riven Bottom.

We all should Know by now the dams have changed the river Flows and how Farmers need waten to Feed everyone.

The DFG has worked with dredgers on spawning seasons (open & closures) and regulations For many years.

The Indian tribes, Fishermen, and comercial Fisheries want Salmon & Steel Head to Kill, and want Someone to Blame that is what this is all about!

It is upsetting For me to hean People (Idiots) say, "Lets Stock the Klamath &

Sacrament river with northern pike & asian carp, they won't have to complain about Lack OF Fish no more!"

"I" hope that never happens Like Lake Davis! what a mess.

Seems Like everytime someone gets pushed too Far Someone does something very Stupid and everyone else SUFFers.

Lets not Let this get Blown out of porportion!

November I Saw Fishemen Lined up on the sacramento Killing Salmon, and I haven't seen the dams being removed, and, The Indian tribesare mad their not getting enough to Kill.

Lets get this Solved soon so I can go Back to work making a Living as my property taxes alone are over $3,000.— a year and are due, work or no work.

Keep me informed so I can work with you and help.

also: The 1872 mining Laws give us the right to work our Federal Land held claims.

Thank you Don Bruechle

Don Bruechle
Box 362
Sierra City, Ca 96125

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | DON LEWIS |
| Mailing Address: | HCH BOX 916 |
| | FORKS OF SALMON, CA. 96031 |
| Telephone No. (optional): | (530) 462-4774 |
| Email (optional): | NO INTERNET SERVICE - |

**Comments/Issues:**

I HOPE YOUR STUDY WILL BEGIN WITH THE PREMIS THAT THE WATERWAYS IN THIS STATE. ARE VERY DEVERSIFIED - EACH WITH A DIFFERENT CIRCUMSTANCE - THE KLAMATH DRAINAGE IN PERTICULAR IS AN ENTITY ALL IT'S OWN - I ATTENDED YOUR MEETING IN REDDING (11-18-09) AND SPECIFICALLY ASKED ABOUT THE IMPACT OF "TRIBAL FISHING" AND IT'S IMPACTS ON "FISH" IN THE KLAMATH WATERSHED - IN A NUTSHELL - I WAS TOLD IT'S A FEDERAL ISSUE. I CAN'T BELIEVE DFG WILL CONDUCT A STUDY OF IMPORTANCE ABOUT THE IMPACTS OF DREDGING UPSTREAM FROM AN AREA WHERE THE SLAUGHTER OF AT LEAST 30,000 SALMON IS NOT CONSIDERED AS AN IMPACT!

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | DON LEWIS |
| Mailing Address: | HC4 BOX 916 |
| | FORKS OF SALMON, CA. 96031 |
| Telephone No. (optional): | 530-462-4774 |
| Email (optional): | NO INTERNET SERVICE |

**Comments/Issues:** IT APPEARS THAT YOU + DFG DON'T ~~FEEL~~ PLAN ON ACTUALLY STUDYING A WORKING DREDGING OPERATION — IF THAT IS NOT THE CASE. I WOULD LOVE TO HAVE YOU OR YOUR PERSONEL FOR A DEMO — WE BELIEVE OUR OPERATION ACTUALLY HELPS THE FISH — MY CLAIMS ARE THE FIRST ONES - BEYOND THE TRINITY ALPS NORTHERN BOUNDARY ON THE SOUTH FORK OF THE SALMON RIVER :: AT YOUR MEETING IN REDDING ON (11-18-09) YOU COMMENTED THAT THE SALMON RIVER WAS BEING OVER DREDGED - I DON'T KNOW ABOUT THE MAIN STEM AS FAR AS USE — I CAN TELL YOU: THE 21 MILES OF CLAIMABLE RIVER ON THE SOUTH FORK - NO MORE THAN EIGHT DREDGES WERE IN USE THIS SEASON — IF YOU WOULD LIKE TO SEE A FISH FRIENDLY OPERATION — PLEASE CONTACT ME!

