LAW OFFICES OF DAVID YOUNG
David Young, SBN 55341
11845 W. Olympic Boulevard, Suite 1110
Los Angeles, CA 90064
Telephone: (310) 575-0308
Facsimile: (310) 575-0311
Email: dyounglaw@verizon.net

Attorney for Plaintiffs/Petitioners Kimble et al. and PLP et al.

JAMES L. BUCHAL (SBN 258128)
MURPHY & BUCHAL LLP
3425 SE Yamhill Street, Suite 100
Portland, OR 97214
Telephone: (503) 227-1011
Facsimile: (503) 573-1939

Attorney for Plaintiffs The New 49'ers Inc. et al.

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF SAN BERNARDINO

Coordination Proceeding Special Title (Rule 1550(b) **SUCTION DREDGE MINING CASES**	Judicial Council Proceeding No. JCPDS 4720 **DECLARATION OF ERIC MAKSYMYK IN SUPPORT OF MINERS' JOINT MOTION FOR INJUNCTION AGAINST DEFENDANTS** Judge: Hon. Gilbert G. Ochoa Dept.: S36 Date: June 23, 2015 Time: 8:30 a.m.
Related Actions: *Karuk Tribe of California, et al. v. California Department of Fish and Game* *Hillman, et al. v. California Department of Fish and Game*	 RG 05211597 – Alameda County RG 09434444 – Alameda County

Karuk Tribe of California, et al. v. California Department of Fish and Game	RG 1263796 – Alameda County
Kimble, et al. v. Kamala Harris, Attorney General of California, et al.	CIVDS 1012922 – San Bernardino County
Public Lands for the People, et al. v. California Department of Fish & Game, et al.	CIVDS 1203849 – San Bernardino County
The New 49er's, et al. v. State of California; California Department of Fish and Game, et al.	SCCVCV 120048 – Siskiyou County
Foley, et al. v. State of California; California Department of Fish and Wildlife, et al.	SCSCCV 13-00804 – Siskiyou County
Walker v. Harris, et al.	34-2013-80001439 – Sacramento County

I, Eric Maksymyk declare:

1. I am a plaintiff and make this declaration in support of the Miners' Joint Motion for Injunction against Defendants.

2. I have been deeply involved with the suction dredging issue for over seven years. I am a suction dredge operator on mining claims in Sierra County, California. I have operated suction dredges on my placer mining claims for nearly 15 years prior to the ban.

3. I am a retired U.S. Army Lieutenant Colonel, with a Bachelor of Science degree in Economics; a Master of Science degree in Management; and a Master of Science degree in Systems Acquisition from the Naval Postgraduate School in Monterey, which includes five courses at the Masters level in statistics, reliability and probability.

4. I run a technology company that provides communications solutions and software development and we support the United States Special Operations Command with the Science and Technology advisor in the National Capital Region.

5. My company provides analysis support to a variety of activities, and we have previously provided our analysis expertise to the U.S. Special Operations Command; the U. S. Army Special Operations Command; the Joint Special Operations Command; the U.S. Army Natick Laboratories; the Program Executive Officer for Special Programs; the Program Manager for Special Programs; and, the U.S. Army Program Executive Officer for Soldier Systems.

6. My last assignment prior to retirement was as the Army program manager for the reconstruction of Iraqi armed forces in Baghdad, Iraq where I was awarded the Bronze Star. After retirement, I accepted a position as the lead analyst for a Department of Defense Intelligence Program where I was required to review intelligence products, conduct analysis and provide meaning to a variety of intelligence sources for use by others.

7. I consider myself an expert in suction dredging, and I am extremely familiar with the environmental effects of suction dredges 5" or less. In my experience, I have never seen any lasting effects from the operation of my suction dredges, and I have found it impossible to observe any effects following even a moderate flood.

8. While others will counter the observations of a suction dredger don't equate to the opinions of a PhD level scientist, I disagree. Suction dredge operators spend far more time in the rivers observing the effects than any scientist or theorist, and we read the reports.

9. It is my opinion, after participating in the conduct of the suction dredge EIR, reviewing all relevant reports that were referenced, and evaluating the supporting data; the significant effects are wildly hypothetical, are not supported by the evidence, and appear to be based on the selective use of data. Secondly, the effects are based on a "statewide review" of suction dredging and consequently are so generalized they are overly restrictive.

The Suction Dredge Draft Subsequent Environmental Impact Report Overstates Effects.

10. The suction dredge Draft Subsequent Environmental Impact Report ("DSEIR") was 1,388 pages in length including all appendices. In the 1,388 pages, there is not a single documented instance of a suction dredge harming fish or wildlife; no documented cases of noise complaints; no documented cases of disturbing archaeologic or historical resources or documented evidence of water quality effects.

11. In the DSEIR, the word "may, might or could" is used 1,675 times. The phrase "is proven" occurs 0 times.

12. The rivers we are arguing over have been dredged and re-dredged again and again. The percentage of un-dredged river bottom is unknown, but it is likely a small fraction. Any effect which could occur has occurred, yet the DSEIR evaluates the rivers as if they were in pristine condition, but this is not the case.

13. One of the most detailed estimations made of the quantity of hydraulic tailings which flowed down the tributaries and into the Yuba, Bear and American rivers, was made by Dr. Waldemar Lindgren in 1911[1]. He used surveying equipment to estimate the amount of missing material from the hydraulic pit and estimated 1,295,000,000 cubic yards of debris flowed through the tributaries, into the main rivers, and then down to the valley. This estimate only accounts for the Yuba, Bear and American River districts. As any dredger will verify, the

[1] W. Lindgren, *The Tertiary Gravels of the Sierra Nevada of California*, U.S. Geological Survey Professional Paper 73 (1911).

vast majority of this material has been flushed from the upper reaches, but the evidence of this still exists in the form of hydraulic tailings some thirty feet high on the banks of some these drainages. On the specific river I work, Slate Creek, hydraulic tailings filled the entire length of the river to a depth of 30 feet. The evidence (bathtub ring) of this debris still exists and can be readily observed.

