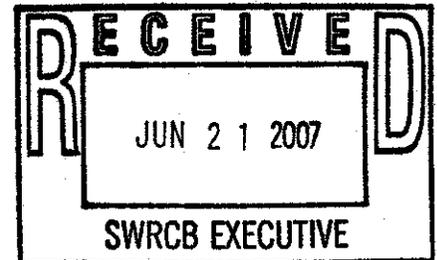


KLAMATH RIVERKEEPER

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June 19th, 2007

Song Her, Clerk to the Board
Executive Office, State Water Resources Control Board
P.O. Box 100
Sacramento, CA
95812-0100



RE: Suction Dredge Mining and Water Quality Impacts Comments

Please accept the following comments from the Klamath Riverkeeper, the Klamath Siskiyou Wildlands Center, and the Environmental Information Environmental Center on the impacts to water quality and beneficial uses from suction dredge mining. First we would like to state that we are very disappointed that this harmful activity has been unregulated for over seven years, despite the growing wealth of science showing the harmful, and sometimes dangerous impacts to water quality, fisheries and human health. This activity should not be allowed to continue without a 401 permit from the State Board and a General NPDES or individual NPDES permits. Furthermore when permits are completed certain areas should have prohibitions on suction dredge mining.

The areas we propose for prohibitions are: any sediment, turbidity, or mercury listed rivers or stream segments, all critical or currently used habitat for endangered, sensitive, threatened, or Management Indicator Species aquatic species listed under the State or Federal Endangered Species Act or Northwest Forest Plan, National Wild and Scenic Rivers systems, drinking water supplies, and areas with culture sensitivity issues, such as Tribal territories where Tribal members have asked for an end to mining. In these permits non-intended pollutants such as sewage, oil and gas, sediment imputes from road ways, streamside shade reduction, and soap should be addresses, as they have significant impacts on waterways. If the State Board is not planning to enforce suction dredging permits or prohibitions, then we ask that no suction dredge mining be allowed at all. While this permit is being worked on all suction dredge mining should be suspended.

Situations where a General Permit should never apply

If the board decides to issue a general NPDES permit or 401 permit, prohibitions on certain areas need to be put into place to protect beneficial uses. As stated before, Wild and Scenic Rivers, endangered, threatened, and sensitive species habitat, sediment or mercury impaired rivers and culturally significant areas are not appropriate places for the use of suction dredge mining.

The mining community may also argue that the regulations only apply when a pollutant is added to waters of the United States from the "outside world." Several courts have addressed whether an addition of a pollutant must come from the outside world, See e.g., *Natl. Wildlife Federation v. Gorsuch*, 693 F.2d 156, 175 (D.C. Cir. 1982); *Natl. Wildlife Fedn. v. Consumers Power Co.*, 862 F.2d 580, 584 (6th Cir. 1988); *Dague v. City of Burlington*, 35 F.2d 1343, 1346, 1354-55 (2d Cir. 1991); *Dubois v. U.S. Dept. of Agric.*, 102 F.3d 1273, 1298 (1st Cir. 1996); *Catskill Mts. Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481, 484, 491-2 (2d Cir. 2001); *Catskill Mts. Chapter of Trout Unlimited, Inc. v. City of New York*, 451 F.3d 77, 83 (2d Cir. 2006).

Suctions dredging without a permit or enforcement violate Porter Cologne

The state board must either issue a 401 and General NPDES permit or direct the Regional boards to issue permits for the pollution from suction dredge mining. This is especially important when pollutants for which the water body is listed (i.e. sediment and mercury) are added by dredging. Furthermore the State Board must make sure that these permits will be enforced. To not regulate mining pollution, or to not enforce permits would be a violation of Porter Cologne.

