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8 Attorneys for Proposed Intervenor
9 THE NEW 49'ERS, INC., a California corporation, and
10 RAYMOND W. KOONS, an individual
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SUPERIOR COURT OF CALIFORNIA
COUNTY OF ALAMEDA
UNLIMITED CIVIL JURISDICTION

12 KARUK TRIBE OF CALIFORNIA and LEAF
13 HILLMAN,

14 Plaintiffs,

15 v.

16 CALIFORNIA DEPARTMENT OF FISH
17 AND GAME and RYAN BRODDRICK,
18 Director, California Department of Fish and
19 Game,

20 Defendants.

Case No. RG05 211597

**SECOND DECLARATION OF JAMES
L. BUCHAL IN SUPPORT OF
OBJECTIONS OF THE NEW 49'ERS
AND RAYMOND W. KOONS TO THE
PROPOSED STIPULATED
JUDGMENT**

Date: January 26, 2006
Time: 9:00 a.m.
Judge: Honorable Bonnie Sabraw
Place: Department 512

Filing Date: January 10, 2006
Trial Date: None Set

22 James L. Buchal declares:

23 1. I am counsel to proposed intervenors The New 49'ers, Inc., a California
24 corporation, and Raymond W. Koons, an individual (hereafter, the Miners). I make this
25 Declaration in further support of the Miners' opposition to entry of the Proposed Stipulated
Judgment presented by the parties to this action.

2. Attached as Exhibit 1 is a true copy of the cover page and two interior pages (addressing suction dredge mining) in a document I located on the Department's website at <http://www.dfg.ca.gov/nafwb/coharecovery/RecoveryStrategy.html>.

3. I am counsel to certain Oregon suction dredge miners in *Siskiyou Regional Education Project v. U.S. Forest Service*, No. 03-3013-CO (lead case) (D. Or.). This litigation was brought by the Siskiyou Regional Education Project to capitalize upon their earlier victory in *Siskiyou Regional Education Project v. Rose*, 87 F. Supp.2d 1074 (D. Or. 1999). It is important for the Court to understand that no mining interests took part in that earlier case, and as far as I can tell based on the record, the factual claims of the environmentalist plaintiffs were not contested. The Oregon miners regarded this suit as a collusive suit between anti-mining elements within the Siskiyou National Forest and the environmentalists.

4. When the environmentalists renewed their attempt to eject the miners from the Siskiyou National Forest by expanding upon the holding in *Rose*, the miners obtained limited intervention in the suit and later filed a second suit which was consolidated with No. 03-3013-CO. This time, when the environmentalists filed their purported statement of undisputed material facts, a true copy of which I have annexed as Exhibit 2, we filed a detailed response based upon the material already in the Administrative Record of the Forest Service, a true copy of which I have annexed as Exhibit 3.

5. This time around, the same magistrate judge issued a very different opinion, denying the claims of the environmentalists, a true copy of which is annexed hereto as Exhibit 4. That opinion is now before the same District Judge on review of the magistrate judge's findings.

6. An individual miner has provided me with a copy of an Australian review of the effects of suction dredge mining, a true copy of which is annexed hereto as Exhibit 5. The paper contains tantalizing references to actual studies addressing the ultimate question—does suction dredge mining increase or decrease the number of fish in a river. The paper identifies two examples where suction dredging was associated with increased fish populations. Such results would be consistent with the view often expressed by conservation biologists that increased

1 habitat complexity (here, a riverbed with holes and more dynamic gravel disposition) is associated
2 with greater productivity.

3 7. Obviously, I am not an expert on the effects of suction dredge mining, other than to
4 the extent that any reasonably intelligent person with a scientific background who studies the
5 literature can be so qualified, and do not purport to know any more about these studies than is
6 reflected in the attached paper. Nevertheless, the paper is significant to the Court's determination
7 because it reflect the type of information that might assist the Department if it were to formulate
8 its regulations concerning suction dredge mining in the manner prescribed by law which would
9 allow members of the public a fair opportunity to place material such as this before the
10 Department.

11 8. I was startled by Mr. Soto's testimony that there was no fisheries literature to
12 support use of a 20°C criterion for waters hostile to salmon, which is the generally-accepted
13 number in the Pacific Northwest. I visited the website <http://www.krisweb.com> cited in his
14 Declaration (§ 8(n)) and discovered numerous charts of temperature records, many of which
15 reflected the same 20°C criterion. A true copy of one of those pages, which cross-hatches areas
16 above 20°C as "stressful to salmonids", is annexed hereto as Exhibit 6.

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

19 Dated: January 24, 2006

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22 James L. Buchal
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Recovery Strategy for California Coho Salmon

Report to the California Fish and Game Commission

PREPARED BY

The California Department of Fish and Game

Species Recovery Strategy 2004-1

FEBRUARY 2004

EXHIBIT 1
PA. 1/3

EXHIBIT 1

TABLE 3-5: Major dams within the California portion of the SONCC Coho ESU that block coho salmon from accessing historical spawning and rearing habitat

NAME OF DAM	LOCATION	UPSTREAM HABITAT BLOCKED	PERCENT OF ENTIRE BASIN
Scott Dam	Eel River, approximately 169 miles upstream from the Pacific Ocean, forming Lake Pillsbury in Lake County	36 miles	8% (Eel River Basin)
Matthews Dam	Mad River, approximately 79 miles upstream from the Pacific Ocean, forming Ruth Lake in Trinity County	2 miles	13% (Mad River Basin)
Lewiston Dam	Trinity River (tributary to the lower Klamath River), approximately 112 miles upstream from the Pacific Ocean, forming Lewiston Reservoir in Trinity County	109 miles	24% (Trinity Basin) 9% (Klamath Basin)
Dwinnell Dam	Shasta River (tributary to the upper Klamath River), approximately 214 miles upstream from the Pacific Ocean, forming Dwinnell Reservoir in Siskiyou County	17 miles	17% (Shasta Basin) 2% (Klamath Basin)
Iron Gate Dam	Klamath River, approximately 190 miles upstream from the Pacific Ocean, forming Iron Gate Reservoir in Siskiyou County	30 miles	8% (Klamath Basin)

TABLE 3-6: Major dams within the CCC Coho ESU that block coho salmon from accessing historical spawning and rearing habitat

NAME OF DAM	LOCATION	UPSTREAM HABITAT BLOCKED	PERCENT OF ENTIRE BASIN
Peters Dam	Lagunitas Creek, approximately 14 miles upstream from the Pacific Ocean, forming Kent Lake in Marin County	8 miles	6%
Nicasio Dam	Nicasio Creek, (tributary to Lagunitas Creek), approximately 8 miles upstream from the Pacific Ocean, forming Nicasio Reservoir in Marin County	5 miles	10%
Warm Springs Dam	Dry Creek (tributary to the Russian River), approximately 45 miles upstream from the Pacific Ocean, forming Sonoma Lake in Sonoma County	50 miles	9%
Coyote Dam	Russian River, approximately 95 miles upstream from the Pacific Ocean, forming Lake Mendocino in Mendocino County	36 miles	7%
Newell Creek Dam	San Lorenzo River, approximately 14 miles upstream from the Pacific Ocean, forming Loch Lomond Reservoir in Santa Cruz County	6 miles	10%

3.6.6 SUCTION DREDGING

Suction-dredge placer miners extract gold from the river gravels by sucking the gold-bearing gravels through a nozzle (typically 6 to 8 inches in diameter) into floating dredges, pumping the gravel and water mixture across a settling table where the gold concentrates by gravity, and then discharging the gravel and water back into the river. Both the pump and the sluice box are usually mounted on a floating platform, often positioned over the work area by ropes or cables secured to trees or rocks. The portion of stream bottom dredged ranges from a few small excavations to the entire wetted area in a section of the stream. Larger suction dredges have the capacity to process as much as several cubic yards of gravel from the river bottom at one time. An annual permit from the Department (Title 14 California Code of Regulations [CCR], §228) and, in some circumstances, a Lake and Streambed Alteration Agreement (EGC §1600) is required to engage in this activity.

Dredging activities in freshwater environments can have a variety of direct impacts on the environment, including impacts on aquatic and riparian organisms (Griffith and Andrews 1981;

Thomas 1985; Harvey 1986) and channel stability. Impacts can also result from the potential release of hazardous materials such as mercury into aquatic and terrestrial environments. However, there are no studies that document such dredging-related impacts on coho salmon or their habitat within the range of coho salmon. The restrictions currently imposed by regulations on this activity are designed to eliminate the potential for impacts to coho salmon by restricting suction dredging actions to locations and times when such activities should not impact the species.

3.6.7 STREAMBED ALTERATION

Streambed alteration activities such as construction of roads, navigational improvements, dams, bank stabilization structures, and channels can result in a loss of habitat complexity (Bisson et al. 1987). Effects include decreases in the range and variability of stream flow velocities and depths, and reductions in the amount of large wood, boulders, and other stream structures. Construction activities in the stream channel can cause excess sediment to fill pools. Channelization that includes paving the channel bottom, or changing the length or sinuosity of the channel, permanently alters the substrate, eliminating macroinvertebrate habitat, instream vegetation, and the gravel substrate necessary for spawning.

3.6.8 WATER QUALITY

Water pollution originates from point sources and non-point sources as listed in Table 3-7, and includes sediment, nutrients, biocides, metals, and metalloids. It is difficult to correlate specific pollutants with specific and direct effects on coho salmon. Mixed compounds may have different effects on the biological community of a stream than would an accumulation of the same compounds considered separately. In addition, effects vary with habitat alteration, temperature, and the concentration of dissolved materials in the surface waters (Brown and Sadler 1989). Water quality within coho salmon range is known to be affected by industrial discharges, agricultural discharges, silvicultural discharges, mineral mining wastes, municipal wastewater discharge, road surface discharge, and urban stormwater discharge.

Under CWA § 303(d), states, territories and authorized tribes are required to develop lists of impaired waters that do not meet water quality standards, even after those responsible for point sources of pollution have installed the minimum required levels of pollution control technology. In addition, the law requires that they establish priority rankings for waters on the lists and develop action plans, including total maximum daily load (TMDL) plans to improve water quality. Within the California range of coho salmon, there are 74 water bodies that are on the § 303(d) list of impaired water bodies (Table 3-7).

TMDLs in California are developed either by Regional Water Quality Control Boards (RWQCB) or by the U.S. Environmental Protection Agency (EPA). TMDLs developed by RWQCBs are designed as Basin Plan amendments and must include implementation provisions. TMDLs developed by EPA typically contain the total load and load allocations required by § 303(d), but do not contain comprehensive implementation provisions. It is the responsibility of the RWQCBs to develop implementation programs for TMDLs established by the EPA and during that process, it has often been necessary for the RWQCBs to reevaluate, and sometimes change, the EPA requirements.