14. Past historical effects must be taken into account. Suction dredging isn't a new activity, and it follows over one hundred years of historical impacts which were both widespread and severe. When talking about irreparable damages, the damage to these rivers has already occurred and the continued activity of a suction dredge is insignificant in relation to past impacts.

15. From 1976 to 2008 the California Department of Fish and Wildlife issued 174,755 suction dredge permits.[2] Section 5653.1 of the Fish and Game code prohibited the Department from issuing a suction dredge permit if issuance would be deleterious to fish. This represents 174,755 separate determinations over a 32-year span suction dredges were not deleterious to fish.

16. The SEIR found nine areas where a suction dredge could potentially cause a significant environmental effect, these areas include[3]:

- Mercury resuspension and discharge;
- Resuspension and discharge of other trace metals;
- Effects on Special Status Passerines;
- Historical Resource Impacts;
- Archaeological Resource Impacts;
- Noise;
- Cumulative Effects on Wildlife Species and their Habitats;
- Cumulative Effects of Turbidity/TSS Discharges; and
- Cumulative Effects of Mercury Resuspension.

---

[2] DSEIR at 3-3, Figure 3-1.

[3] DSEIR, Executive Summary, Table ES-2.

The Mercury Question.

17. The fundamental question in regards to mercury is whether the reintroduction of suction dredging would cause irreparable harm to the environment.

18. "The 1994 EIR found that suction dredge mining would have a less than significant impact on water quality as it relates to mercury in streams. At the time of the 1994 report adverse effects related to mercury were cited as those being associated with re-release of mercury after capture in the dredging equipment."[4]

19. No new studies are cited in the DSEIR than the 1994 EIR with one major exception – a report prepared by the U.S. Geological Survey, which was funded by the Bureau of Land Management, and the California State Water Resources Control Board[5]. The findings on mercury were based almost entirely on this study.

20. "...there are very few published studies specifically addressing the effects of suction dredging on Hg fate and transport processes. Since the time the Literature Review (Appendix D) was prepared, USGS scientists and Hg experts provided CDFG with preliminary results of their recent research in the Yuba River which is specifically focused on assessing the potential discharge of elemental Hg and Hg enriched suspended sediment from suction dredging activities. This new information and data from USGS was used in formulating the approach to this assessment of the Program."[6]

21. The conclusions in the SEIR seemed impossible to support and presented the appearance of bias, and the selective use of data. The SEIR states "caution should be used in

---

[4] DSEIR at 4.2-18.

[5] Fleck, J.A., Alpers, C.N., Marvin-DiPasquale, M., Hothem, R.L., Wright, S.A., Ellett, K., Beaulieu, E., Agee, J.L., Kakouros, E., Kieu, L.H., Eberl, D.D., Blum, A.E., and May, J.T., 2011, The effects of sediment and mercury mobilization in the South Yuba River and Humbug Creek Confluence Area,, Nevada County, California: Concentrations, speciation, and environmental fate—Part 1: Field characterization: U.S. Geological Survey Open-File Report, 2010-1325A, 104 p.

[6] DSEIR at 4.2-19.

interpreting these results because only [one] year of data is available for the no dredging condition, these are likely the only data available at this time." [7]

22. We submitted a Freedom of Information Act Request[8] to determine if additional data existed. It did, there were in fact an additional five years of data. Although the SEIR stated only one year of dredging data was available, the same scientist, Dr. Charles Alpers, who conducted the dredging test in support of the SEIR, was also commissioned by the Bureau of Land Management to sample biota on the South Yuba River from 1999-2002. Certainly caution should be used when interpreting only one year of data. When the entire data set is evaluated, however, no correlation to suction dredging and mercury can be made, suggesting that selective use of data can present a picture which distorts the truth.

23. When this additional data is plotted, it shows natural variability in mercury levels which appears to be correlated to natural storm events. This correlation is confirmed in the USGS report the SEIR Water Quality section is based on;[9] in a report by Dr. Michael Singer of the University of California Santa Barbara[10], and by Dr. Carrie Monohan[11] of the Sierra Fund who conducted research on Deer Creek in Nevada County and found a strong correlation between spring floods and the level of methylmercury in insects.

24. In 2012 the same USGS scientist, Dr. Alpers, resampled the same locations[12] and the data shows a significant increase in mercury levels since the suction dredging ban was put in place. Despite this increase, no effort was made to correct the record, or amend the study, or the EIR's conclusions.

---

[7] DSEIR at 4.2-46.

[8] USGS FOIA 2013-0085.

[9] Fleck Report p.55

[10] Singer, *et al.*, Enduring legacy of toxic fans via episodic redistribution of California gold mining debris. Proceedings of the National Academy of Sciences (PNAS), 110(46): (2013).

[11] Henson, et al., Deer Creek Watershed Mercury Survey, 2007.

[12] USGS FOIA 2013-0085

25. The selective use of data in the Water Quality section presents the appearance of bias and this is confirmed in a Department of Interior Inspector General investigation report.[13] "According to the research chemist [Dr. Charles Alpers], CWB did not want dredging to be the solution to the mercury problem; instead, CWB wanted to ban suction dredging, which it did in 2008".

26. The bias is again evident in the confirmation by the DOI Inspector General the U.S. Geological Survey scientist was a member of the Sierra Fund, which is the environmental group which claims authorship of SB 670, AB 120, SB 1018 and recently SB 637, all anti-dredging legislation. The report also confirms the lead scientist for the mercury study sat on the Board of Advisors of the Sierra Fund. The report went on to state they saw no conflict of interest in the research scientist belonging to the group which lobbied for the ban.

27. Even if we assume there was no bias in the conduct of the studies, the selective use of data again raises its head in the DSEIR.

28. In the 1,388 page document, there is not a single reference to Year 1 of the USGS study which instrumented an actual 3" dredge and measured the water quality effects, specifically for mercury in the effluent. Although this dredge was in an area labeled as a "mercury hotspot" the data showed virtually no mercury in the effluent, and the measurements showed in some cases a drop in mercury levels behind the dredge. In fact, the report shows one hour prior to starting the dredge the mercury measurements in the water column (naturally occurring) were 717 ng/g while measurements taken one hour after the start of dredging the measurements were 510 ng/g showing a significant drop in mercury levels. It's important to note the sensors were measuring in parts per billion, and variance in some cases were measured in parts per trillion. The results of this actual dredge test were very positive towards suction dredging, and they were buried. The DSEIR used only Year 2 of the study which was conducted in 2008.