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

**From:** eman <chinadoc@pacbell.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** Creek Hanauer <tcreek@sisqtel.net>
**Date:** 12/1/2009 5:55 PM
**Subject:** Suction Dredging in Salmon River Watershed

Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

Dear Mr. Stopher,

As a resident and property owner on the Salmon River, I cannot overstate my outrage and concern over the illegal and destructive practice of suction dredging in the Salmon River watershed. Please do everything in your power to curtail this practice and appropriately remove and/or punish the perpetrators who continue to damage our environmentally vulnerable riparion resources without regard to human, animal or botanical sensitivities and requiremens. Thank you for your attention to this matter.

Efrem Korngold, OMD, LAc
Butler Flat
Somes Bar, California

**From:** Creek Hanauer <tcreek@sisqtel.net>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** Terry Hanauer <tcreek@sisqtel.net>
**Date:** 11/30/2009 4:25 PM
**Subject:** dredging comments

November 30, 2009

To Mark Stopher, California Department of Fish and Game,

My name is Terry Hanauer, my wife, Elizabeth, and I have been residents of the Salmon River for over forty years, twenty eight of those years on a patented piece of property in the Knownothing Township, at the mouth of Knownothing Creek on the South Fork of the Salmon River, 2.3 miles upriver from Forks of Salmon. My wife and I have raised our family here and as twenty five and thirty year employees of the Forks of Salmon School District have been active members of our Salmon River community, which includes the towns of Cecilville, on the South Fork of the Salmon River, Sawyers Bar on the North Fork of the Salmon River, Forks of Salmon at the confluence of the North and South Forks and Somes Bar at the confluence of the Salmon River and the Klamath River.

For the last twenty eight years I have been a whitewater kayak instructor and river guide on the Salmon River, mid-Klamath River region and the Colorado River in Grand Canyon. This outdoor professional career has given me a unique perspective on river issues especially in my home region.

*As a private river citizen, river user and board member of the Salmon River Restoration Council,* *I emphatically oppose suction dredging in the Klamath River basin, most especially on the Salmon River and its tributaries. I fully support the Karuk Tribe's stewardship efforts to stop the degradation of their salmon habitat.*

The whole history of gold mining is one of rape of landscape while pillaging and plundering the natural resources, for the benefit of very few; whether directly by the mining operations themselves or the clear-cutting of whole forests for mining timbers. Dredges and placer operations finally outlawed in the Sierra, were moved to remote places like the Klamath River (further from population centers and public notice) and then, in my lifetime on the area's rivers, to Brazil.

On the Klamath River the traditional salmon runs approach extinction due to rising river temperatures in large part caused by past logging and mining practices and currently because of the series of dams above I-5. Further fouling of an imperiled river through suction dredging is just another nail in the coffin of the spring and fall salmon runs.

*On the Salmon River's pre-white man spring salmon runs of Chinook and Coho numbered a half a million; the fall run a hundred thousand fewer. Today we're lucky to see a spring run numbering above 100 SALMON TOTAL! The now bigger fall run has dropped below TWO HUNDRED in my river lifetime and we feel fortunate when the fall run gets above a couple of hundred. The Salmon River is the last and only natural river in the whole Klamath River basin.*

The Salmon River drainage encompasses 750 square miles and is 98.5% federal land administered by the United States Forest Service.

The Salmon River has no major population congregations (the total population within the entire 750 sq. miles of the Salmon River drainage is around two hundred people.) There is no large agriculture or industrial operations. The Salmon River is host to the only remaining natural run of fish in the whole Klamath River basin.

In other words there is nothing to foul the river except the consequences of past mining, road construction and clear cutting.

*How can we in our right minds condone an activity that pollutes the river system in any magnitude at the lowest, warmest time of the Salmon River's yearly cycle? We cannot!* The salmon runs are the heart of the forest's health, this is a time for river restoration efforts such as those of the community based organizations like the Salmon River Restoration Council and Mid Klamath Watershed Council, not the further endangerment and loss of habitat.