3.6.9 AGRICULTURAL IMPACTS

Historic, and some current, agricultural practices impact freshwater habitat components important to coho salmon. While current agricultural activities and programs have made strides in improving pollution and sediment discharge into streams and in habitat restoration,

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3 THREATS

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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

**SISKIYOU REGIONAL EDUCATION
PROJECT,**

Plaintiff,

UNITED STATES FOREST SERVICE, et al.

Defendants,

ROBERT AND LESA BARTON; et al.

Defendants-Intervenors.

CV. 03-3013-CO (Lead Case)

CONSOLIDATED CASES

PLAINTIFF SISKIYOU REGIONAL
EDUCATION PROJECT'S
CONCISE STATEMENT OF
MATERIAL FACTS IN SUPPORT
OF MOTION FOR SUMMARY
JUDGMENT AND INJUNCTIVE
RELIEF

WALDO MINING DISTRICT, et al.

Plaintiffs,

UNITED STATES FOREST SERVICE, et al.

Defendants.

CV 03-1175-CO

EXHIBIT 2
PAGE 1 OF 6

Pursuant to LR 56.1(a)(2), Plaintiff Siskiyou Regional Education Project hereby respectfully submits this Concise Statement of Material Facts in support of its Motion for Summary Judgment and Injunctive Relief.

1. As of 2001, there were approximately 800 placer claims in streams administered by the Siskiyou National Forest. Administrative Record (AR) 1071 at 2.
2. Most of these claims are unpatented. AR 37.
3. The average claim size is 20 acres. AR 1071 at 79.
4. Roughly 580 placer claims may be worked annually by suction dredges. AR 1071 at 28.
5. Approximately one-half of the claims are active each year. AR 1071 at 51.
6. The environmental effects of current mining are compounded by past mining from which many streams are still recovering. AR 1071 at 100.
7. Suction dredges are comprised of high-pressure water pumps driven by gasoline-powered motors to create suction in a flexible intake hose, which miners use to draw streambed material up through the hose and pass it over a sluice to separate out gold. AR 1071 at 30.
8. Suction dredges are mechanized earthmoving equipment. AR 439.
9. The excavations can exceed several meters into the stream bottom. AR 68.
10. Suction dredges discharge material, consisting of things like rocks, gravel, silt, and biota, back into the stream column. AR 67.
11. When settled on the streambed, the discharged material is called tailings, and may be deposited in a previously undisturbed area of the streambed. AR 67.
12. Tailings piles can exceed 18 inches in height. AR 1071 at 117.
13. Tailings piles or dredged holes next to streambanks can cause bank failure during winter

flows. AR 1071 at 93.

14. A typical single dredge operation may produce a visible plume of turbidity over 300 feet in length during one day. AR 1146.

15. The Forest Service has observed sediment plumes from suction dredge operations of up to one-third of a mile. AR 1146.

16. Multiple miners working the same or adjacent claims can cause violations of water quality standards for turbidity. AR 1071 at 91.

17. Some miners construct dams in streams to elevate water levels to float their dredges. AR 1147; AR 1071 at 96.

18. These dams result in barriers to fish movement. AR 1147; AR 1071 at 96.

19. A miner constructed a dam across the entire stream channel of Sucker Creek. AR 1072.

20. Miners may remove or relocate large woody debris or boulders from the streambed or column in order to access the bed and thereby displace materials needed for bank stability and integrity, and to inhibit scouring flows. AR 1071 at 133.

21. Cables and winches were present on a mining claim on Left Fork Sucker Creek, assumed to be used to dislodge boulders. AR 928.

22. Miners commonly access their claims by driving their vehicles on unimproved, substandard roads and trails. AR 1071 at 96; AR 1071 at 100.

23. These roads are a source of sedimentation, surface erosion, and bank failure. AR 1071 at 96.

24. The environmental effects of mining are cumulative and synergistic. AR 1071 at 94.

25. Chinook and coho salmon and steelhead trout inhabit streams administered by the Siskiyou National Forest. AR 1071 at 38.

26. The Forest Service has identified the Illinois and Coquille River watersheds as of highest priority to protect and restore wild salmon. AR 1071 at 38-39.
27. Suction dredge mining occurs in low-gradient stream reaches where salmon spawn. AR 68; AR 1071 at 30; AR 1071 at 101.
28. Dredging in the summer months can overlap with fish spawning. AR 70.
29. Fine sediment dispersed by suction dredging operations can infiltrate the gravelly areas where salmon construct their nests (redds). AR 78.
30. Sediment can suffocate the eggs and prevent young salmon (sac fry, or alevins) from emerging. AR 78; AR 1071 at 101.
31. In some streams, young salmon do not emerge from substrate until summer, and then can be lethally entrained by dredges. AR 70; AR 1099; AR 1071 at 101.
32. Sac fry existed during a mining season in three Illinois subbasin streams that were monitored: Sucker, Briggs, and Althouse Creeks. AR 1071 at 101.
33. Fry are weak swimmers for 10-14 days following emergence and may not be able to avoid entrainment. AR 676.
34. Fry or juvenile salmon that manage to avoid being drawn up into the machines, because dredging often occurs in extremely clear water, dredging creates suspended sediment that reduces water clarity, and inhibits their ability to see or capture food. AR 76; AR 1099.
35. Dredging occurs in the summer when stream temperatures are at their highest. AR 1071 at 89.
36. Some salmonids such as coho spend 1-2 years in freshwater before migrating to sea, and in the summer may return to streams as they seek cooler water, such as in the pools where dredging

occurs. AR 920; AR 1099; AR 1071 at 30.

37. Sediment in water caused by dredging absorbs solar radiation and can cause water temperatures to increase. AR 1071 at 94.

38. Increased water temperatures harm salmon because as water warms, it contains less dissolved oxygen. AR 1071 at 95.

39. Salmonids may lay their eggs in redds in tailings piles that are later obliterated during winter flows, resulting in death of eggs. AR 1423.

40. In 2000 or 2001, the Forest Service surveyed redd sites in Taylor, Althouse, Sucker, and Grayback Creeks. AR 1071 at 100-01.

41. Mining occurs in Taylor, Althouse, and Sucker Creeks, but not in Grayback Creek. AR 1071 at 100-01.

42. In its 2000 or 2001 surveys, the Forest Service found 7, 11, and 34 coho salmon redds in reaches of Taylor, Althouse and Sucker Creeks, respectively, and found 150 coho salmon redds in reaches of Grayback Creek. AR 1071 at 101.

43. For the 2002 mining season, the Forest Service informed certain miners that they would not be required to submit proposed plans of operation before conducting suction dredge placer mining in Riparian Reserves. AR 1276, 1280, 1335, 1348, 1353, 1359, 1415-1417.

44. For the 2003 mining season, the Forest Service informed certain miners that they would not be required to submit proposed plans of operation before conducting suction dredge placer mining in Riparian Reserves. AR 1426, 1439, 1441, 1480, 1482; Supplemental Administrative Record (SAR) 664-667.

45. For the 2004 mining season, the Forest Service informed certain miners that they would not

be required to submit proposed plans of operation before conducting suction dredge placer mining in Riparian Reserves. AR 588, 591, 629, 647, 650, 652, 658, 659A, 671, 676; SAR 721-725.

46. For the 2005 mining season, the Forest Service informed certain miners that they would not be required to submit proposed plans of operation before conducting suction dredge placer mining in Riparian Reserves. SAR 730, 732, 734; Second Supplemental Administrative Record (SSAR) 21 & 32; 22-31 & 41-42; 34 & 43-44; 47 & 48-49.

47. For the 2002 mining season, the Forest Service informed certain miners that they would not be required to submit proposed plans of operation before conducting suction dredge placer mining in Supplemental Resource Areas. AR 1276, 1348-50.

48. For the 2003 mining season, the Forest Service informed a miner that that miner would not be required to submit proposed plans of operation before conducting suction dredge placer mining in a Supplemental Resource Area. AR 1439.

Dated: May 4, 2005.

Respectfully submitted,

/s/ Peter M.K. Frost

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

SISKIYOU REGIONAL EDUCATION
PROJECT,

Plaintiff,

v.

UNITED STATES FOREST SERVICE, et al.

Defendants,

ROBERT AND LESA BARTON, et al.

Defendant-Intervenors.

ROBERT AND LESA BARTON,

Plaintiffs,

v.

UNITED STATES FOREST SERVICE, et al.

Defendants.

Case No. 03-3013-CO (Lead Case)

CONSOLIDATED CASES

THE BARTON'S RESPONSE TO
SREP'S CONCISE STATEMENT IN
SUPPORT OF MOTION FOR
SUMMARY JUDGMENT, AND
CONCISE STATEMENT IN SUPPORT
OF THEIR CROSS-MOTION FOR
SUMMARY JUDGMENT

Case No. 03-1175-CO

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Page 1- THE BARTON'S RESPONSE TO SREP'S CONCISE STATEMENT IN
SUPPORT OF MOTION FOR SUMMARY JUDGMENT, AND CONCISE
STATEMENT IN SUPPORT OF THEIR CROSS-MOTION FOR SUMMARY
JUDGMENT

EXHIBIT 3

For their response to plaintiff SREP's Concise Statement In Support Of Motion For Summary Judgment, for their own Concise Statement In Support Of Their Cross-Motion For Summary Judgment, the Bartons:

Facts Pertaining To The Scale Of Mining In The Siskiyou National Forest.

1. Admit that the cited page of a draft environmental impact statement (DEIS), which represents the preliminary views of unknown Forest Service officials, contains this statement as to the number of "placer mining claims on the Siskiyou National Forest". AR1071, at 2, and refer the Court to page 28 of that report for an estimate of the lesser number of placer mining claims (580) linked to rivers and streams within the Forest.
2. Admit that most claims are "unpatented", but state that such unpatented claims constitute, as a matter of law, possessory property rights under federal law as set forth at length in the briefing concerning proposed intervention previously filed by the Bartons.
3. Admit that unknown Forest Service personnel state in the DEIS that the "average claim size is 20 acres". AR1071, at 79.
4. Deny that the DEIS includes any claim that all 580 placer claims "may be worked annually", as the cited page of the Administrative Record contains no such assertion.
5. Admit that the DEIS states that "approximately 50 percent of the claims are active each year" (AR1071, at 51), which would represent 50% of the 580.
6. Deny. While the DEIS states that "many streams are still recovering from mining today" (AR1071, at 100), the material fact is that they are recovering

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notwithstanding—and perhaps even because of—continuing suction dredge mining (e.g., AR1052; *see also* Response to ¶ 24). While there may be locations within the Siskiyou National Forest where the effects of past mining are still visible, it is vital for the Court to understand that the streams and rivers within the Forest have been mined for more than 150 years, including the very areas that SREP now characterizes as the pristine sort of wilderness it seeks to protect. *See* Ullian Decl. ¶ 1; *See, e.g.*, AR557-60 (history of mining in Sucker Creek). It is also vital to understand that today's suction dredge mining is utterly insignificant compared to historical practices; “even at the peak of dredging activity in the early 1980s [when gold reached \$850 an ounce], all the dredging added together for a year didn't equal the daily production of even one of the larger [historic] hydraulic mines”. AR863; *see generally* AR862-63 (Waldo Mining District historical summary approved by unknown Forest Service employee). The natural power of the Forest's rivers and streams is such that even gigantic tailing piles filling entire canyons/ 20 to 30 feet deep are long gone. AR862.