---

[13] Investigative Report of Scientific Misconduct and Conflict of Interest, U.S. Geological Survey Department of the Interior, Inspector General Final Report, (Dec 2014).

29. In 2008, the use of suction dredges was prohibited on the South Yuba River, but legal elsewhere. The part of the study which led to the conclusion suction dredges could have significant impacts on mercury levels in the river is based entirely on the 2008 study which used hand dug pits, on the bank, far above the water line where winter floods didn't scour, and where suction dredges had never operated.

30. In this portion of the study, the research team used a closed circuit device which recirculated mercury-contaminated water from a holding tank, through a pump impeller, onto the bedrock, and then back to the tank again, this recirculation of mercury contaminated water likely occurred thousands of times.

31. The DSEIR relies almost completely[14] on the research using a hand dug hole, well above the water line using recirculated mercury-contaminated water. The excavated material was screened through progressively finer mesh ensuring any mercury would be fragmented and attach to the finest particles of sediment. Once the bedrock was reached they used the water from a closed circuit system, pumped the water into the hole and sucked it back out again.

32. The selective use of data is reflected in the conclusions in the SEIR. In the hand-dug hole study (Year 2) they used the highest measurement of turbidity ever recorded from a 8" suction dredge, then added to that the results from their highly contaminated mercury water and concluded that only a few dredges could contribute significantly to mercury loading. Turbidity is the measure related to how many very fine particles are in a liter of water, a quantity generally expressed as milligrams per liter. The Year 2 study assumes all suction dredges were producing 340 mg/l of suspended sediment, but the Year 1 results, from the same report the SEIR relies on, showed that the highest reading recorded during operations was 3 mg/l.[15] The number used in the SEIR, while not mentioning the actual data, was over 100 times the measured output from a real suction dredge.

---

[14] DSEIR at.4-24 ("discharge of Hg from suction dredging was based primarily on field characterization of Hg contaminated sediments. (Fleck et al. 2011)").

[15] Fleck, p.40.

33. There are several major flaws with this approach, but I'll discuss only the ones which fail to represent a suction dredge. First, a suction dredge has a recovery device known as a sluice box, but the experiment had no recovery device.

34. A study by the Water Board of the efficiency of a suction dredge[16] in 2005 showed 98% efficiency in recovering mercury. This test used an older style suction dredge, and new technologies likely push the efficiency over 99%. This means 98% of the mercury which went into the collection tank wouldn't have if a suction dredge were actually employed.

35. Secondly, the experiment recirculated the water through the pump impeller, likely thousands of times ensuring any mercury in the water would be highly fragmented, or what the researchers call "flouring."[17] An actual suction dredge doesn't process material through an impeller; it flows right to the sluice box where it is captured. Finally, the data in the EIR assumed a suction dredger was spending all of his time on the bedrock layer where mercury may exist. My analysis of time spent on the bedrock layer shows it would take an actual suction dredge 19 hours to even reach the layer in question, then only 10 minutes would be spent in this layer. The report assumed all 19 hours were spent in this layer. The actual report the DSEIR is based on provides a strong caution against using this data to project impacts from dredging generally: "Furthermore, this estimate accounts for the dredging of the Hg-rich layers exclusively, a situation that is unlikely given the variable spatial distribution of these Hg-rich layers."[18]

36. Despite the obvious caution in the USGS report, the SEIR makes no mention of this. The DSEIR represents an obvious and selective use of data from the USGS report which appears designed to support a pre-determined conclusion.

---

[16] Humphreys, R., 2005, Losses and Recovery During a Suction Dredge Test in the South Fork of the American River. Staff Report, State Water Resources Control Board, Division of Water Quality.

[17] "Flouring" of mercury is not a scientific term, and its use can be found in only two cites, to represent the fragmentation of mercury into fine particles. There is no scientific definition of what constitutes "flouring.

[18] Fleck, p.80

37. Despite the obvious and significant flaws in the experiment design, the SEIR relied on this flawed, highly speculative experiment to conclude suction dredges could discharge sufficient mercury to have a significant impact on the environment.

38. Apart from the study used, there is no other study which has reached the conclusion that suction dredges can contribute "significantly" to a watershed's mercury loading. The evidence, and the facts, indicate suction dredges decrease mercury loading in a watershed by removing the elemental mercury and its potential to move downriver where it could methylate.

39. The California Regional Water Quality Control Board has extensively studied the issue of mercury in the environment in a series of three comprehensive studies from 2005 – 2014.[19] [20] [21] All three studies concluded mercury in the historical gold mining areas isn't an issue. The studies found mercury levels in wildlife in the historic mining areas were well below EPA thresholds for issuing advisories.

40. The most recent Water Board study, published in draft form, February 2014[22], evaluated the correlation between various factors and elevated mercury levels in reservoirs. The conclusion of this study was the lack of nutrients in reservoirs and lakes was the largest contributor to elevated methylmercury levels and recommended the addition of nutrients to the lakes. The report shows there is a greater correlation between elevated methylmercury levels and the number of trees in a watershed than there is between active, or historical mines.

41. A 2012 report[23] published by Dr. Singer, of the University of California Santa Barbara, confirmed mercury is constantly moving down the rivers due to spring floods. With, or without suction dredging, this mercury will continue its march downriver.

---

[19] Mercury Contamination in Fish in Northern California Lakes and Reservoirs, California Regional Water Quality Control Board, July 2007.

[20] Contaminants in Fish from California Rivers and Streams, California Water Board, Davis et al, May 22 2013, a Report of the Surface Water Ambient Monitoring Program.

[21] Draft Report, California Regional Water Quality Control Board, Appendix A to Basin Control Plan for mercury, issued March 2014.