My home is on Knownothing Creek near the mouth. The creek runs unusually flat, by local standard, for its first three miles, historically prime salmon spawning opportunity for returning spring and summer Chinook and Coho salmon. Knownothing flows into the South Fork in a way that naturally creates a yearly hole that supports the weary fish. There are spawning redds directly above and below the Knownothing Hole. Yearly fish dives have always found returning salmon and steelhead nosed into the creek's flow at the mouth. Knownothing Creek is one of only three summer creeks large enough to provide refuge to the spring and fall spawners and the only creek fed hole for the first six miles of the lower South Fork. Knownothing Creek's fresh, colder water is a major factor in the returning salmon's ability to survive summer temperatures. During the dredging season the river is at its lowest flows and Knownothing Creek flows at around two (2) or three (3) cfs; in good years. These last weather years have not been good.

Last summer, July 2009, a mining claim only two hundred yards up Knownothing Creek from its confluence with the South Fork of the Salmon River was rented out to people from southern California who placed a SIX INCH DREDGE into one of the few holes on Knownothing Creek big enough at that time of year to hold it. They were outfitted in the very latest state-of-the-art diving gear designed for deep diving. Knownothing Creek at that flow wasn't deep enough for them to have to do anything but float on top while suctioning up the creek bottom; and there were already three more smaller dredges further up the creek! The few days before the ban that they ran the dredge turned the creek black with mud. With no real flow to push the muck down creek I watched as a thick pudding like flow seemed to ooze slowly down creek to the river. It filled every nook and cranny of the creek bottom with a thick layer of silty mud. When these flows reached the river they dumped this oxygen killing muck directly into the faces of the spring salmon nosed into the creek mouth for cool temperatures and oxygenated water. This should be a crime; to participate in the killing of the last struggling representatives of a species!

After witnessing this horror in my own home neighborhood I went and

spoke to these folks about what was going on in the Salmon River drainage and where they were and the community they were invading. Nice folk. They had no knowledge of anything in the area, they were there just to “have fun together dredging in this beautiful place you have here.” The owners of the claim gave them no information and nice as they were, if it wasn’t for the ban, they would have continued destroying the Knownothing refugia.

Late history on the Salmon River system included a very few local folk doing a little plinking around and a few stalwart old-timers who returned to traditional claim every year. Not many as far as raw numbers went. Then came the invasion of “the recreational mining club.” Four or five years back a mining claim on the main stem of the Salmon River was occupied by over two dozen recreational miners from the New 49er Mining Club out of Happy Camp (the New 49ers bought up every unclaimed foot of the Salmon River). Locals noted that the family that had lived there for over a decade had been forced off the claim when denied occupancy and now we had two dozen flatlanders crowding a flat that used to support an active family in our river community. *The New 49er’s placed FOURTEEN DREDGES in the first half mile below Butler Creek!* Gas being poured into the river at refueling times (boating below the flotilla of dredges found a dirty river with hints of gas slicks in the small eddies below.) Toilet facilities were minimal and there was no concern for bathing, grey waste water or trash. This was an abomination to all local sensitivities, in particular to the Karuk Tribe. Fortunately we have fishery issues that shut that kind of travesty down. But, a pretty good example of these
“wreck-reational” miner clubs stretching the regulations so a few at the top can make a buck; without a thought to the river’s residents or communities. There oughta be a law.

Last summer when the dredging ban went into effect, there were three miners with Oregon plates on their rigs, dredging a mile up the North Fork from Forks of Salmon that thumbed their noses at the ban, F&G and the local community and kept right on dredging until a rumor that the F&G was finally going to put in a token appearance caused them to shut down. Letters to the editor in regional news papers made bold claims of not obeying the law; the prevalent statement of bravado identified the angry miner as an “outlaw.”

The Salmon River may appear to these “outlaws” to be in the middle of nowhere, but the river has a long history of being the home to many families sprinkled along its banks. The Salmon River is my home. I take it personally when someone threatens to defy the law in my home, as would anyone in any neighborhood in the state.

In the last two decades the recreational uses of the Salmon River area have skyrocketed. Rafting, Kayaking, Mountain Biking, Four-Wheeling, Hiking, Motorcycling, Road Biking have all grown enormously. These are activities that do not use up the natural resources of the Salmon River drainage while infusing recreational dollars into local businesses.