In further and general response to ¶¶ 1-6, the Bartons state that the *material* fact is that suction dredge mining is of no appreciable significance on the scale of the Forest; even the DEIS states that only “3% of the Forest's perennial streams are overlain with placer claims”. AR1071, at 51. *See also* AR427 (Siskiyou National Forest “receives 150 to 200 proposals a year for prospecting, exploration and mining”); AR482 (same; “[t]ypically, such operations have moved between one-half and twenty-five cubic yards of streambed material during a four-month operating season established by the State of Oregon”). This amount “pales in comparison to the amount of material moved by Mother Nature during an average season”. AR560. Indeed, a Forest Service official,

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utilizing the "most conservative of the natural sediment yield figures found in the literatures" (presumably understating natural sediment movement) found that suction dredge mining was only 0.7% of natural rates within the Siskiyou National Forest. AR564. The Draft EIS contains a substantially lower estimate of only 565 cubic yards moved during the entire 1999 suction dredging season. AR1071, at 133.

Nature of Suction Dredge Mining.

7. Admit.

8. Deny. The cited reference (AR439) states that "a suction dredge *might* be considered a form of mechanized earthmoving equipment". The term is of significance insofar as it appears in 36 C.F.R. § 228.4, exempting "operations which will not involve the use of mechanized earthmoving equipment such as bulldozers or backhoes and will not involve the cutting of trees" from the requirement to file a notice of intent. Suction dredges are not akin to bulldozers or backhoes within the meaning of this regulation. See AR443, AR467.

9. Admit that this statement appears in a review of suction dredge mining in general, but deny that the statement has any application to any agency action challenged in this lawsuit. Moreover, "[m]any times during major winter storms the stream bed has been completely scoured down to bedrock and then filled in again. Boulders as large as cars have been moved during some of the worst winter storms." AR560. Again, the effects of suction dredge mining pale in significance to natural variations in stream topography.

10. Admit.

11. Deny, because both enormous and continuous natural reconstruction and

the prior scale of mining in the Siskiyou National Forest means that there are, in substance, no areas where suction dredge mining is now occurring that can be considered "previously undisturbed area[s] of the streambed". See Responses to 1-6 & 9.

12. Admit.

13. Admit that the DEIS, after reciting the scientific evidence that impacts of suction dredge mining as actually observed are "seasonal and site-specific" contains the following speculation: "... if a hole is dug by a stream bank and or tailings are piled near a stream bank, *there is a possibility* that water *could* undercut or be directed at the stream bank and cause a local bank failure before the hole is filled in or tailings redistributed" (AR1071, at 93 (emphasis added)), and otherwise deny. The Bartons are unaware of any evidence that this has ever occurred, and SREP presents none.

The Turbidity Question.

14. Deny. See AR61 ("Because of the nature of the streambeds there [in the Siskiyou National Forest], little discernable turbidity is generated . . ."); AR772 ("very little turbidity results from normal use of smaller suction dredges (4-inch or less) in stream gravels").

15. Deny.

16. Deny.

In general response to concerns over turbidity and ¶¶ 14-16, the Bartons state that the material fact is that the State of Oregon regulates suction dredge mining in a fashion to limit turbidity to levels of no significance. Specifically, and pursuant to exhaustive consideration under delegated authority pursuant to the Clean Water Act, Oregon takes numerous steps to control turbidity, including but not limited to: limiting dredging in

EXP 3
PA 5 19

sensitive areas to 4" or less dredges and restricting activities to the wetted perimeter of the stream (Ex. C to Plt's Mtn. for SJ, at 3); forbidding mining of stream banks (highbanking) and restricting dredging to the active stream channel everywhere (*id.* at 2); and forbidding dredging whenever plumes exceed 300 feet downstream (*id.*).

The Dams Issue.

17-18. Admit that the DEIS states that:

"On small streams, some miners build temporary dams to facilitate flotation of dredges. These dams would usually be needed for a few hours to a few days. If properly constructed, they generally would not block adult fish passage but *could* inhibit normal juvenile salmonid feeding behavior and escapement from predators while in place." AR1071, at 96 (emphasis added); *see also* AR1147 (same quote).

Deny each and every other implication of ¶¶ 17-18, and state that in this context, "inhibit normal juvenile feeding behavior" may mean no more than the recognized fact that juvenile salmonids hang out near suction dredges to catch additional food dislodged by the dredges. *See* General Response to ¶¶ 25-42. As for "predation", if biologists adopted an unbiased approach to the problem that would not simultaneously speculate that suction dredge mining may disturb larger fish that could eat juvenile salmonids (presumably chasing them away), yet complain of possible adverse effects with respect to predation. This sort of speculation is why the miners believe that the Forest Service and SREP have colluded in an attempt to manufacture unsupported and unsupportable claims concerning suction dredge mining, and the most rudimentary sort of cross-examination would expose the makeweight nature of this speculation.

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19. Admit that the Forest Service has advised a miner on Sucker Creek in 2001 of numerous violations of the Oregon state regulations concerning suction dredging, including the construction of a dam across Sucker Creek, and demanded a plan of

Page 6- THE BARTON'S RESPONSE TO SREP'S CONCISE STATEMENT IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT, AND CONCISE STATEMENT IN SUPPORT OF THEIR CROSS-MOTION FOR SUMMARY JUDGMENT

operation from said miner. AR1072-73. Thus: (1) this is not a final action even embraced within the scope of this lawsuit, and is utterly irrelevant to this Court's consideration; and (2) to the extent the Court considers this incident, the Court should consider it as evidence of the proper functioning of an active regulatory structure protecting the environment in Sucker Creek and elsewhere.

Other Speculation About Potential Adverse Effects.

20. Admit that the DEIS expresses "concern" about "the removal, or relocation of large woody debris and boulders from prior embeddedness in the streambed or streambanks" (AR1071, at 133) and otherwise deny. This "concern" is then supported by reference to "brutal" techniques used in the "mid to late 1800's". *Id.* Oregon now prohibits "removal or disturbance of rooted or embedded woody plants in the stream". (Ex. C to Plt's Mtn. for SJ, at 2.) Neither the DEIS nor SREP offer any evidence that any suction dredge mining as presently conducted has caused any adverse effects from moving such materials (removal is forbidden).

21. Admit that a SREP representative has reported to the Forest Service in 2001 that he observed what appeared to him to be evidence of various legal violations in connection with mining (AR928), and state that such evidence is not linked to any challenged final agency action at issue in this litigation and cannot properly be considered by this Court.

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22. Admit that miners, along with all other forest users, drive on "unimproved, substandard roads and trails" within the Siskiyou National Forest, and otherwise deny.

The cited pages of the Administrative Record do not reflect whether this process is "common" or not; it obviously depends upon the location of the mining claim.

23. Admit that the DEIS states that "[f]ine sediment from vehicular travel on unimproved substandard roads . . . could to [sic] be delivered to streams. *The amount would be small and would likely be detectable only at the site scale.*" AR1071, at 96 (emphasis added). Otherwise deny.

Cumulative Impacts.

24. Deny that any effects are cumulative, and deny that the claim that effects are "synergistic" has any material content. Without scientific measurement, both claims are mere verbiage. For many years, investigations of asserted cumulative effects have turned up nothing of measurable significance, because the overwhelming, and material fact is that "natural winter and spring stream flows eradicate evidence of almost all suction dredging actions". AR61; *see generally* AR79 ("The only attempt to measure cumulative effects of dredging on fish and invertebrates (Harvey 1986) suggested that a moderate density of dredges does not generate detectable cumulative effects"); AR560 (35 years of observations); AR769 (six 6" dredges on 2 km stream and 40 dredges on 11 km stretch "had no additive effects"); AR770 (no cumulative effects from 24 3" to 6" dredges along 15 km stretch); AR773-74 (California state EIS finds not significant effects); AR775 (U.S. Army Corps of Engineers study provides "official recognition of what suction dredgers have long claimed: that below a certain size [4 inches], the effects of suction dredging are so small and so short-term as to not warrant the regulations being imposed in many cases"). More recently, a 2003 study in the Siskiyou National Forest was unable to detect any cumulative effects of suction dredge mining whatsoever, leading the scientist to conclude that "*it would seem that public money would be better spent on encouraging compliance with current guidelines than on further study*". SAR530

(emphasis added).

Another important feature of suction dredge mining is that miners are naturally self-limiting, "giv[ing] every man his space", and normally exclude others from working their claims, which "helps to keep dredgers spread over larger areas". AR803-04. Ultimately, to the extent that there is any cumulative effect, it is likely to be positive, as suction dredging gradually restores damage from historical mining. See AR864-65; see generally General Response to ¶¶ 25-42 (benefits to fish). The Bartons note that the Forest Service has considered and rejected the legal strategy of seeking to enjoin individual suction dredge miners because, among other things, "it will be very difficult to show that significant environmental impacts are occurring"—particularly in a legal context where cross-examination can show the makeweight nature of the concerns proffered by SREP. AR925.

Effects on Fish.

25. Admit, but state that whether or not salmonids are present in the Forest does not prove that salmonids are affected by, or even present in the vicinity of, any particular final agency action that might be challenged by SREP. See, e.g., AR1051 (Barton's claim not within active salmon habitat). See also Response to ¶ 27.

26. Admit.

27. Admit, but that this sentence is misleading insofar as it does not matter if suction dredge mining occurs where salmon spawn because it occurs at times that do not interfere with such spawning. See also Response to ¶¶ 25 & 28. Moreover, some claims are located above waterfalls impassable to anadromous fish. See, e.g., AR507.

28. Deny; the stated reference contains the following statement: "While state-

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regulated dredging seasons in the western U.S. limit dredging to summer months, the potential remains for overlap of dredging and fish spawning activity in this geographic region". This statement has no bearing on any particular suction dredging activities within the Siskiyou National Forest, and SREP acknowledges that both Oregon and California provide guidance from local fish biologists to limit mining to periods when fish will not be adversely affected. See Exhibit C to Plffs. Motion for Summary Judgment, MAO at 3 (citing ODFW standards appearing at AR484-95; *Id.* Ex. D, at 7-14 (California regulations)).

29. Admit that fine sediment may drift downstream, but deny that the cited reference finds any evidence of adverse effects. The page cited by SREP refers to the effects of drowning redds in silt when occupied by salmonid eggs or alevins (AR78), but dredging is not allowed then; the reference goes on to explain that "[a]vailable data indicate that individual dredges need not have significant downstream effects on aquatic biota" (AR79). See also AR61 ("effects on biota are minimal. . . . No threatened or endangered species are affected by the typical suction dredge operation"); AR769 ("Fish and invertebrates were not highly sensitive to dredging in general, probably because the streams studied naturally have substantial seasonal and annual variations in flow, turbidity, and substrate").