Although the Porter-Cologne Act gives the Regional Boards a clear directive to regulate all sources of pollution to surface water and groundwater, including polluted runoff not regulated under the federal Clean Water Act, the Regional Boards all continue to fail completely to enforce these provisions for suction dredge mining. These illegal discharges, including the seven years of illegal suction dredging discharges cause and contribute to significant and lasting degradation of surface water, and yet no action on redressing this enforcement chasm is discernable

Areas with listed fish species

Suction dredging should never be allowed within areas with listed aquatic species. The effects to fisheries are perhaps the most well documented impact of suction dredge mining. Our endangered salmon and trout population in the state of California are suffering from severe cumulative impacts, which is driving the fishing industry, Native American, and coastal communities into poverty. Dredging has been found to both directly kill fish and beneficial insects and to impact fisheries and beneficial insects through water quality impacts. The following quotes support this claim:

"All anadromous fishes in the Klamath basin should be considered to be in decline and ultimately threatened with extirpation as wild populations because of the long history of decline and the multiple threats to the river system. Suction dredging, through a combination of disturbances of resident fish, alteration of substrates, and indirect effects of heavy human uses of small areas, especially thermal refugia, will further contribute to the decline of the fishes." Peter Moyle declaration in *Karuk Tribe of California vs. California Department of Fish and Game*. In addition during the course of the litigation, CDFG stated it is "the Departments current opinion that suction dredge mining under the current regulations in the Klamath, Scott and Salmon watersheds is resulting in

viability of spawning redds on the Trinity River by altering the stability of spawning gravels. Although dredging tailings may be attractive sites for redd construction because they provide loose, appropriately sized gravel near riffle crests where fish frequently spawn, embryos in tailings suffer high mortality due to scoring during high flows (Harvey et al. 1998)" Trinity River sediment TMDL. Note the Trinity River is listed for sediment and is home to endangered and Tribal Trust salmon species.

From Table 6-1 Summary of Implementation Recommendations for the Trinity River Basin under recommendations, "Evaluate and limit effects of suction dredge operations in stream reaches that overlap spawning sites" Trinity River TMDL

"Effects of suction dredging commonly appear to be minor and local, but natural resource professional should expect effect to vary widely among stream systems and reaches within systems. Fisheries managers should be especially concerned when dredging coincides with the incubation of embryos in streams gravels or precedes spawning runs soon followed by high flows. We recommend that managers carefully analyze each watershed so regulations can be tailored to particular issues and effects. Such analysis are part of a strategy to (1) evaluate interactions between suction dredging and other activities and resources; (2) use this information to regulate dredging and other activities; monitor implementation of regulations and on-and off site effects of dredging; and (4) adapt management strategies and regulations according to new information. Given the current level of uncertainty about the effects of dredging, where threatened and endangered aquatic species inhabit dredged areas, fisheries managers would be prudent to suspect that dredging is harmful to aquatic resources." Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy

"Material is commonly dredged from pools and cast over downstream riffles." Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy

Griffith and Andrews (1981) observed a range of mortality rates for aquatic organisms entrained in a suction dredge. In contrast entrainment increased mortality of the early life history stages of trout. Mortality was 100% among un-eyed eggs of cut-throat trout (*Oncorhynchus clarki*) from natural redds but decreased to 29%-62% among eyed eggs. Sac fry of hatchery rainbow trout suffered >80% mortality following entrainment, compared to 9% mortality for a control group. Entrainment in a dredge would likely kill larvae of other fishes." Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy

"Fish eggs, larvae, and fry removed from the streambed by entrainment that survived passage through a dredge would probably suffer high mortality from subsequent predation and unfavorable physico-chemical conditions." Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy

Effects on Important refugia area from dredging

The importance of creeks and creek mouths for refugia in polluted and warm rivers is well documented. Within waterbodies, such as the Klamath River, salmon species

“Off-site effects of individual dredges may be minor, but downstream impacts may be of concern where dredges are closely spaced, and other human activities and natural conditions increase the potential for cumulative effects”

Effects of Suctions Dredging on Streams: a Review and an Evaluation

“Dredging should be of special concern where it is frequent, persistent, and adds to similar effects caused by other human activities.”