*It is long past time to put a stop to all dredging within the Salmon River Drainage. The Salmon River, of all the state’s rivers and certainly as the only free-flowing river in the Klamath River basin deserves protection, not further degradation and endangerment.*

Yours with Deep Concern,

Terry M. Hanauer Elizabeth Hanauer 44631 Cecilville Rd Forks of Salmon, CA 96031 530-462-4764

5126 W. Longfellow Avenue

Tampa, FL 33629

California Department of Fish and Game

Attn: Mark Stopher

601 Locust Street

Redding, CA 96001

Dear Mr. Stopher;

This letter is in response to the Public Scoping Meeting mailer. As I won't be able to attend in person I want to provide my input by letter.

First, I have been dredging for over 15 years and for 10 years on the same claim in Yuba County. In regards to scoping I believe the scope of the study should be limited to those rivers where Salmon are present. The creek where I dredge is a feeder creek to the N. Fork of the Yuba River and is about 8 miles from the confluence with the Yuba. The Yuba is then an additional distance from an area where Salmon may be present – not to mention the rather significant dam that exists between all of the feeder rivers on the Yuba.

My second comment is I believe it is a waste of time and money to look at the effects of dredging disturbing mercury. Unless you can stop mountain streams from flood stage every year you cannot stop the mercury problem. Some of the mercury is naturally occurring; some of it is the result of mining in the 1800's. The mercury I find is always associated with gold and I don't throw it back. I know the issue is the trace mercury that is stirred up, but my point is when a river floods it disturbs the entire stream bottom. The amount of material I move in a year is miniscule compared to a river during the spring melt. Additionally, as mercury is a heavy metal it settles very quickly during the summer months when the rivers are low.

As I mentioned above I have dredged the same river for over 10 years. I can attest there is absolutely no impact from dredging. It is quite the opposite. Often I will fly fish for trout and there is a very good population of trout in the river. A more sensitive test of pollution would be amphibians. I see an abundance of Sierra Newts in the river that you would think would be very sensitive to mercury, but every year their population seems to grow – not the reverse.

These aren't the comments of just a dredger – I used to belong to the Sierra Club for many years – that is until they came out on the side of banning dredging. I think there have been sufficient environmental impact studies done with dredging and I believe the Department of Fish and Game has done a sufficient

job of regulating dredging. Apparently the representatives who claimed the Department has not done a good job at regulation have never read the Suction Dredging Regulations. As you are well aware the regulations close certain rivers during the year and this is probably an effective method.

I'm neutral on the effects of the clubs. I'm not sure if my position would change if there were multiple dredges on my river – but in the years I've been dredging I have never seen another miner on my river.

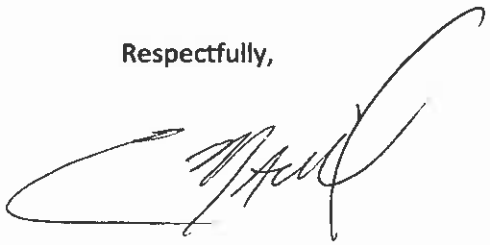
I think the existence of claims that are not within the clubs tend to protect a river as it limits the amount of dredging that occurs on the claim to the claimants (generally). In my case I have over a mile of river claimed and I've maybe sample dredged a quarter of it. There are no other dredges on that mile.

Finally, I object to the classification of dredgers as "hobbyists." My dredging is done under a corporation, Cold Canyon Mining, and I recover sufficient gold to make it worth my while. I know some people that recover more, and some that recover less. With placer mining the idea is to find the pockets so you may go years sampling until you find a pocket that pays you back. Classifying dredgers as hobbyists makes it seem that it a small thing to take away the right. I don't agree with that. Any person that goes out and makes money by the sweat of their brow should be respected – not denigrated.

My recommendations are:

1. Don't ban dredging on all rivers during the study period – limit it to the rivers with Salmon breeding areas.
2. Mercury is a bit of a red herring. The mercury will continue to be stirred up as long as rivers flow.
3. Keep in mind that claims tend to protect a river. Limiting the number of dredges per length of river could be effective.