30. Admit that sediment can cause the specified adverse effects in theory, but state that this fact is strikingly misleading given that suction dredge mining is not allowed when this could occur.

31. Admit that the cited reference AR70 states that in some streams, salmonids do not emerge from the substrate until summer, but deny that this statement

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has any relevance for streams and suction dredge mining within the Siskiyou National Forest.

32. Admit that representatives of the Forest Service purport to have observed "0-age class steelhead in Sucker Creek that *apparently* had emerged after June 15th" and "fry that *appeared* to have recently emerged . . . in the Johnson/Sucker Creeks drainage during the operating season". AR1071, at 101. Such speculation from the "personal communications" of two persons of uncertain expertise is not evidence of any actual injury to fish anywhere in Siskiyou National Forest, and affords this Court no reason to second guess the professional judgment of the Oregon Department of Fish and Wildlife in setting seasons adequately protective of salmonids.

33. Admit that the cited document contains that statement that (steelhead) "fry are weak swimmers for 10-14 days following emergence and may not be able to avoid entrainment". AR676. Deny that this statement has any relevance to any suction dredge mining activity challenged in this lawsuit, insofar as it is no more than speculation as to potential harm. The Administrative Record is devoid of any evidence that any fry have actually ever suffered entrainment in the Siskiyou National Forest as a result of suction dredge mining.

34. Object to the statement concerning "fry or juvenile salmon that manage to avoid being drawn up into the machines", insofar as the machines are not operated when fry are present, admit that a reduction in water clarity can inhibit the ability of predators to find prey, and state that the cited reference states that "fish may also benefit from elevated turbidity through changes in their behavior which are perhaps related to reduced risk of predation in turbid water" (AR76), and otherwise deny. *See also* AR77

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(suggesting that "data from studies exposing biota to chronic suspended sediments would not apply to the impacts of dredging"); AR78 (where dredges operate at low density, "suspended sediment is not a significant concern because effects are moderate, highly localized, and readily avoided by mobile organisms").

35. Admit.

36. Admit, and state that the fact that salmon utilize and prefer habitat created by suction dredge mining is a positive attribute of suction dredge mining.

37. Deny. The DEIS states unequivocally that "there is no evidence that suction dredging affects stream temperature". AR1071, at 93. It also explains why: "Shade trees would not be cut and the width-to-depth ratio of dredged channels would not be sufficiently increased to cause solar radiation to increase stream temperature. Pool temperature could be slightly *reduced* in excavated pools if cooler groundwater is intercepted or deepened pools cause temperatures to stratify." *Id.*; see also AR560; AR770 ("little, if any, impact on water temperature"); AR890. The State of Oregon agrees. Ex. C to Plt's Mtn. for SJ, at 5 ("Suction dredge activities allowed under this permit are not expected to cause a measurable change in stream temperature"). In fact, the temperature effects of suction dredging are only positive, by creating pools of deep, cooler water favored as refugia by salmonids. See also Response to ¶ 36.

38. Admit.

39. Deny. There is evidence that salmon occasionally spawn in tailings piles which are subsequently scattered, but it is not known for certain whether such piles "washed out during high flows or were obliterated by later arriving coho salmon or steelhead trout that attempted to spawn on them". AR897-98. In one case, Forest

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Service representatives observed that "[m]ost of the substrate material in the tailing pile had been re-distributed eight to 10 feet downstream . . . and had been spawned on again (two more redds)". AR912. In addition, salmonids may also lay their eggs in other portions of the streambed that are scoured out or lost by natural variations in stream topography. *See also* Response to ¶¶ 1-6 (power of natural variations); *see generally* C. Groot & L. Margolis. *Pacific Salmon Life Histories* 327 (chinook), 410 (coho) (Vancouver: UBC Press 1991). *The Administrative Record is devoid of any evidence to suggest greater losses from spawning in tailings piles than in other areas.*

40. Admit

41. Admit.

42. Admit.

In further response to ¶¶ 25-42, the Bartons state that the material fact is that neither the Forest Service nor SREP have any idea whether the net effect of suction dredge mining on salmonids is positive or negative, and the weight of evidence suggests that it is positive, for the Administrative Record contains substantial evidence that suction dredging improves the quality of salmonid habitat. *E.g.*, AR771. Miners focus on the areas where habitat is least suitable for salmon, and break up compacted areas, thereby improving the quality of the stream bottom for spawning. *See* AR804-05. The State of California concluded in its environmental analysis of suction dredging that:

"In streams carrying heavy sediment loads, the substrate often becomes compacted. The result is a highly embedded and nearly 'cement-hard' substrate which provides poor fish spawning and rearing conditions. Suction dredging in such stream areas may break up compacted substrate and mobilize the fines . . ." *See* AR864.

Miners confirm that such conditions are present in the Siskiyou National Forest.

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AR863-84. Suction dredge mining also removes toxic materials from the riverbed.

AR866. The Forest Service's observations of spawning in tailing piles, properly construed, should be viewed as evidence of the positive effects of suction dredge mining on spawning habitat.

More generally, miners often observe "small trout swimming near the outflow of the sluice box picking up food that has been stirred up by the dredging activities" (AR560), behavior utterly at odds with imagined deleterious effects of suction dredge mining or turbidity. "In several studies, adult salmon have been observed to spend considerable time within yards of active dredges and to hold in dredged holes". AR774. The fish themselves get along with the miners better than the environmentalists, and enjoy the improved habitat the miners create.

43. Admit that the cited pages in the Administrative Record (except for AR1415-17, which appears to be an error) constitute individual, site-specific determinations by District Rangers in 2002, following review of notices of intent, that no plan of operations would be required for certain suction dredge miners, and state further that such determinations were made after, among other things, review of "the required aquatic checklist guidelines for suction dredging within the Riparian Reserve" (*E.g.*, AR1276.) Such determinations also reflect the incorporation of extensive voluntary measures by the miners including such measures as no "high banking", limitations on turbidity, a limitation on dredge size to four inches or less, spacing of dredges, and limitations on the storage of petroleum fuels, and a limitation on moving large rocks or buried woody material. (*E.g.*, AR1276-77.)

44. Admit that the cited pages in the Administrative Record (except for

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SAR664-65, which appears to be an error) constitute individual, site-specific determinations by District Rangers in 2003, following review of notices of intent, that no plan of operations would be required for certain suction dredge miners, and state further that such determinations were made after, among other things, review of "the required aquatic checklist guidelines for suction dredging within the Riparian Reserve" (E.g., AR1426.) Such determinations also reflect the incorporation of extensive voluntary measures by the miners including such measures as no "high banking", limitations on turbidity, a limitation on dredge size to four inches or less, spacing of dredges, and limitations on the storage of petroleum fuels, and a limitation on moving large rocks or buried woody material. (E.g., AR1426-27.)

45. Admit that similarly-numbered pages in the Supplemental Administrative Record (AR588, 591, 629, 647, 650, 652, 658, 659A, 671 and 676, erroneously refer to the Administrative Record instead of the Supplemental Administrative Record; SAR721-25 appears to be an error) constitute individual, site-specific determinations by District Rangers in 2004, following review of notices of intent, that no plan of operations would be required for certain suction dredge miners, and state further that such determinations were made after, among other things, review of "the required aquatic checklist guidelines for suction dredging within the Riparian Reserve" (E.g., SAR588.) Such determinations also reflect the incorporation of extensive voluntary measures by the miners including such measures as no "high banking", limitations on turbidity, a limitation on dredge size to four inches or less, spacing of dredges, and limitations on the storage of petroleum fuels, and a limitation on moving large rocks or buried woody material. (E.g., SAR588-89.)

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46. Admit that the cited pages in the Administrative Record (except for SAR734, SSAR21, SSAR22-31, SSAR34, and SSAR47, which appear to be an error) constitute individual, site-specific determinations by District Rangers in 2005, following review of notices of intent, that no plan of operations would be required for certain suction dredge miners, and state further that such determinations were made after, among other things, review of "the required aquatic checklist guidelines for suction dredging within the Riparian Reserve" (E.g., SAR730.) Such determinations also reflect the incorporation of extensive voluntary measures by the miners including such measures as no "high banking", limitations on turbidity, a limitation on dredge size to four inches or less, spacing of dredges, and limitations on the storage of petroleum fuels, and a limitation on moving large rocks or buried woody material. (E.g., SAR730-31.)

47. Deny knowledge or information sufficient to form a belief as to the truth of the statement, for the Administrative Record references identify the areas in question as involving Riparian Reserves, not Supplemental Resource Areas.

48. Deny knowledge or information sufficient to form a belief as to the truth of the statement, for the Administrative Record reference identifies the area in question as involving a Riparian Reserve, not Supplemental Resource Areas.

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Dated: June 17, 2005.

MURPHY & BUCHAL LLP

/s/ James L. Buchal

James L. Buchal, OSB #92161

Tel: 503-227-1011

Attorney for Plaintiffs Waldo Mining
District and Robert & Lesa Barton

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Certificate of Service

I hereby certify that on June 17, 2005, I served copies of the foregoing "THE BARTON'S RESPONSE TO SREP'S CONCISE STATEMENT IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT, AND CONCISE STATEMENT IN SUPPORT OF THEIR CROSS-MOTION FOR SUMMARY JUDGMENT", by electronically filing the same document in this Court's ECF system, for delivery to these parties:

Christopher L. Cauble clcauble@qwest.net

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S. Jay Govindan jay.govindan@usdoj.gov, leatha.johnson@usdoj.gov

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and served the remaining party by U.S. Mail, postage pre-paid, addressed as follows:

Gerald J. Hobbs
7194 Conejo Drive
San Bernardino, California 92404

/s/ Carole A. Caldwell
Carole A. Caldwell

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Carole Caldwell

From: info@ord.uscourts.gov
Sent: Friday, June 17, 2005 5:33 PM
To: nobody@ord.uscourts.gov
Subject: Activity in Case 1:03-cv-01175-CO Waldo Mining District et al v. United States Forest Service et al
"Concise Statement of Material Fact"

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U.S. District Court

District of Oregon

Notice of Electronic Filing

The following transaction was received from Buchal, James L. entered on 6/17/2005 at 5:33 PM PDT and filed on 6/17/2005

Case Name: Siskiyou Regional Education Project v. United States Forest Service et al
Case Number: 1:03-cv-3013
Filer: Robert Barton
Lisa Barton

Document Number: 119

Case Name: Waldo Mining District et al v. United States Forest Service et al
Case Number: 1:03-cv-1175
Filer: Robert Barton
Document Number: 88

Docket Text:

Concise Statement of Material Fact in Support of Cross Motion for Summary Judgment and Response to Plaintiff SREP's Concise Statement in Support of Motion for Summary Judgment. Filed by Lisa Barton, Robert Barton. (Related document(s): Motion for Summary Judgment[117], Motion for Summary Judgment[96].) Associated Cases: 1:03-cv-03013-CO, 1:03-cv-01175-CO (Buchal, James)

The following document(s) are associated with this transaction:

Document description: Main Document

Original filename: Not Available

Electronic document Stamp:

[STAMP ordStamp_ID=875559790 [Date=6/17/2005] [FileNumber=1405922-0] [926c99c7cf2c32298203cfe72c7a62706fa62b8c796e378e24243eb124f7a9445780cf e83cbc9b87a33b0db383ca083f2fc079696b23cea10c9ae37636ee7154]]

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6/20/2005

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF OREGON

SISKIYOU REGIONAL EDUCATION
PROJECT,

Plaintiff,

v.