[22] Draft Report, California Regional Water Quality Control Board, Appendix A to Basin Control Plan for mercury, issued March 2014.

[23] University of California, Santa Barbara, PNAS 2013.

42. Whether suction dredging increases or decreases levels of mercury is unproven and speculative. The USGS report which the SEIR relies on states "Further monitoring of MeHg in biota where previous data exist during the statewide suction-dredging moratorium that began in 2009 would be helpful in evaluating this possibility."[24]

43. As far as I can tell, based on diligent efforts to obtain data on mercury sampling (including Public Records Act requests and access to government databases that should have contained the information), inexplicably, the California Regional Water Quality Board suspended mercury monitoring in the gold dredging rivers (Yuba, Feather and American) precisely after 2009.[25] By all appearances, the 2009 dredging ban provided a perfect opportunity for testing the hypothesis that dredgers contributed to elevated mercury levels, and the Board ignored the advice of the scientists involved to ensure that the actual impact of the ban would never be known.

44. As to the actual risks to human health posed by mercury, as stated by the California Office of Environmental Hazards and Health Assessment (OEHHA) "No case of mercury poisoning has been reported from eating California sport fish. The levels of mercury in California fish are much lower than those that occurred during the Japanese outbreak. Therefore, overt poisoning resulting from sport fish consumption in California would not be expected. At the levels of mercury found in California fish, symptoms associated with methylmercury are unlikely unless someone eats much more than what is recommended or is particularly sensitive."[26] [27]

45. This general lack of any appreciable risks comes despite the early history of hydraulic mining and sixty years of suction dredging. Given the lack of credible studies on

---

[24] Fleck Report, p.87.

[25] Public Records Act Request Response, Central Valley Regional Water Quality Control Board, dated 24 April 2015

[26] OEHHA website accessed July 15, 2012 http://oehha.ca.gov/fish/hg/

[27] Two weeks after we quoted OEHHA in a press release this statement was removed from their website and replaced with dire warnings about mercury and health effects. The above statement no longer exists on their active site, but can still be accessed through archives.

suction dredging and mercury, a sixty year history of no harm to humans, or wildlife, it is improbable the resumption of suction dredging would have any measurable impact on mercury levels in watersheds.

Turbidity

46. The issue of turbidity caused by suction dredging is not supported by studies, or even the SEIR. The resumption of suction dredging will have no significant impact, or cause irreparable harm.

47. "The 1994 EIR found that suction dredge mining would have a less-than-significant impact on water quality related to temporary increased turbidity levels caused by the resuspension of stream bed sediments."[28]

48. "All scientific studies to date suggest that the effects of suction dredging on turbidity and suspended sediment concentrations as it relates to water clarity are limited to the area immediately downstream of the dredging for the duration of active dredging."[29]

49. As shown above, there are no studies which show an impact from turbidity released from a suction dredge, not one.

50. "As noted in the Literature Review, there is very little new dredging-specific data available since the preparation of the 1994 EIR, and no substantial changes in the scientific understanding of the effects of increased turbidity/TSS from suction dredging operations with respect to water clarity."[30]

51. "Generally, suction dredging causes turbidities of between 15 and 50 NTUs immediately downstream of the operation, with background levels returning between 50 and 160 meters downstream, and in some cases in as short as 11 meters (Harvey, 1986; Somer and Hassler, 1992; Thomas, 1985; Griffith and Andrews, 1981; Stern, 1988; Prussian et al., 1999)."

---

[28] DSEIR at 4.2-18.
[29] DSEIR at 4.2-19.
[30] DSEIR at 4.2-21.

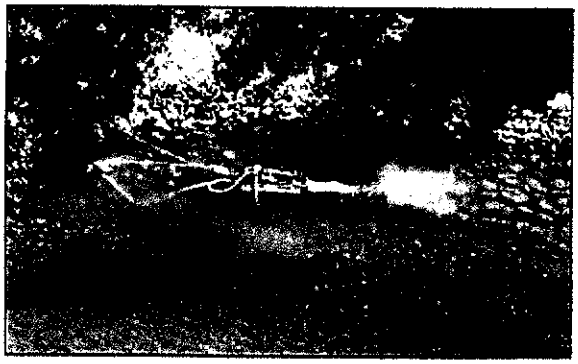


Photo f. Turbidity plume emitting from end of an active dredge, visible on right.

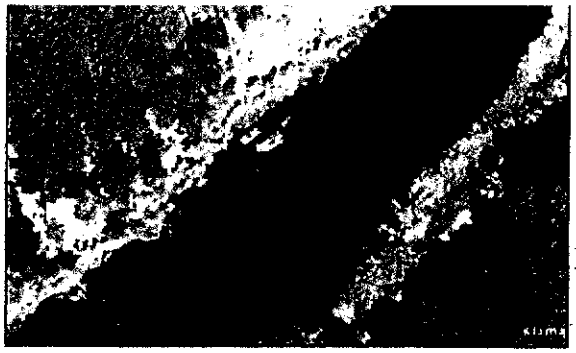


Photo h. Aerial view of an active dredge and resulting turbidity plume, visible on left.

In found turbidity returned to background levels within 30m of the dredge. Thomas (1985) found the majority of sediments deposited within the first 15m downstream from the dredge."[31]

53. The DSEIR provides no justification for the cumulative effects of turbidity being significant. All studies reviewed and cited in the literature supporting the SEIR determined exactly what the pictures above show:

54. No study cited in the DSEIR indicates there could be a cumulative effect. It should also be noted that rivers where dredgers are working in close proximity are the exception, not the general case. Far more common is a wide dispersion of suction dredgers on individual mining claims.

Trace Metals

55. The SEIR acknowledges there is very little information on the release of trace metals from suction dredging and instead of using a quantitative approach, they use a qualitative approach, assuming this could occur.