Respectfully,



ERIC M. MAKSYMYK

# SUCTION DREDGE PERMITTING PROGRAM
## Subsequent EIR - CEQA Scoping Comment Form

| | |
|---|---|
| Name: | ERNEST HAYDEN |
| Mailing Address: | 115 SOFIELD RD. CALLAHAN, CA 96014 |
| Telephone No. (optional): | 530- 467-5695 |
| Email (optional): | HLOGGING@GMAIL.COM |

**Comments/Issues:**

BEING A FIRST TIME MINING CLAIM OWNER I SEE NOTHING BUT BENEFITS FROM DREDGING, IT HAS LOOSENED IMPACTED GRAVEL IMPROVING SPAWNING BEDS, WE HAVE REMOVED MERCURY FROM THE STREAM BED, THE FISH LOVED US, WE STIRRED UP FOOD IN THE STREAM. MY WIFE AND I HAVE A MAIL ROUTE ON THE SALMON RIVER, WHEN THE DREDGING BAN WENT INTO EFFECT THERE WAS A MASS EXODUS FROM THE AREA, IT GREATLY IMPACTED THE LOCAL ECONOMY I.E. BUSINESSES THAT RELIED ON THE MINERS. (GREAT THING IN A BAD ECONOMY).

WE INVESTED IN A MINING CLAIM AND A DREDGING PERMIT, AND WERE BANED IN THE MIDDLE OF THE SEASON, WITH NO PROVISION TO REIMBURSE US FOR OUR FEES.

I ALSO SEE THE BAN AS AN INFRINGEMENT OF MY RIGHTS UNDER FEDERAL MINING LAWS.

*Please use additional sheets if necessary.*

**SUBMIT WRITTEN COMMENTS (POSTMARKED BY 12/03/09) TO:**

**Mail:** Mark Stopher
California Department of Fish and Game
601 Locust Street
Redding, CA 96001

**Email:** dfgsuctiondredge@dfg.ca.gov

**Website:** www.dfg.ca.gov/suctiondredge

*Questions? Please call us at (530) 225-2275*

**From:** "Parham, Gene (CDPH-DDWEM)" <Gene.Parham@cdph.ca.gov>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** <ttrexler@tcsconsultingservices.com>
**Date:** 12/2/2009 1:34 PM
**Subject:** FW: Information that may be pertinent to the upcoming required suction gold dredging EIR

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From: Parham, Gene (CDPH-DDWEM)
Sent: Wednesday, December 02, 2009 11:25 AM
To: 'dfgsuctiondredge@dfg.ca.gov'
Cc: 'ttrexler@tcsconsultingservices.com'; 'GALE BALLENGER'; Fong, Stephen (CDPH-CFH-MCAH-PAIS-AMF); 'Linda Parham'
Subject:

To: Mark Stopher , Department of Fish and Game
December 1, 2009

From: Eugene Parham, P.E.

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retrieved the mercury data for all public water supply systems in the "mother lode" counties, from Placer County to Plumas County. Out of approximately 200 water systems, the data shows none of the water systems exceeded the MCL for mercury and only six had detected mercury above 50% of the MCL. Records show the mercury detections for these six systems were all from deep wells and as reported are not under the influence of surface water.

I have "hard copies" of mercury test data for several domestic water supply systems which have surface water sources and will send them to you. The water systems are Cal Water Service - Oroville, North Yuba Water District, and the City of Grass Valley. I chose these systems as they utilize water from sources whose watersheds have recent and historical mining activities. Note that the tests were taken through out the year, thereby testing the water for mercury during the suction dredging season as well as stream bed scour during high winter flow. The records show all results for mercury for these systems are below the detection level for reporting of 1.0 ppb. There is additional water system mercury data in counties to the south of Placer County that can be researched and provided to you; however, in talking with Dave Lancaster (916-449-5668), District Engineer for the area which regulates counties south of Placer County, he stated no water systems in his District have had a violation for mercury concentration. Based on the above as well as all the data I reviewed for mercury concentrations in streams associated with mining activities, I feel suction dredging clearly has a less than significant impact for mercury in water downstream of dredging operations.

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distributed is much less than that shown in the Initial Study.