Effects of Suctions Dredging on Streams: a Review and an Evaluation

We are very concerned with the cumulative effects of suction dredge mining when combined with past, present and foreseeable actions. We are especially concerned when these action effect fisheries, sediment imputes, and mercury level. Cumulative impacts that should be considered throughout the permitting process should include logging, road building, other mining, agriculture use, grazing, power plant operations, fishing, stormwater run-off, related dredging, development, and ext. The following quotes support our claims that the cumulative impacts from suction dredge mining need to be avoided and mitigated.

“For example, dredged channels would be less likely to be remolded annually if they were downstream of impoundments or diversions that decrease peak flows and trap bedload.” Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy speaking on varied responses of streams to impacts of suction dredge mining.

“Erosion of streambanks is likely to be greater where (1) streambanks and riparian vegetation are directly disturbed by suction dredging and related activities; (2) streambanks are composed of erodable materials such as alluvim; (3) dredging artificially deepened the channel along streambanks, and (4) the roughness of streambanks and the adjacent bed is reduced. Bank roughness in the form of large rocks, roots, and bank projections tends to reduce hydraulic forces on streambanks (Thorne and Furbish 1995)

“If dredging causes riffle crests to erode, spawning sites may be destabilized, and upstream pools may become shallower. Disturbance of riffle crests also can destabilize the reach immediately downstream. Riffle crest are commonly flat, so any imposed topography would tend to deflect the flow to one side of the channel downstream, promoting back erosion, and scour and fill the bed. Dredge tailings placed in different locations from year to year would exacerbate these impacts.” Effects of Suctions Dredging on Streams: a Review and an Evaluations Strategy

Mercury flowering

“Mercury concentrations in the fine and suspended sediment lost from the dredge were more than ten times higher than that needed to classify it as a hazardous waste, and recycled to the environment”.

State Water Resources Control Board, Dept. of Fish and Game, and United States Forest Service, May 2005

The lack of clarity and objectivity in the permits impacts enforcement, which necessarily becomes extremely staff-intensive. Straightforward requirements will lend themselves to straightforward enforcement and conserve valuable staff resources. For this reason, the 2005 Lloyd Memo on water quality enforcement recommended that:

“Where appropriate to achieve water quality protection, numeric limits based on sound science should be incorporated into permits that define the allowable discharge or pollutants that the Boards determine are high priority.”

We agree with the Secretary that numeric limits, as well as clearly established deadlines, are essential to a sound enforcement program and we think this strategy should be used in

Stream and Wetlands Protection Policy

Allowing of in stream and riparian mining will most likely violate the Stream and Wetlands Protection Policy that is currently being created by this board.

Impacts from operating with no permit or oversight for last seven years

We are very concerned that the impacts of seven years of unregulated suction dredge mining may take decades to recover from. One example of where this unregulated mining has had significant impacts is the Klamath River. Within the Klamath River watershed three recreational mining groups have lined up their members within sediment listed waterways. This intensive mining occurred during salmon spawning, within important spawning areas and refugia. These effects have been significant due to the volume of miners within one spot, often spots that are prime habitat to species. Furthermore these areas were already suffering from intensive sediment related cumulative impacts. Furthermore due to the lack of oversight and regulation we have no idea how many fish have died from this intensive mining, nor how it has impacted sediment and mercury levels in prime fish habitat.

A full report on the impacts to waterbodies should be prepared to address this concern before any more mining is permitted.

In closing we believe site specific NPDES permits which include prohibitions in the sensitive areas we have identified above, and includes limits on pollutants is needed to deal with the issue of suction dredge mining pollution. Until the time this happens all unpermitted suction dredge mining is illegal and the State Board is ignoring it's responsibilities to the public by allowing continued unpermitted mining.

Thank you for accepting and incorporating these comments.

Sincerely,

Regina Chichizola
Klamath Riverkeeper