56. "Generally, discharge of trace metals at typical sites should have less than significant impacts. However, suction dredging at known trace metal hot-spots resulting from

---

[31] DSEIR at 4.1-18.

acid mine drainage and characterized by contaminated sediment (*e.g.*, low pH levels and high metal concentrations in the pore water) would remobilize potentially bioavailable forms of metals and has the potential to increase levels of one or more trace metals in water body reaches such that the water body reach would exceed California Toxics Rule metals criteria by frequency, magnitude, and geographic extent that could result in adverse effects to one or more beneficial uses, relative to baseline conditions. This impact is considered to be potentially significant."[32]

57. While the SEIR speculates the release of trace metals at "known trace metal hot-spots" may occur, and may be significant, the SEIR fails to identify a single trace metal hot-spot and doesn't identify a single study where trace metal discharge exceeding water quality standards has occurred.

58. It's just the opposite.

59. "Due to the limited quantitative information, the water quality impact assessment for trace metals is largely qualitative and based on the anticipated level and nature of dredging activity that is projected to occur."[33]

60. "At a typical dredging site (having sediment trace metal concentrations similar to those identified herein for the Yuba and Sacramento river sites and used in the Table 4.2-6 calculations), the dredging activity is not expected to increase the bioavailable concentration of any of the eight metals discussed to levels that would be toxic to aquatic life, on an acute or chronic basis. Moreover, the bioavailable fraction of metal, which could have been elevated by the dredging activity, will rapidly become diluted with increasing distance downstream from the dredging site, and is expected to rapidly return to background levels at most sites as shown in the studies cited above."[34]

---

[32] DSEIR ES-12.

[33] DSEIR at 4.2-24.

[34] DSEIR at 4.2-57.

61. The studies cited above include the most comprehensive study of suction dredging and trace metal release ever conducted. This study was conducted by the US EPA on a 8" and 10" suction dredge on the Forty Mile River in Alaska and found.[35] "Although relatively little study of trace metal (other than mercury) mobilization and transport related to suction dredging has occurred, a few studies have been identified. Johnson and Peterschmidt (2005) identified a maximum copper concentration of 9.3 µg/L in suction dredge effluent in a study on the Similkameen River in Washington State. Zinc and lead were both significantly below their respective acute criteria. In a study of dredging in the Fortymile River of Alaska, the maximum near-field copper concentration was 20 µg/L, and the maximum zinc concentration was 43 µg/L (Royer et al., 1999). In both studies, concentrations returned to ambient background levels within a short distance from the dredging site."

62. The Fortymile River study is one of the only known studies to measure trace metals, the weight provided this report should outweigh mere speculation on the Water Board's part that a suction dredge may cause some significant environmental effects. The cold reality is if a suction dredger hasn't hit this trace metal "hotspot" in sixty years, it's not likely a dredger will hit it next year.

Effects on Special Status Passerines.

63. The SEIR claims suction dredging may have a significant effect on special status passerines. These passerines include:

- Southwestern Willow Flycatcher
- Least Bells Vireo
- Western Yellow Billed Cuckoo
- Little Willow Flycatcher
- Willow Flycatcher
- Bank Swallow[36]

---

[35] Prussian *et al.*, Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek and Chatanika River of Alaska, US EPA Region 10, 1999.

[36] DSEIR at Table 4.3-3.

64. When you plot the actual locations of critical habitat, in relation to suction dredging areas there is very little overlap. Shown below is the plot of USFWS data for the Least Bells Vireo and the Southwestern Willow Flycatcher. There is no suction dredging near where this habitat is located. These two species were plotted because the data we downloaded from the USFWS includes these two species. A more extensive evaluation could be conducted for each species to determine areas of overlap, and suitable mitigation could be developed, however, it is improbable an activity which has been ongoing for 60 years would impact these species.

65. Consistent with this data, the FSEIR concluded that the actual "likelihood of disturbance is considered very low".[37] The Department nonetheless found "significance" because of the relative rarity of birds such as the Least Bell's Vireo. As noted above, there is no reason to believe that any suction dredgers would operate remotely near the rare birds. And even if they did, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird"

[37] FSEIR at 4-35.

except as provided by law".[38] Impacts on birds that may nest somewhere near suction dredge miners, but manifestly not in the middle of the rivers and streams where they operate, are manifestly speculative. In the SEIR, the Department presented no evidence concerning impacts of suction dredge mining, but relied upon general statements that human presence "may alter behavior patterns".[39]

Cultural and Archaeological Resources.

66. Perhaps no part of the DSEIR is more speculative than this section. The state fails to identify a single historical or archaeological resource which may be affected by suction dredging, but instead speculates this event may occur in the future.

67. CEQA has very clear guidelines on defining a historical resource.[40] It is wildly speculative to assume a suction dredger could impact a historical, or archaeological resource within the river. For those who operate suction dredges within the river, we know the rivers are nothing more than giant rock tumblers, and during a typical spring flood every rock and boulder in the river is moved. Any historical, or archaeologic resource within the river would be so far removed from its original location and so damaged to be of little value.

68. Again, CEQA has a very clear definition of archaeological resources.[41] The SEIR fails to identify a single archaeological resource which has been impacted, or even may be

---

[38] Fish and Game Code § 3503.

[39] DSEIR at 4.3-48.

[40] Public Resources Code § 21084.1 For purposes of this section, an historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources.

[41] Public Resources Code § 21083.2 As used in this section, "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

impacted. There is little precedent for designating the entire geographic area of a project as a possible archaeological resource. Should the state be able to designate a unique archaeological resource it would be fairly easy to work around these areas, but there are no such designations. We are led to believe by the SEIR the probability of this occurring is high, but no evidence is presented this conflict has occurred during the past sixty years of dredging.

69. The State has a public trust responsibility to protect archaeological and historic resources on State land. However, the State has no authority over Federal land. These lands are managed by the Bureau of Land Management. The State has no authority to dictate how either the Federal government or the private person disposes of their lands.[42]

70. Even if archaeological or historic resources are present it still doesn't require a finding of significance.[43]

71. CDFW uses the following justification to support their finding:

> "*The vast majority of these resources are wood-hulled, Gold Rush-era vessels submerged within the Sacramento, American, Feather, Yuba, and San Joaquin rivers in Central California... While many of these resources are concentrated within the rivers and tributaries of the Sacramento-San Joaquin Delta, they may exist anywhere within the state's waterways.*"[44]

72. This is patently untrue and completely unsupported by fact and the administrative record. The state shipwreck database shows there are no shipwrecks in the following counties: Plumas, Sierra, San Bernardino, Siskiyou, Placer, Trinity, Kern, Nevada, El Dorado, Mariposa... We could go on, but simple research from the state's own database www.shipwrecks.slc.ca.gov shows there are no shipwrecks virtually anywhere suction dredging takes place. The SEIR finding is completely unfounded and refuted by the state's own records.