UNITED STATES FOREST SERVICE,
et al.,

Defendants,

ROBERT AND LESA BARTON;
GERALD E. HOBBS,

Defendant-Intervenors.

Civil No. 03-3013-CG (Lead Case)

FINDINGS AND RECOMMENDATION

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COONEY, Magistrate Judge:

Plaintiff Siskiyou Regional Education Project (SREP) brings this action for declaratory and injunctive relief pursuant to the National Forest Management Act (NFMA), 16 U.S.C. §§ 1600-1614, and the Administrative Procedures Act (APA), 5 U.S.C. §§ 501-706, against the United States Forest Service (USFS) and Scott Conroy,

Forest Supervisor (defendants) for the Siskiyou National Forest (SNF). SREP alleges that the defendants have failed to comply with the standards and guidelines (S&Gs) contained in the Northwest Forest Plan (NWFP) and the Siskiyou National Forest Land Resource Management Plan (LRMP) in connection with the management of suction dredge mining in the waterways of the SNF. (Amended Complaint at 1). SREP seeks declaratory relief. SREP also seeks an injunction prohibiting the USFS from authorizing or approving mineral operations in Riparian Reserves (RR) or Supplemental Resource Areas (SRAs) without an approved plan of operations (PO) and prohibiting defendant intervenors from conducting any mining activities until they obtain an approved PO from the USFS. (Amended Complaint at 9).

In the trailing case, Robert and Lesa Barton v. USFS, 03-1175-CO, the Bartons allege a claim for infringement of their rights under the 1872 Mining Law, 30 U.S.C. §11 et. seq. They allege that the USFS is violating the Mining Act and the regulations contained in 36 C.F.R. § 228.4 by requiring suction dredge miners to file a PO under S&G MM-1. (Amended Complaint).

Before the court are SREP's motion for summary judgment (#96), defendants' cross motion for summary judgment (#111), the Bartons' motion to strike the Nawa declaration (#115), and the Bartons' cross motion for summary judgment (#117).

I. FACTS

Suction dredging, a method of placer mining, uses mechanical means to capture naturally occurring gold found moving through the

stream systems. AR 1071 at 30. As of 2001, approximately 580 placer mining claims existed in the SNF. AR 1071.

The SNF LRMP, adopted in 1989, contains S&G MA7-10. AR 18. S&G MA7-10 requires a PO for all mining activities within SRAs. *Id.*

In 1994, the SNF LRMP was amended by the NWFP. AR 38. The NWFP created new S&Gs, which replaced the SNF LRMP S&Gs where there was a conflict. (NWFP ROD C-1). The NWFP S&Gs provide that "None of these standards and guidelines applies where they would be contrary to existing law or regulation . . .". (*Id.*). The NWFP contains S&G MM-1, which requires an approved PO for all mineral operations in RRs. (NWFP ROD C-34).

In 1995, the Regional Forester wrote a letter to the forest supervisors, including the SNF supervisor, regarding questions relating to the NWFP's S&Gs and how they applied to mining operations. AR 39. The letter contained the following information:

The NWFP S&Gs did not apply where they were contrary to existing laws or regulations. The regulations which governed mining in the national forests were contained in 36 CFR 228, Subpart A. Under the regulations, some mining operations required no notification to the Forest Service, anyone proposing a mining operation that might cause disturbance of surface resources was required a file notice of intent [NOI], and when the district ranger determined that the mining operation will likely cause a significant disturbance of surface resources, the miner would have

to submit a proposed plan of operations [PO]. There were numerous, small placer operations using suction dredges and similar equipment occurring in RRs that were carried out under a notice of intent [NOI], because of the insignificant nature of their operation. The mining S&Gs for RRs would not apply, because there was no regulatory provision for including S&Gs in a notice of intent [NOI]. Id. at 39-40.

36 C.F.R. § 228.4 provides in part that:

(a) Except as provided in paragraph (a)(1) of this section, a notice of intent to operate is required from any person proposing to conduct operations which might cause significant disturbance of surface resources. Such notice of intent to operate shall be submitted to the District Ranger having jurisdiction over the area in which the operations will be conducted. Each notice of intent to operate shall provide information sufficient to identify the area involved, the nature of the proposed operations, the route of access to the area of operations, and the method of transport.

(1) A notice of intent to operate is not required for:

(i) Operations which will be limited to the use of vehicles on existing public roads or roads used and maintained for National Forest System purposes;

(ii) Prospecting and sampling which will not cause significant surface resource disturbance and will not involve removal of more than a reasonable amount of mineral deposit for analysis and study which generally might include searching for and occasionally removing small mineral samples or specimens, gold panning, metal detecting, non-motorized hand sluicing, using battery operated dry washers, and collecting of mineral specimens using hand tools;

(iii) Marking and monumenting a mining claim;

(iv) Underground operations which will not cause

significant surface resource disturbance;

(v) Operations, which in their totality, will not cause surface resource disturbance which is substantially different than that caused by other users of the National Forest System who are not required to obtain a Forest Service special use authorization, contract, or other written authorization;

(vi) Operations which will not involve the use of mechanized earthmoving equipment, such as bulldozers or backhoes, or the cutting of trees, unless those operations otherwise might cause a significant disturbance of surface resources; or

(vii) Operations for which a proposed plan of operations is submitted for approval;

(2) The District Ranger will, within 15 days of receipt of a notice of intent to operate, notify the operator if approval of a plan of operations is required before the operations may begin.

(3) An operator shall submit a proposed plan of operations to the District Ranger having jurisdiction over the area in which operations will be conducted in lieu of a notice of intent to operate if the proposed operations will likely cause a significant disturbance of surface resources. An operator also shall submit a proposed plan of operations, or a proposed supplemental plan of operations consistent with § 228.4(d), to the District Ranger having jurisdiction over the area in which operations are being conducted if those operations are causing a significant disturbance of surface resources but are not covered by a current approved plan of operations. The requirement to submit a plan of operations shall not apply to the operations listed in paragraphs (a)(1)(i) through (v). The requirement to submit a plan of operations also shall not apply to operations which will not involve the use of mechanized earthmoving equipment, such as bulldozers or backhoes, or the cutting of trees, unless those operations otherwise will likely cause a significant disturbance of surface resources.

(4) If the District Ranger determines that any operation

is causing or will likely cause significant disturbance of surface resources, the District Ranger shall notify the operator that the operator must submit a proposed plan of operations for approval and that the operations can not be conducted until a plan of operations is approved. . . . 36 C.F.R. § 228.4.

In National Wildlife Fed'n v. Aquapoa, 95-3005-CC (D.Or. 1995), several environmental organizations challenged the USFS's determination that S&G MM-1 did not apply to certain suction dredge mining activities. AR 44. The Aquapoa case was settled by a stipulated dismissal, in which the USFS agreed to make a "proposal to modify management direction for suction dredge mining within riparian reserves" and to make a decision about whether to amend the SNF LRMP with such proposed modification. AR 47.

In January of 1996, the USFS issued its modification, accompanied by an Environmental Assessment (EA) and decision notice/finding of no significant impact (DN/FONSI), which amended S&G MM-1 to require a PO for mining activities in RRs that are "likely to significantly retard or prevent the attainment of the Aquatic Conservation Strategy objectives" in the SNF LRMP. AR 109. The proposed amendment and accompanying EA were invalidated in Siskiyou Regional Education Project v. Rose, 87 F.Supp.2d 1074 (D.Or. 1999).

Following the Rose decision, the SNF personnel determined that rather than promulgate a new amendment of MM-1 and MA7-10, the SNF would comply with the court's decision by requiring a PO for any mining within RRs. AR 508-509. The SNF published a notice of

intent to prepare an environmental impact statement (EIS) for approving POs for suction dredge mining in RRs. 66 Fed.Reg. 29078. The SNF developed a draft EIS, which was published in December of 2001, and it would have allowed the SNF to approve POs for suction dredging within RRs without further NEPA analysis, provided that the operation met a variety of criteria regarding methods, location, and resource use. AR 1071.

On October 9, 2001, the Bartons provided a NOI to the Forest Service. AR 1031-1034. On October 24, 2001, the District Ranger determined that the Bartons' activities would not likely cause significant disturbance of surface resources. AR 1051. The District Ranger informed the Bartons that, because they intended to operate within an area designated as RR, under the S&Gs of the NWFP, they were required to file a PO. AR 1053. On December 7, 2001, the Bartons appealed this decision to the Forest Supervisor. AR 1074-1085. On January 7, 2002, their appeal was denied. AR 1095.

In February of 2002, the USFS began administering S&G MM-1 in accordance with several memoranda. During that month, the USFS's Washington Office issued the first memorandum to various Regional Foresters affected by the NWFP. AR 1207-1208. The memorandum stated that applying S&G MM-1 to mineral activities which will not cause significant disturbance under 36 C.F.R. § 228.4(a)(1)(v), would be "contrary to law and regulation". AR 1207. The memorandum explained that a NOI would only be required if the proposed activity might cause disturbance of surface resources and

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it doesn't meet the provisions of 36 C.F.R. § 228.4(a)(2). AR 1207-1208. This memorandum was transmitted from the Regional Forester to the Forest Supervisors in March of 2002. AR 1226.

In June of 2003, the SNF Forest Supervisor issued a memorandum containing further guidance to District Rangers based upon the February 2002 memorandum. SAR 566. The June 2003 memorandum directs District Rangers to ensure that NOIs were processed in accordance with the Washington Office's and Regional Forester's direction. Id. It instructs District Rangers to ensure that the appropriate resource specialists review NOIs and document their reviews according to a checklist. Id.