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In conclusion, and as stated above, I have been dredging for about 30 years. In that time frame I have met a considerable number of miners and they represent all "walks" of life, from professional engineers, college professors, and retired sheriffs, to skilled tradesman, and of course those who supplement their income or are actually subsistence miners. While a few "mavericks" may exist, the gold dredgers I have met are decent law abiding individuals and would be the first to inform authorities of activities in violation of dredging laws or other activities that are detrimental to the environment. After all, the individuals I know dredge because we love and respect the outdoors and because we do find gold. We have found placer gold tainted with mercury and feel we are doing a good deed for the environment by taking mercury out of the streams, not putting it in. We also remove from the streams lead shot, lead fishing sinkers, and lead strips from when sluice cracks were sealed with lead in the early years of gold mining. In addition, we create spawning beds as well as holes for the fish to feed in.

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If you have questions, I can be reached at (530) 524-4735 or (530) 224-4863.

**From:** "Parham, Gene (CDPH-DDWEM)" <Gene.Parham@cdph.ca.gov>
**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** <ttrexler@tcsconsultingservices.com>, "GALE BALLENGER" <gballenger@sbcgl...
**Date:** 12/2/2009 11:26 AM

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December 1, 2009

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**To:** <dfgsuctiondredge@dfg.ca.gov>
**CC:** <ttrexler@tcsconsultingservices.com>
**Date:** 12/2/2009 2:02 PM

**Subject:** Regulatory info

Thought you might like to have info on the California Department of Public Health Regulations for inorganic chemicals showing maximum contaminant levels. This is located in the California Code of Regulations, Title 22, Chapter 15.

Article 4. Primary Standards--Inorganic Chemicals

§64431. Maximum Contaminant Levels--Inorganic Chemicals.

(a) Public water systems shall comply with the primary MCLs in Table 64431-A as specified

in this article.

Table 64431-A

Maximum Contaminant Levels

Inorganic Chemicals

Chemical Maximum Contaminant Level, mg/L

Aluminum 1.

Antimony 0.006

Arsenic 0.010

Asbestos 7 MFL*

Barium 1.

Beryllium 0.004

Cadmium 0.005

Chromium 0.05

Cyanide 0.15

Fluoride 2.0

Mercury 0.002

Nickel 0.1

Nitrate (as NO3) 45.

Nitrate+Nitrite (sum as

nitrogen)

10.

Nitrite (as nitrogen) 1.

Perchlorate 0.006

Selenium 0.05

Thallium 0.002

* MFL=million fibers per liter; MCL for fibers exceeding 10 um in length.

§64432. Monitoring and Compliance--Inorganic Chemicals.

(a) All public water systems shall monitor to determine compliance with the nitrate and nitrite MCLs in Table 64431-A, pursuant to subsections (c) through (e) and §64432.1. All community and nontransient-noncommunity water systems shall monitor to determine compliance with the perchlorate MCL, pursuant to subsections (c), (d), (j), and Section 64432.3. All community and nontransient-noncommunity water systems shall also monitor to determine compliance with the other MCLs in Table 64431-A, pursuant to subsections (b) through (n) and, for asbestos, Section 64432.2. Monitoring shall be conducted in the year designated by the Department of each compliance period beginning with the compliance period starting January 1, 1993.

To: Mark Stopher , Department of Fish and Game December 1, 2009

From: Eugene Parham, P.E.

---

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Although there are a number of items in the Notice of Preparation/Initial Study handed out at the scoping meeting, the December 3, 2009 comment date does not allow me to fully address them; however, the information shown on page 16 with respect to sediment displacement per hour is not representative of actual stream bed displacement. It is my understanding this information was taken from Keene data, who manufactures dredges, and is based on dredging loose sand with different nozzle sizes for comparative differences only. The dredge my friends and I were using last summer had a six inch nozzle. I recently took pictures of that section of river we dredged and have calculated the volume of material moved. The hard copies to be sent to you show the limits of our operations as measured in the field. The area affected is about 1,238 square feet and the average over-burden was less than 5-feet, but used 5-feet for the calculation. We typically dredge 8-hours a day and we dredged at this site for three weeks or 18 days. The hard copy calculations sent to you with my civil engineering stamp and signature show approximately 230 cubic yards (CY) of material was moved. At 18 days consisting of 8 hours each, the volume of material moved per hour is calculated at about 1.6 CY per hour. I have been dredging for almost 30 years, and my experience is that this calculated value is certainly "in the ball park." There are times when the material is some what loose and we may move slightly over 2 CY/hour. Then there are times when we are in "hard pack" where we move less than 1.0 CY/ hour. As you can see, the amount of stream bed material distributed is much less than that shown in the Initial Study.