---

[42] *San Diego Archaeological Society v. Compadres* (1978) 81 Cal.App.3d 923 "...the public trust doctrine applies only to limited types of real property to which the state holds or held title because it was important the land be available to all. It does not involve private property except where the state has conveyed the land into private hands. It does not cover artifacts located on private property."

[43] *Topanga Association for a Scenic Community v. County of Los Angeles* (1989) 214 Cal.App.3d 1348

[44] DSEIR at 4.5-12

73. Substantial adverse change is defined in § 15064.5 as "*Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.*"

Noise

74. Suction dredges *do* make noise. As the DSEIR notes, "use of a motor boat, ATVs" and even "ringing telephones" may violate these prevailing noise standards, yet the Department found that "suction dredge activities have potential to generate noise in excess of local noise standards" and "the impact cannot be discounted".[45]

75. The presence of noise should not be regarded as significant effect militating against entry of an injunction when county ordinances covers the effect. Local ordinances and jurisdiction do address noise standards. CDFW has presented no evidence that any suction dredger has ever been cited for a violation of a noise ordinance in 60 years, which should serve as firm evidence this is not a substantial adverse change in the environment. Noise is mitigated by local jurisdiction.

76. Mining, and dredging, pre-date the residential areas or the recreational areas, there has been no previous conflict in regards to noise but mining has a legal right to take place. The issue is not the impact of the program on the environment, but rather this is a case of the environment impacting the program. Whether recreationalists such as hikers or rafters are sensitive to the noise of a suction dredge is irrelevant. The miner is operating on a federal mining claim which is located for the express purpose of mining. The miners have a statutory right of possession and right to operate; those objecting to the mining have no such corresponding rights. In fact, most miners seldom see another human being, other than the people they have brought with them, when operating their dredges.

---

[45] DSEIR at 4.7-9 to 4.7-10.

77. CDFW considers the effects of noise on a statewide basis and cites a single noise ordinance for Yuba County.[46] The Yuba County ordinance (Ordinance Chapter 8.20) allows a maximum level of 65db in residential areas from 7a.m. to 7p.m (Ordinance 8.20.140). However, suction dredging isn't conducted in residential areas and the Statewide CNEL permissible level for water recreation is 75db, the Yuba County ordinance allows 75db for light industrial activities.[47] CDFW claims, when considered statewide, noise would be a significant and unavoidable impact if it "*Expose[s] persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.*"

78. Mining is a light industrial activity. The Yuba County ordinance for light industrial is 75db. The data the State uses actually shows the noise from dredge engines is below threshold standards: Table 4.7-2 on page 4.7-4 of the DSEIR provides the California Land Use Compatibility Standards for Noise. For recreation they provide a permissible noise level of 75db. Table 4.7-3 on page 4.7-5 of the DSEIR provides a recommended noise objective of 70db for active recreation.

Cumulative Effects

79. It is difficult to follow the logic of the SEIR where turbidity on an individual basis is insignificant, but when cumulatively considered it may be significant. As shown previously, every study the SEIR cites shows turbidity as a very localized and short duration event. The implementation of dredge spacing would prevent any cumulative effect.

80. The justifications for mercury and trace metal turbidity is also highly speculative and based upon flawed studies, or qualitative opinions. There is no evidence, or credible studies, which provides the basis for cumulative effects, no more than there is for individual effects, but perhaps to a much lesser degree. Dredging is not conducted statewide. There are 21 counties where no dredging occurs and there are an additional 12 counties where virtually no dredging

---

[46] DSEIR at 4.7-4.

[47] DSEIR Table 4.7.

takes place. From a geographic standpoint there is less than 10% of the state where dredging takes place and it is exactly where you would expect: Feather River Basin; Yuba River Basin; American River Basin; Klamath River Basin and some smaller rivers primarily in the Motherlode region.

81. A significant shortcoming of the SEIR is the State has very little knowledge of where dredging and placer claims are located. The miners do. As shown in the suction dredger survey,[48] the concentration of suction dredgers is exactly where you'd expect them. It makes little sense from a time or resource standpoint to evaluate every region of the state under the assumption someone, someday may want to dredge there. The Alameda Court Order[49] required an additional environmental study on three rivers: Klamath; Scott and Salmon and required nothing further. The litigation today is solely due to the Department's discretionary decision to expand the scope statewide.

My Personal Mining Claims and Local Environmental Conditions.

82. I am the owner of multiple mining claims in Sierra County, California. These claims include Kayla Anne; Trillium 16; Bucks Ravine; Freedom 7 and Sawdust. I pay property taxes annually to Sierra County. These claims are located on Slate Creek. I have been suction gold dredging exclusively on my mining claims, in California since 1997.

83. Under the regulations that were in effect when the suction dredging moratorium commenced, this body of water was open from the 4th Saturday in May to the 15th of October. Under the current regulations this river is closed, as a Class A waterbody due to the Mountain Yellow Legged Frog.

84. Based on the elevation of this creek, in a normal year the earliest I could start dredging was around the middle of June and the latest I could dredge was to late September, based largely just on water temperatures, or the amount of snow pack which prevented access. This left the creek completely undisturbed for 10 months of the year.

---

[48] DSEIR Appendix F.

[49] Order and Consent Judgment, Alameda County, Case No. RG05-211597.

85. Slate Creek, and the specific portion I'm on has been actively mined since the 1850s. There has never been a period of time where this creek has not had some mining activity in it. In the 1880s hydraulic tailings covered this river to a depth of 30 feet. That gravel has now flushed from the river channel providing very good placer gold which was inaccessible to the early miners.