The checklist includes a variety of background information and a variety of criteria. SAR 568-569. Once the resource specialists complete the checklist, the District Ranger reviews the NOI and the specialists' input to determine if the activity would result in a significant disturbance of surface resources, and documents the rationale for his or her determination. SAR 566. For suction dredge mining operations in 2002, 2003, 2004, and 2005 in the SNF, the USFS did not require POs, because the proposed activities were determined not to result in significant surface disturbances. AR 1276-1279, 1280-1283, 1335-1338, 1348-1351, 1353-1356, 1359-1362, 1426-1427, 1439-1440, 1441-1442, 1480-1481, 1482-1483, SAR 588-590, 591-593, 629-631, 647-649, 650-651, 652-653, 658-659, 659A-660A, 671-673, 676-677, 32-33, 41-42, 43-44, 48-49. None of the NOIs identified by plaintiff involved SRAs. Schull Decl. ¶¶ 2, 3, 4, 5 and attachment 2.

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II. LEGAL STANDARDS

Pursuant to Rule 56(c) of the Federal Rules of Civil Procedure, a moving party is entitled to summary judgment as a matter of law "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact." Fed.R.Civ.P. 56(c); Bhan v. NME Hosps., Inc., 929 F.2d 1404, 1409 (9th Cir.), cert. denied, 502 U.S. 994 (1991). In deciding a motion for summary judgment, the court must determine, based on the evidence of record, whether there is any material dispute of fact that requires a trial. Waldridge v. American Hoechst Corp., 24 F.3d 918, 920 (7th Cir. 1994) (citations omitted). The parties bear the burden of identifying the evidence that will facilitate the court's assessment. Id.

The moving party bears the initial burden of proof. See Rebel Oil Co., Inc. v. Atlantic Richfield Co., 51 F.3d 1421, 1435 (9th Cir.), cert. denied, 516 U.S. 987 (1995). The moving party meets this burden by identifying portions of the record on file which demonstrates the absence of any genuine issue of material fact. Id. "[T]he moving party . . . need not produce evidence, but simply can argue that there is an absence of evidence by which the nonmovant can prove his case." Crav Communications, Inc. v. Novatel Computer Systems, Inc., 33 F.3d 390, 393 (4th Cir. 1994), cert. denied, 513 U.S. 1191 (1995) (citation omitted).

in assessing whether a party has met their burden, the court must view the evidence in the light most favorable to the nonmoving party. Allen v. City of Los Angeles, 66 F.3d 1052 (9th Cir. 1995). All reasonable inferences are drawn in favor of the nonmovant. Id.

If the moving party meets their burden, the burden shifts to the opposing party to present specific facts which show there is a genuine issue for trial. Fed.R.Civ.P. 56(e); Anvil v. CBS "60 Minutes", 67 F.3d 816 (9th Cir. 1995), cert. denied, 517 U.S. 1167 (1996). The nonmoving party cannot carry their burden by relying solely on the facts alleged in their pleadings. Leonard v. Clark, 12 F.3d 885, 888 (9th Cir. 1994). Instead, their response, by affidavits or as otherwise provided in Rule 56, must designate specific facts showing there is a genuine issue for trial. Id.

The judicial review provisions of the APA governs the court's review of agency actions taken pursuant to the NFMA. Native Ecosystems Council v. U.S. Forest Serv., 418 F.3d 953, 960 (9th Cir. 2005). Under the APA, the court will set aside an agency's action if it was arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law. Id.

An agency's interpretation of its own regulations, including its own Forest Plan, is entitled to deference. Forest Guardians v. U.S. Forest Serv., 329 F.3d 1089, 1097, 1099 (9th Cir. 2003). The court will defer to an agency's interpretation unless it is plainly erroneous or inconsistent with the regulation. Alaska Trojan Partnership v. Gutierrez, 425 F.3d 620, 627 (9th Cir. 2005). The

court will not defer to an agency's decision if it is without a substantial basis in fact or it is based upon a clear error of judgment. Native Ecosystems Council, 418 F.3d at 960 (citations omitted).

III. DISCUSSION

SREP moves for summary judgment arguing that:

- 1) the defendants violated the NFMA by violating S&Gs MM-1 and MA7-10;
- 2) the defendants' inconsistent legal interpretations are not entitled to deference;
- 3) MM-1 and MA7-10 are not contrary to or in conflict with any other existing law or regulation;
- 4) SREP is entitled to declaratory and injunctive relief.

In response to SREP's motion for summary judgment and in support of its motion for summary judgment, the defendants argue that:

- 1) the defendants' interpretation of the Forest Service regulations and the Forest Plan is reasonable, not arbitrary and capricious and does not violate the NFMA; and
- 2) the defendants did not violate NFMA by allowing mining in SRA to proceed under NCIs.

In response to SREP's motion and in support of their motion, defendant intervenor Bartons argue that:

- 1) the defendants have properly exercised their authority to

regulate mining in Part 228 of Forest Service regulations;

2) the defendants must give effect to state authorization of mining within the waters of the National Forests;

3) the defendants cannot restrict mining through National Forest plans;

4) the S&Gs cannot override the Forest Service's Part 228 regulations;

5) only continued use of the NOI procedure can effectuate Congressional intent with respect to mining;

6) SREP's denial of a conflict between the S&Gs and the Part 228 regulations lacks merit;

7) the Bartons are entitled to declaratory relief; and

8) if the court finds that the defendants erred, the court should conduct additional proceedings to determine the scope of relief.

In reply and response, SREP argues that:

1) MM-1 is authorized by statute;

2) state regulation of mining does not supplant Forest Service regulations;

3) MM-1 is not contrary to any law;

4) Karnk Tribe is distinguishable from this case;

5) the Bartons' claim for declaratory relief is moot; and

6) SREP is entitled to injunctive relief.

In reply, the defendants argue that:

- 1) the decision in Karuk Tribe supports the defendants' position that they did not violate the NFMA by accepting NOIs for mining within RRs;
- 2) the regulatory history of 36 C.F.R. Part 228A supports the defendants' position that POs should not be required as a per se rule;
- 3) the court need not reach the issue of whether the NFMA allows the regulation of mining;
- 4) the Bartons' request for declaratory relief is unnecessary, as the Forest Service has clarified that it is no longer requiring POs, unless they are required under Part 228A of the regulations;
- 5) the defendants have not allowed mining in SRAs under NOIs; and
- 6) if the court finds that the defendants violated the NFMA, it should not adopt the broad remedy sought by SREP.

In reply the Bartons argue that:

- 1) the court must evaluate suction dredge claims within the context of the administrative record tied to specific, final agency action;
- 2) SREP's facts are disputed;
- 3) the defendants cannot use the NFMA to regulate mining;
- 4) state determinations to authorize suction dredge mining are relevant to assess the appropriate scope of federal regulation;
- 5) MM-1 is contrary to the Part 228 regulations;

6) SREP is not entitled to injunctive relief; and

7) the defendants' voluntary cessation of alleged illegal conduct does not moot the Bartons' claim.

SREP alleges two claims for relief. The first claim alleges that the defendants violated the NFMA by allowing suction dredge mining operations to proceed in RRs under NOIs and without POs in violation of S&G MM-1. The second claim alleges that the defendants violated the NFMA by allowing suction dredge mining operations to proceed in SRAs under NOI without POs in violation of S&G MA7-10. The Bartons have one claim, in which they allege that the defendants are violating the Mining Act and the regulations contained in 36 C.F.R. § 228.4 by requiring suction dredge miners to file a PO under standards and guidelines MM-1.

Defendants argue that the Bartons' claim is moot, because the defendants are no longer requiring the Bartons to file a PO. The Bartons argue that the defendants' voluntary cessation of the alleged illegal conduct does not moot their claim. If an agency voluntarily stops the alleged illegal conduct, a claim will not be moot, "unless it is absolutely clear that the allegedly wrongful behavior could not reasonably be expected to recur." Forest Guardians, 329 F.3d at 1095 (citations and quotations omitted).

The undisputed evidence shows that:

On a national level the Forest Service has never required a PO, except when required by the regulations contained in 36 C.F.R. Part 228A, and that this was the Forest Service's position since

1995, shortly after the NWFP ROD was issued. AR 39-40. In 2002 the Deputy Chief of the Forest Service again clarified the Forest Service's position that POs were not required, except as provided in 36 C.F.R. Part 228A. AR 1248-1249. Based on this guidance, the local District Ranger and Forest Supervisor were preparing letters withdrawing the finding that the Bartons were required to file a PO. AR 1333. Although those letters were never sent to the Bartons, it is clear that the Forest Service on a national level has never required a PO, except as required by the regulations, and that the local officials of the SNF have been directed to comply with those regulations. In addition, the Forest Service has amended their mining regulations to further clarify its position with respect to how the mining regulations are to be interpreted. Karuk Tribe of California v. U.S. Forest Serv., 379 F.Supp.2d 1071, 1080-1081 (N.D.Cal. 2005). The court finds that the defendants have met their burden of demonstrating mootness and it is "absolutely clear" that the alleged wrongful conduct could not reasonably be expected to recur. See Forest Guardians, 329 F.3d at 1095 (it would be unreasonable to think the Forest Service would return to conduct it admitted was unconstitutional). The court finds that the undisputed evidence demonstrates that the defendants met their burden to show that the Bartons' claim is moot. Therefore, the defendants are entitled to summary judgment on the Bartons' claim.

As to SREP's second claim, SREP has not presented any evidence to support its claim that the defendants are allowing suction

dredge mining operations to proceed in SRAs under NOI's and without POs. The undisputed evidence shows that the areas SREP complains about are all in RRs. Therefore, defendants are entitled to summary judgment on SREP's second claim.

The undisputed evidence shows that:

S&G MM-1 requires PO for all mining operations in RRs regardless of the nature of the operation. NWFP ROD C 34. The NWFP provides that its S&Gs do not apply where they would be contrary to existing law or regulation. NWFP ROD C-1. The Forest Service's regulations, found in 36 C.F.R. Part 228A, only require a PO if the mining operation is causing or will likely cause significant disturbance of surface resources. 36 C.F.R. § 228.4.

This court finds that S&G MM-1 is contrary to 36 C.F.R. §228.4, and under the NWFP the mining regulations supersede the requirements of MM-1. See Karuk Tribe of California, 379 F.Supp.2d at 1094. The court finds that the Forest Service's interpretation of their own regulations and their own Forest Plan are entitled to deference, and that their actions based on their interpretation of the regulations and the Forest Plan were not arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law. Therefore, defendants are entitled to summary judgment on SREP's first claim.

IV. RECOMMENDATION

Based on the foregoing, it is recommended that plaintiff's motion for summary judgment (#96) be denied, defendants' motion for summary judgment (#111) be granted, the Bartons' motion to strike (#115) be denied as moot, the Bartons' motion for summary judgment (#117) be denied, and a judgment be entered dismissing this case.

This recommendation is not an order that is immediately appealable to the Ninth Circuit Court of Appeals. Any notice of appeal pursuant to Rule 4(a)(1), Federal Rules of Appellate Procedure, should not be filed until entry of the district court's judgment or appealable order. The parties shall have ten days from the date of service of a copy of this recommendation within which to file specific written objections with the Court. Thereafter, the parties have ten days within which to file a response to the objections. Failure to timely file objections to any factual determinations of the Magistrate Judge will be considered a waiver of a party's right to de novo consideration of the factual issues and will constitute a waiver of a party's right to appellate review of the findings of fact in an order or judgment entered pursuant to the Magistrate Judge's recommendation.