I would also like to comment on some of the Initial Study items found to be shown as having a "Potentially Significant Impact." Many of these items such as (pg.30) "have a substantial adverse effect on a scenic vista", or (pg. 34) "impede compliance with greenhouse gas emissions", or (pg. 67) "create a significant hazard to the public through the transport, use, or disposal of hazardous materials" such as gasoline and oil apply to many other, if not all, outdoor activities involving people, vehicles, and other combustion engines. As to having "a substantial adverse affect on a scenic vista", I recognize there may be a few people who find our dredging operations have an adverse effect on their scenic view of the area; however, in my 30 years of dredging, I have NEVER had a negative comment from the public about our dredging operations. In fact, quite the opposite. We dredged the Klamath River, the Yuba River, and the Salmon River, and in full view of a highway or travel way. In all cases, people would stop and would ask questions about our operations, wanted to sit on the dredge when it was in operation, take pictures, completely enjoyed themselves, and only had positive things to say about our activities. It is my hope that when these issues are addressed, common sense and reason, combined with regulatory limits and mandates, will provide accurate determinations which can be mitigated if necessary.

In conclusion, and as stated above, I have been dredging for about 30 years. In that time frame I have met a considerable number of miners and they represent all "walks" of life, from professional engineers, college professors, and retired sheriffs, to skilled tradesman, and of course those who supplement their income or are actually subsistence miners. While a few "mavericks" may exist, the gold dredgers I have met are decent law abiding individuals and would be the first to inform authorities of activities in violation of dredging laws or other activities that are detrimental to the environment. After all, the individuals I know dredge because we love and respect the outdoors and because we do find gold. We have found placer gold tainted with mercury and feel we are doing a good deed for the environment by taking mercury out of the streams, not putting it in. We also remove from the streams lead shot, lead fishing sinkers, and lead strips from when sluice cracks were sealed with lead in the early years of gold mining. In addition, we create spawning beds as well as holes for the fish to feed in.

It may be determined that existing laws are too lax, and if that is found to be the case then appropriate regulations should be developed to deal with the issues. However, an entire industry should not be banned because of unjust or unfounded reasons. I feel dredging can exist in harmony with nature as well as other outdoor activities. This is also my cultural heritage and to ban it completely would be an injustice to those of us who enjoy gold dredging so much.

If you have questions, I can be reached at (530) 524-4735 or (530) 224-4863.

12/1/09

To: Mark Stopher, DFG

These are the calculations approximating the cubic yards per hour of material a 6-inch dredge nozzle can remove in a simi hardpack stream bed. The calculations are based on actual conditions as shown on the attached photograph. We dredged for 18 days averaging 8-hours per day. Over-burden averaged 5-feet.

Area ≈ 22.5 x 55 ≈ 1238 $ft^2$
Volume ≈ 1238 x 5 ≈ 6190 $ft^3$
Cubic Yards ≈ 6190 ÷ 27 ≈ 230 CY
CY/day ≈ 230 ÷ 18 ≈ 12.8 CY

Therefore CY/hour ≈ 12.8 ÷ 8 ≈ 1.6 CY

Eugene

REGISTERED PROFESSIONAL ENGINEER
EUGENE W. PARHAM
19828
9/30/11
CIVIL
STATE OF CALIFORNIA


≈ 60'
≈ 40'
11/27/2009

STATE OF CALIFORNIA
DRINKING WATER PROGRAM



DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091130
REPORT OF COUNTY: 29 NEVADA