86. My mining claims are contiguous and I am the sole suction dredger on nearly one mile of the river length. During a typical year, I may work several hundred yards of length, but it is usually in isolated spots, rather than a continuous operation. This is because the gold is not uniformly distributed.

87. I have been suction dredging in California since 1997 and consider myself to be an expert. Based on the likely gold deposits on my claim, I believe I could do it professionally. While it is possible there may be Mountain Yellow Legged Frogs on my claim, I have never seen egg masses. The lack of egg masses and tadpoles is likely due to the non-native trout present in the river, which are prolific and widespread. If there are frogs on this claim, both the frogs and my dredging can coexist.

88. The "significant effects" discussed in the SEIR are not significant on my mining claim. As I said, I am the sole dredger for nearly one mile of river. Noise, in this deep canyon, is of no impact. I have never seen the special status passerines discussed, and my mining claim is far above Bullards Bar dam. There are no salmon, or endangered fish.

89. Since 1997, I have never seen another human being on my mining claims with the exception of my family members. I have never even seen a track from another human being.

90. Turbidity is inconsequential as any turbidity released from my dredge settles out of the water column well before leaving my claim boundaries, and all the studies acknowledge the maximum distance of a turbidity plume is 200 meters, even the SEIR acknowledges this.

91. My mining claims are in a narrow steep canyon. During the gold rush days this area was heavily mined using hydraulic monitors which washed an enormous quantity of gravel into the river channels. Some reports say this area was the most intensely, and profitably- mined area in the motherlode. The annual floods have moved all of this gravel and any accompanying

historic artifacts down to the Yuba River. Regardless, anything which I might encounter is not in-situ and would be of little value from a historical perspective. The items I have found (and left) include square nails and horseshoes.

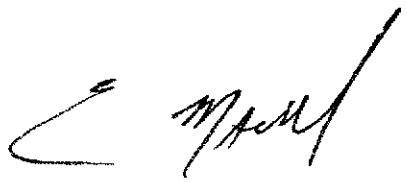
92. It is highly unlikely one person, using a 4" suction dredge, on one mile of river which was buried in hydraulic debris for nearly 75 years, could create any significant impact. The sides of this river are solid rock.

93. With over 150 years of continuous gold mining, and nearly sixty years of suction dredging it is improbable any impact could occur, which hasn't already occurred.

94. In my opinion, a reasonable season for Slate Creek, upstream from Rabbit Creek would be the 1st June to the 30th of September.

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

Executed on May 18, 2015.



Eric Maksymyk

Investigative Report of Scientific Misconduct and Conflict of Interest, U.S. Geological Survey

Date Posted to Web: December 12, 2014

This is a version of the report prepared for public release.

EXHIBIT 1
PAGE 1 OF 4

SYNOPSIS

This office received allegations of scientific misconduct and conflict of interest associated with U.S. Geological Survey (USGS) Open File Report 2010-1325A, titled "The Effects of Sediment and Mercury Mobilization in the South Yuba River and Humbug Creek Confluence Area, Nevada County, California: Concentrations, Speciation, and Environmental Fate—Part 1: Field Characterization."

Our investigation did not disclose any evidence of scientific misconduct or conflict of interest by the scientist in the USGS study.

This investigation is closed with no further action by this office. The allegations have been reviewed by this office, including consultations with the USGS ethics officer and the USGS scientific integrity officer, and determined to be unsubstantiated.

DETAILS OF INVESTIGATION

The U.S. Department of the Interior, Office of Inspector General, received allegations that a USGS research chemist deliberately omitted data while conducting a study and concluding that suction dredge mining could contribute to the increase of methylmercury levels in biota in California waterways. According to the complaint, the research chemist withheld available scientific data from his study, which the complainant alleged would have resulted in a different scientific conclusion. The complainant obtained this additional data via USGS Freedom of Information Act (FOIA) Request 2013-00085.

The complaint also alleged that the research chemist's membership in and support of the Sierra Fund's (TSF) activities presented a conflict of interest and created the appearance that the research chemist used his professional capacity to support a private organization. TSF is a nonprofit organization whose mission is to protect and restore the natural resources and communities of the Sierra Nevada region; one of TSF's primary goals is to stop suction dredging. According to documents in the complaint, the research chemist spoke at several conferences hosted by TSF and was a private donor to the organization.

Coordination with the USGS deputy ethics officer and deputy ethics counselor revealed that the research chemist's membership in TSF was authorized and complemented USGS interests. Private donations to such organizations by USGS employees are not regulated because they do not create a conflict of interest; an ethical question would only arise if an employee were receiving compensation from the organization. The deputy ethics officer's review of the research chemist's file showed that he is in compliance with ethical rules and responsibilities and there were no other complaints against him.

According to the USGS scientific integrity officer (SIO), the research chemist's work on Open File Report 2010-1325A (South Yuba River Study) presented no scientific integrity issues. The SIO explained that there is a growing trend for people to file scientific integrity complaints in an effort to change legislative decisions they do not like; the object is to undermine the scientific

basis for the decision in an effort to have the decision reversed or overturned by the courts. The SIO and the deputy ethics officer discussed the research chemist's activities during his tenure at USGS and concluded that the research chemist's record is "above the board" regarding ethics issues.

An interview of the complainant revealed two primary concerns: whether the research chemist purposefully omitted data from the study and whether his association with TSF biased his scientific work product. The complainant questioned the research chemist's choice to analyze only 1 year of mercury data when many years' worth of mercury data was available. An associate of the complainant consolidated the mercury data received via the USGS FOIA request and the data from the research chemist's study into one graph. According to the complainant, the graph portrays the variation and natural fluctuation in mercury levels in the South Yuba River watershed, which would have led to a different scientific conclusion had the research chemist incorporated the data into his analysis. In addition, the complainant believes the research chemist's association with TSF is inappropriate; the research chemist's attendance at TSF functions created the appearance of a conflict of interest.