DATED this 8 day of November, 2005.

/s/
UNITED STATES MAGISTRATE JUDGE

Carole Caldwell

From: info@ord.uscourts.gov
Sent: Wednesday, November 09, 2005 8:14 AM
To: nobody@ord.uscourts.gov
Subject: Activity in Case 1:03-cv-03013-CO Siskiyou Regional Education Project v. United States Forest Service et al "Findings & Recommendation"

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U.S. District Court

District of Oregon

Notice of Electronic Filing

The following transaction was received from dn, entered on 11/9/2005 at 8:13 AM PST and filed on 11/8/2005

Case Name: Siskiyou Regional Education Project v. United States Forest Service et al
Case Number: 1:03-cv-3013
Filer:
Document Number: 145

Docket Text:

Findings & Recommendation: Motion for Summary Judgment [96] should be denied. Motion for Summary Judgment[111] should be granted. Motion for Summary Judgment[117] should be denied. Motion to Strike[115]should be denied as moot. Judgment should be entered dismissing this case. Objections to the Findings and Recommendation are due by 11/22/2005. Signed on 11/8/05 by Judge John P. Cooney. Associated Cases:Associated Cases: 1:03-cv-03013-CO,1:03-cv-01175-CO (dn,)

The following document(s) are associated with this transaction:

Document description:Main Document

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Electronic document Stamp:

{STAMP ordStamp_ID=875559790 [Date=11/9/2005] [FileNumber=1544697-0] [04cbf4184a873a0e15e31baaa39a63d4f77bc25345b5e50071ad299cdaa99bae939eb37143c572729c7110987a6f87f163bfd2b452f38952fcab57ef9d8b1dcf]}

1:03-cv-3013 Notice will be electronically mailed to:

James L. Buchal jbuchal@mbllp.com, ccaldwell@mbllp.com

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Roger Flynn wmap@igc.org

EXHIBIT 4
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11/9/2005

The Environmental Aspects of Eductor Dredging

By Robert K. Craig

Eductor dredges are small portable machines that vacuum gravel from the bed of a river or stream, pass the gravel through a floating recovery system and then return the gravel directly back into the waterway. Eductor dredges simulate, on an extremely small scale, the natural movement of alluvial gravel in times of flooding. The total disturbance of a waterway by eductor dredging represents only a small portion of the geological processes that occur naturally – whether or not any eductor dredging was carried out!

The auriferous deposits contained within waterways are formed by the relatively constant movement and sorting of gravels over extremely long periods of time. Without this movement and gradual concentration of valuable minerals, economic deposits could not form and there would be no reason to mine them.

If the movement of small quantities of alluvial gravel is to be considered as pollution, then the constant repeating processes of natural erosion must be regarded as a massive degradation of the environment. All rivers and streams could then be said to be polluted to an incredible extent. The "pollutants" are natural substances that have always been present, and always will be.

The geology of all rivers and streams involves a natural movement of gravel, a constant replacement process that is very much a part of the river environment. And at times of heavy run off, the movement is very pronounced. A rivers aquatic life forms, from the smallest invertebrates to full grown fish, survive this natural movement of gravel during floods.

In comparison with natural processes, the disturbance caused by an eductor dredge is insignificant, lasts no longer than the following high flow and has no long term effect whatsoever. No other mining, forestry or farming method can assure a complete and natural rehabilitation as eductor dredging can.

Concerns

a) Turbidity

The main environmental concern which arises from the use of eductor dredges is the direct disposal of tailings after processing.

Most river gravel processed by an eductor dredge is sufficiently coarse to cause it to fall almost instantaneously to the river bed after processing. Some fine material can remain in suspension for varying lengths of time, before settling out. It is this turbidity which can be of concern.

EXHIBIT 5
PAGE 1 OF 1

Variables such as the amount of colloid material in a stream, the size and number of eductor dredges in use, the waterways velocity and volume, and the width of the waterway, all influence the amount of turbidity created. In effect, changes in turbidity caused by eductor dredging are highly variable – dredging river gravels containing only sand and gravel causes very little change in turbidity, whereas dredging clay deposits can cause noticeable turbidity increases.

In an eductor dredging trial conducted on the Mulgrave River in Far North Queensland (Australia) for various state government departments, it was recorded that a 5-inch eductor dredge caused marginal discoloration at the tailings discharge, with the discoloration precipitating very rapidly and not being discernible 30 meters downstream from the dredge.

Turbidity is an expression of the optical properties of water that causes light to be scattered rather than transmitted through it. In simple terms it is a measurement of how "muddy" the water is, and is measured in nephelometric turbidity units (NTU).

During an eductor 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 eductor dredges studied, Harvey (1982) stated "...generally rapid recovery to control levels in both turbidity and settleable 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 which 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."

During 1997 the US Geological Survey and the Alaska Department of Natural Resources conducted a survey into eductor 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)

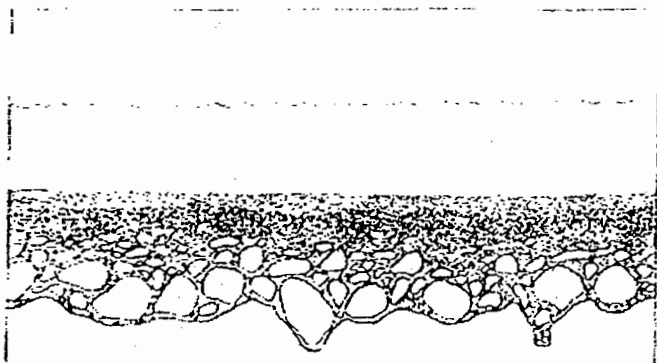
downstream. In both cases, the dredges were well within compliance with this regulation."

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 eductor 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 an eductor dredging operation has less, or at least no greater effect on sediment mobilisation and mobility than a rain storm.

b) Immediate habit changes

Eductor dredging involves moving river gravel, with a number of operational circumstances dictating to what depth the gravel is moved. In some rivers only the top ½ meter of gravel needs to be moved, while in other rivers all of the gravel down to bedrock is moved. Rocks too large to enter the dredge are moved by hand, by being rolled aside (usually laid on bedrock). Larger boulders are rolled over or they can be left in place to be dredged around. The auriferous sand and gravel small enough to enter the dredge is moved by suction through the dredge to the recovery system, where the gold and some other heavy materials are retained. The coarse gravels settle immediately upon leaving the dredge. The smaller particles travel further downstream before settling. Therefore the habit for benthic organisms is removed from the dredge hole, and covered up with sand downstream.



c) Effect on invertebrates

In a river or stream bed, invertebrates are found in the spaces and cracks between unembedded rocks, or rock surfaces. Eductor dredging impacts on these invertebrates by displacing them from the dredged area, and by burying suitable habitat downstream from the dredge. The buried habit does not continue downstream indefinitely, nor is the effect from bank to bank, and not all invertebrate species are equally affected.

During eductor dredging, food (invertebrates) is stirred up and becomes accessible to fish which feed from the dredged area and from the wash of the dredge.

A longer term effect is that a greater area of gravel is aerated; therefore giving a much larger habit to the invertebrates, which then provides fish with food well after the dredging has been completed. Insects are no exception to the general hypothesis that diversity increases with habitat complexity. In American studies, and from the observations of Australian dredgers, it has been found that fish can

do much better in rivers and streams that have been eductor dredged, than they do in areas where there was no such activity.

River and stream invertebrate populations are not severely impacted during eductor dredging, as the impact is local, not harmful to all invertebrate species, and mildly beneficial to some. And, the most important point is that recolonization of dredged areas by invertebrates is rapid!

In an American study (J.S. Griffith and D.A. Andrews, 1981) it was stated in a paragraph titled "Recolonization of Dredged Areas", that "...the dredged sample plots in Summit Creek were substantially recolonized by benthic invertebrates after a 38-day period. A comparison of numbers between orders in the populations of these two areas showed no significant difference. Similarly there were no significant difference among numbers of the five taxa that together accounted for 80% of the invertebrates in both areas." Thomas (1985) noted that recolonization was substantially complete one month after dredging, and Harvey (1986) stated, "Insects recolonized the sand and gravel deposited by dredging at Butte Creek fairly rapidly."

d) Effect on fish

In Australia in the 1980s a very vocal minority of anglers in the state of Victoria objected to allowing any eductor dredging. Their criticisms against eductor dredging were entirely conjecture, with the claims made that dredging "clouds out" fish and that dredging reduces fish numbers, and that fish go "off the bite". And there were even objections to the temporary "holes" sometimes left in a river after dredging, with the fanciful claim made that anglers would fall into these holes and drown.

In New Zealand in the mid 1990s the recreational fishing lobby claimed that the "siltation caused by dredgers could smother developing trout eggs and kill young fish". Also, it was said that dredges have the "potential to silt up brown trout spawning beds and wipe out a generation of trout" and "silt discoloration also created unfavourable conditions for anglers, it can effect the ability to spot fish and stop fish from seeing lures...anglers want to fish in clear water." And these general criticisms were made, "while silt is non-toxic it is harmful to aquatic systems" and (an eductor dredge) "was harmful to fish life and the aquatic insects on which fish feed."

Fish are affected by eductor dredging if their specific habitat is impacted. Of particular concern is the potential for the destruction of fish spawning beds. Fish species require sized gravel with good porosity and proper water flow in which to deposit their eggs. Eductor dredging can impact spawning areas in two ways. Spawning beds immediately in front of the dredge can be sucked up and removed, and downstream from the dredge can have tailings or sand deposited on top of them.

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American studies have shown that the impact arising from the deposition of silt on spawning areas downstream from the dredging operation is extremely variable. It was found that silt deposition ranges from being harmful to having no detrimental effect. Spawning areas are naturally restored after dredging, following the flushing of the next flood which will remove the silt.

In California it has been noted that intergravel permeability was increased by dredging. Porous gravels left after dredging can be washed downstream a short distance during high flows, adding to spawning beds, thus improving them. In America, sieved gravel from bucket dredge tailings have been added to creeks for spawning gravel as part of an improvement project. An American study (Hassler 1986) has stated that "...dredge tailings are often referred to as good salmon spawning substrate," and "...in the Trinity River Chinook salmon have been observed spawning in the tailing piles of suction (eductor) dredges."

Gravel bars formed downstream of eductor dredging operations provide excellent spawning beds for fish – because the gravels are loose and uncompacted. The fish eggs can be laid and covered more easily than in compacted gravels.