SYSTEM NO: 2910001 NAME: City of Grass Valley COUNTY: NEVADA
SOURCE NO: 002 NAME: TREATMENT PLANT - TREATED PSCODE: 2910001-002 CLASS: CLSP STATUS: AT

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | RESULT * | | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 01/05/1994 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 01/26/1995 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 02/24/2004 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091130
REPORT OF COUNTY: 29 NEVADA

SYSTEM NO: 2910002 NAME: City of Nevada City COUNTY: NEVADA
SOURCE NO: 002 NAME: TREATMENT PLANT - TREATED PSCODE: 2910002-002 CLASS: CLSP STATUS: AT

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | RESULT * | | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 02/28/1995 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 02/08/1996 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 12/17/1996 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 01/28/1998 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 01/21/1999 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 02/01/2000 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 12/06/2001 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 12/12/2002 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 12/13/2005 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 11/29/2007 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

STATE OF CALIFORNIA
DRINKING WATER PROGRAM



DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091124
REPORT OF COUNTY: 58 YUBA

SYSTEM NO: 5810006 NAME: North Yuba Water District COUNTY: YUBA
SOURCE NO: 001 NAME: FORBESTOWN DITCH INTAKE PSCODE: 5810006-001 CLASS: XCLD STATUS: AR

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | | RESULT * | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 05/06/2003 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 06/10/2003 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
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DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091124
REPORT OF COUNTY: 58 YUBA

SYSTEM NO: 5810006 NAME: North Yuba Water District COUNTY: YUBA
SOURCE NO: 002 NAME: TREATMENT PLANT - TREATED PSCODE: 5810006-002 CLASS: CLSP STATUS: AT

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | | RESULT * | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 06/14/1994 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 03/06/2006 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 06/23/2009 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
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DATE: 11/24/09
REPORT: R-040/2-3

STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091124
REPORT OF COUNTY: 04 BUTTE

SYSTEM NO: 0410005 NAME: Cal-Water Service Co.-Oroville
SOURCE NO: 005 NAME: TREATMENT PLANT-TREATED

COUNTY: BUTTE
PSCODE: 0410005-005 CLASS: CLSP STATUS: AT

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | | RESULT * | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 04/25/1994 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 11/20/1995 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 09/24/1996 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 04/29/1997 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 04/07/1998 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 09/21/1999 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 04/24/2001 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 06/11/2002 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 07/15/2003 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 07/22/2004 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 08/10/2005 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 08/14/2006 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 08/16/2007 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 08/05/2008 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |
| 71900 MERCURY | 08/11/2009 | | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091124
REPORT OF COUNTY: 04 BUTTE

SYSTEM NO: 0410005 NAME: Cal-Water Service Co.-Oroville COUNTY: BUTTE
SOURCE NO: 014 NAME: OROVILLE TREATMENT PLANT - RAW PSCODE: 0410005-014 CLASS: XCLD STATUS: AR

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | RESULT * | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | |
| 71900 MERCURY | 07/22/2004 | .0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD

STATE OF CALIFORNIA
DRINKING WATER PROGRAM

DRINKING WATER ANALYSES RESULTS REPORT
ALL SAMPLES FOR SELECTED CONSTITUENTS - ALL RESULTS
FOR SAMPLE DATE RANGE OF 19940101 THRU 20091124
REPORT OF COUNTY: 04 BUTTE

SYSTEM NO: 0410008 NAME: Thermalito Water & Sewer District COUNTY: BUTTE
SOURCE NO: 001 NAME: TREATMENT PLANT-TREATED PSCODE: 0410008-001 CLASS: CLSP STATUS: AT

| GROUP IDENTIFICATION / CONSTITUENT IDENTIFICATION | SAMPLE DATE | | RESULT * | MCL | DLR | TRIGGER | UNIT |
|---|---|---|---|---|---|---|---|
| IO INORGANIC | | | | | | | |
| 71900 MERCURY | 05/22/2001 | < | 1.0000 | 2.0000 | 1.0000 | 2.0000 | UG/L |

NOTE1: * = RESULT IS EQUAL TO OR GREATER THAN TRIGGER
NOTE2: .000 = RESULT WAS REPORTED AS NON-DETECTED EXCEPT FOR RAD