The research chemist confirmed that USGS Open File Reports are fully peer reviewed, just like any USGS report would be. Each report is reviewed for quality control purposes by two colleagues, a supervisor, a water specialist, and a data specialist; projects are also reviewed at the proposal level before the study begins. The Bureau of Land Management (BLM) and the California Water Board (CWB) funded the South Yuba River Study to determine mercury characterization and speciation, to characterize mercury levels in biota, and to evaluate the viability of suction dredging as a means to remove mercury from the watershed. In the study, the research chemist conducted a dry run with a 3-inch-diameter suction dredge in a low-mercury-level area, and he found little mercury (as expected). He planned to run another test in 2008 with a larger diameter dredge at a hotspot (a location known to have high levels of mercury), but CWB objected because of concern the test would cause more damage to the environment. According to the research chemist, CWB did not want dredging to be the solution to the mercury problem; instead, CWB wanted to ban suction dredging, which it did in 2008.

The research chemist emphasized that USGS is strictly a science agency with no regulatory function. USGS is concerned only with collecting and providing data while other agencies decide policy. Because the research chemist was precluded from determining whether dredging mobilizes mercury through direct testing (i.e., testing with the large diameter dredge), the second part of the study instead focused on characterizing the sedimentation process in the laboratory. The team also conducted some biological monitoring of mercury levels found in invertebrates within the study sites. The research chemist claimed he did not expect to find conclusive results in the 1 or 2-day invertebrate testing because the methylmercury integration process takes weeks to months, but the team collected what little data it could anyway. Additionally, lab simulations of mercury mobilization using the collected sediment samples were designed to show how mercury would transform (i.e., become methylated and/or reactive) if it was transported and deposited downstream as it would as a result of suction dredging.

The research chemist received the FOIA response containing biological mercury data; BLM paid

for a biological mercury study from 1999 to 2004 with samples taken from over 220 sites. He stated that he did not hide the additional data, but simply did not incorporate it into the South Yuba River Study because the older samples originated from different locations under unknown conditions. He did not know whether the additional data would have changed the conclusions of the report. He admitted to speculating that dredging may impact mercury levels in biota based on the results of his study; however, he also emphasized in the conclusion section of the South Yuba River Study that more study is required to verify the relationship between suction dredging and mercury level increases in biota. He believed the state may have selectively used the data from the South Yuba River Study for its Environmental Impact Report (EIR), but claimed he cannot control how his report is used by other entities (this EIR contributed to the legislative ban on suction dredge mining in California waters).

The research chemist confirmed that he sits on an advisory board for TSF, as do members of many other Federal and State agencies. He described TSF as a non-profit advocacy group in Nevada City, CA, which has completed several projects in the Sierra Nevada region related to mining and the environment. He classified his relationship with TSF as purely professional, and stated he keeps his distance because the chief executive officer of TSF has become a "target" due to her strong anti-mining stance. The research chemist donated his time to TSF by reviewing reports to ensure TSF was citing USGS reports accurately. He also attended TSF meetings, with many other agencies in attendance, to discuss environmental issues associated with mining. He claimed that TSF is trying to change laws and raise money for anti-mining lobbying, but that USGS is not involved in regulation or advocacy and has no bias regarding mining.

SUBJECT

Research chemist, USGS.

DISPOSITION

This investigation is closed with no further action by this office. The allegations have been reviewed by this office, including consultations with the USGS ethics officer and the USGS SIO, and determined to be unsubstantiated.

This is a version of the report prepared for public release.

EXHIBIT 1
PAGE 4 OF 4

PROOF OF SERVICE

I, Carole Caldwell, hereby declare under penalty of perjury under the laws of the State of California that the following facts are true and correct:

I am a citizen of the United States, over the age of 18 years, and not a party to or interested in the within entitled cause. I am an employee of Murphy & Buchal, LLP and my business address is 3425 SE Yamhill Street, Suite 100, Portland, Oregon 97214.

On May 18, 2015, I caused the following document to be served:

DECLARATION OF ERIC MAKSYMYK IN SUPPORT OF MINERS' JOINT MOTION FOR INJUNCTION AGAINST DEFENDANTS

by transmitting a true copy in the following manner on the parties listed below:

Honorable Gilbert Ochoa
Superior Court of California
County of San Bernardino
San Bernardino Justice Center
247 West 3rd Street
San Bernardino, CA 92415-0210
Via U.S. Mail

Chair, Judicial Council of California
Administrative Office of the Courts
Attn: Court Programs and Services Division
(Civil Case Coordination)
455 Golden Gate Avenue
San Francisco, CA 94102
Via U.S. Mail

Bradley Solomon
Deputy Attorney General
455 Golden Gate Avenue, Suite 11000
San Francisco, CA 94102-7004
E-mail: Bradley.Solomon@doj.ca.gov
Via E-mail

Marc Melnick
Office of the Attorney General
1515 Clay Street, Suite 2000
Oakland, CA 94612
E-mail: Marc.Melnick@doj.ca.gov
Via E-mail

John Mattox
Department of Fish & Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
E-mail: jmattox@dfg.ca.gov
Via E-mail

James R. Wheaton
Environmental Law Foundation
1736 Franklin Street, 9th Floor
Oakland, CA 94612
E-mail: wheaton@envirolaw.org
E-mail: elfservice@envirolaw.org
Via E-mail

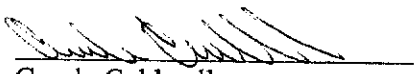
Glen Spain
Pacific Coast Federation of Fisherman's Association
Southwest Regional Office
P.O Box 11170
Eugene, OR 97440
E-mail: fishlifr@aol.com
Via E-mail

Jonathan Evans
351 California St., Suite 600
San Francisco, CA 94104
E-mail: jevans@biologicaldiversity.org
Via E-mail & U.S. Mail

E. Robert Wright
Friends of the River
1418 20th St., Suite 100
Sacramento, CA 95811
E-mail: bwright@friendsoftheriver.org
Via E-mail

Lynne R. Saxton
Saxton & Associates
912 Cole Street, #140
San Francisco, CA 94117
E-mail: lynne@saxtonlegal.com
Via E-mail

Keith Robert Walker
9646 Mormon Creek Road
Sonora, CA 95370
Via U.S. Mail



Carole Caldwell
Declarant