Even dredging fish eggs from a stream bed does not necessarily mean the destruction of those eggs...as would seem logical. In an American study (J.S. Griffith and D.A. Andrews 1981) it was stated that "...a substantial proportion of the eyed cut-throat and rainbow trout eggs survived passage through the dredge. In these eggs, the vitelline membrane has been replaced by layers of cells and they can withstand the shock created by turbulent flows through the dredge." There can be considerable variation in mortality among fish eggs after passing through a dredge."

Trout follow seasonal migration patterns. The majority of adult fish move upstream to shallow gravel spawning streams during the winter months, then return downstream into lakes where possible, for the summer.

The spawning sites chosen are in the remote headwaters of a river system, with the preferred sites within a creek, in rapids, or in the tail or sides of pools. One exception to this is in streams with swept bedrock, or larger boulder stream beds, where fish spawn in small patches of gravel located on the downstream side of larger boulders.

Obviously, the critical aspects of protection of fish spawning sites will vary by stream, fish species, presence of suitable sites, water flow characteristics, ect, ect.

On any eductor dredging claim where spawning is known to occur, dredging could be restricted during the spawning period as a condition of the claim. Such a condition should be designed to prevent dredging only during the period when life stages are present, and excessive buffer periods need not be imposed long

before spawning occurs, or long after fry should have been expected to have emerged. There is no reason for closing to dredging any rivers or streams not used for spawning.

During eductor dredging there is a short period when food (invertebrates) is stirred up and made accessible to fish. In American studies, and from what has been experienced during a great deal of dredging activity in Australia, it has been found that fish do better in areas that have been eductor dredged than they do in rivers where there has been no such activity.

In a study done by marine biologists from the prestige's Scripps Institute in California rivers, it was found that in the second year of dredging activity, the life cycle of the biological life that fish feed upon is actually sped up with their access to room and feed. Stirring up the gravel by dredging speeds up these life cycles. The food available to fish is increased, and the actual finding on record is that fish count can be increased by up to 40%.

The American state of Oregon, by actual fish count determined that the effect of eductor dredging is negligible on aquatic life. A fish count study was made on Cow Creek, which was an excellent area due to the fact that they were able to count the fish prior to the opening of that area for eductor dredging. Up until 1978 Cow Creek was virtually closed, and there was little or no activity by gold dredgers. The area became popular during the 1980-81 season by dredgers, in that there were between 50 and 60 dredges in a 10 mile area of the stream. **The actual fish count during that time improved by as much as 15 to 20%.**

Studies generally have concluded that no adverse effects upon fish numbers result from eductor dredging activity.

e) An annoyance to fish.

Fish do not take fright from the noise of the dredge motor, or the diver in the water, and all dredgers have experienced fish swimming about as the miner works. Fish react defensively to movements above the water surface -- as any angler will be well aware of. Fish have no fear of a diver in their own element. Were this not a fact, fisheries biologists could not conduct mask and snorkel studies (drift dives) without scaring away the fish.

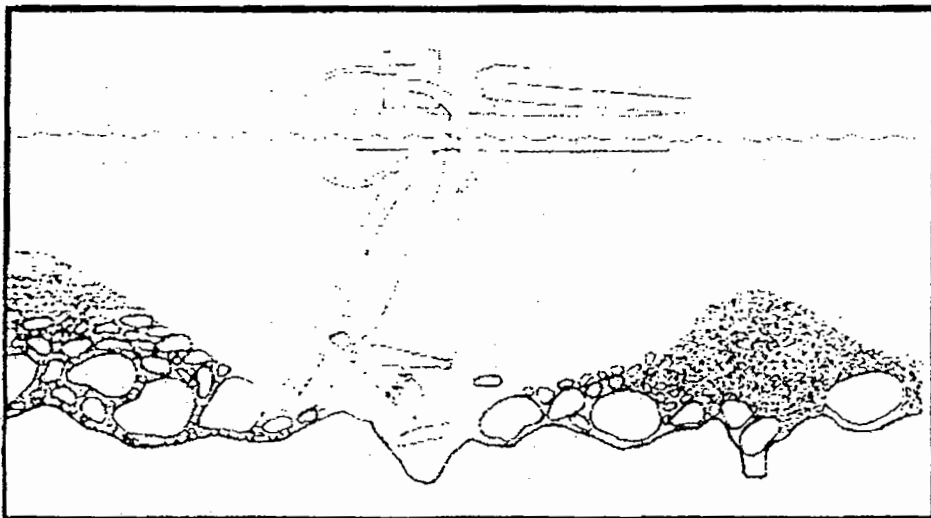
Eductor dredging does not disturb mature size fish, and can attract fish, especially juveniles, to the working dredge. These juveniles will quickly dart in and out of the dredged hole feeding on the invertebrates displaced as the dredger moves rocks. Fish will also feed on dislodged invertebrates as they are expelled from the dredge. Juvenile fish benefit greatly from this feeding and will increase in length and weight as a result. American studies have mentioned rainbow trout feeding in a dredge outfall at turbidity levels of 25-30 NTU, and that the eductor dredge caused turbidity had little effect on the feeding fish.

f) Cumulative or additive effects.

Several studies have been conducted in California to determine what, if any, are the effects of many larger dredges. Harvey (1986) studied six 6-inch and smaller eductor dredges on a 2 km long section of Butte Creek. Some dredging occurred in 85% of all pools and rapids in the 2 km study section. The study stated, "If there were a cumulative effect of dredging, an increasing number of taxa should have declined in abundance after June at downstream stations" -- no such decline appeared in the data. The study concluded "Fish and invertebrates apparently were not highly sensitive to dredging in general, probably because the streams studied have substantial seasonal and annual fluctuations in flow turbidity and substrate...in May 1982, no substrate changes caused by dredging in Butte Creek during the previous summer was evident...along with rapid temporal recovery of insects seen in the study, these results suggest that suction dredging effects can be short lived on streams where high seasonal flows occur."

Harvey (1982) examined the additive effects of 40 dredges on a 11 km section of the Yuba River in 1981. In the conclusion he states, "No additive effects were detected on streams where a number of dredges were being operated."

McLeneghan and Johnson (1983) studied the impact of 270 eductor dredges with up to 10-inch intake, and stated, "Subjective in stream and riparian assessments of habitat damage revealed that few suction dredge miners surveyed caused adverse impacts" -- no additive effects were mentioned. And they point out, "The physical characteristics of the stream will also regulate dredge size to some extent. Stream bed substrate is probably the most selective parameter...relatively shallow foothill streams will generally exclude the larger dredges."



g) Mercury disturbance.

Eductor dredging is carried out in rivers and streams where miners have preceded them. And in many rivers and streams during the late 1800s and early 1900s, mercury (quicksilver) was commonly used in various mining processes. Mercury has an affinity for gold and silver, absorbing them, and was used by earlier miners in sluice box's and on copper plates to assist in the recovery of the smaller gold particles.

Due to inefficient processing, various quantities of mercury were lost to the system, to settle into the gravel of the rivers and streams downstream of the processing site. An example of this is in New Zealand's Lyell Creek immediately downstream from the Alpine stamper battery. And in Victoria (Australia) significant amounts of mercury have been found by eductor dredge miners in the Ledederg River.

In the early 1980s when eductor dredging activity was at its height in Victoria (Australia), concerns were expressed whether disturbance of sediments through the use of these dredges would result in the increased mobilisation and biological availability of mercury. These concerns arose after studies done on Australia's most heavily eductor dredged river, The Goulburn River, revealed that mercury levels in both water and sediment were high by world standards.

A report compiled by the Environmental Protection Authority of Victoria in 1983 showed that the Goulburn River had severe mercury contamination of surface waters, sediment and edible tissues of large fish. The report indicated that the dredgers regularly found quantities of inorganic mercury in the stream bed.

It was found that there are two main sources of mercury in the Goulburn river system. Firstly the Jamison area is a known area of mercury mineralization. Mercury was first discovered there in 1893, along what was to become known as Quicksilver Creek, where globules of mercury could be obtained by breaking up the slate and washing it. Free mercury could be seen in cavities in the quartz, along with small patches of sulphide of mercury, or cinnabar.

The second source was more significant and more widespread, and resulted from the standard procedure in use by the early miners for the extraction of fine gold from crushing by passing the slurry over mercury coated plates. Very high levels of mercury were found in river sediment at the A1 and Morning Star lode mines, confirming historical evidence that mercury had been discharged at these mines.

A production eductor dredge removes mercury from the mercury contaminated river bed as the mercury forms an amalgam with the gold on entry to the dredge. And as a means of solving the problem of mercury contamination of streams, an Australian study (EPA study, 1984, publication: 195) recommended dredging to

remove the (mercury) contaminated sediments. A production eductor dredge can therefore have a positive effect by removing any dangerous mercury from a stream environment.

h) Stream bank erosion.

Eductor dredging has the potential to contribute to stream bank erosion by either the undercutting of stream banks or in the construction of roads for access.

Any risk of undercutting stream banks can be prevented by restricting all mineral recovery to the wet perimeter, and by specifying that the boundaries of an eductor dredging claim follow the natural contours of the waterway. Stream bank disturbance is highly visible and lasting; therefore such mining conditions would be easily enforced.

Most erosion in a waterway occurs naturally due to the direction of flow or obstacles in the river or stream bed. The build up of gravel bars after flooding usually indicates a choking effect in that section of the waterway. Eductor dredging of the inside of a river bend can help reduce stream bank erosion, as these gravel bars can force the river to carve a new course out of the adjoining bank. Dredging of other areas of gravel build up could help containing the waterway in its original channel.

Eductor dredging also helps stabilize the river bed by locating the heavy material on bedrock and then binding these larger rocks with the finer sand and gravel.

It is not necessary to construct roads to gain access to a river or stream for eductor dredging. All sizes of eductor dredges can be dismantled for transportation to the river or stream to be dredged. It would be practical to specify, as a condition of an eductor dredging claim, the appropriate means of access.

Helicopters are a practical and widely utilized means of accessing a dredge directly into a waterway without disturbing the surrounding vegetation. Also, dredging sites, especially in the larger rivers, can often be accessed from the closest point of road access by the use of jet boats or canoes. Walking tracks used by hikers and anglers are common alongside rivers and can be used by dredgers when accessing a dredging site on foot.

i) Impact on flora.

Because of the nature of an eductor dredging operation (water required to permit dredging) and when dredging conditions applying to an eductor dredging claim prohibit any interference with the banks of a watercourse, no impact on any flora would occur.

j) Impact on fauna.

There is potential for eductor dredging to impact on native and introduced fauna through disturbance to the bed of a river or stream and associated turbidity. The noise from an engine which powers a dredge may also impact on fauna.

The fauna likely to be impacted on by eductor dredging include fish, water-dwelling macro invertebrates and also birds and ducks.

The impact on fish and invertebrates has earlier been examined. Birds and ducks can be disturbed by the noise emanating from a dredge motor, or the noise produced while paddling a canoe, or the operation of a power boat that is used to access a dredging site, or even while walking along a river bank. The noises produced by a helicopter can also temporally disturb birds and ducks.

k) