

State of California

Memorandum



The Resources Agency

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 off 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 activities.

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 the cumulative effects question and to iron out past and expected future conflicts between locals and dredgers before they arise.

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

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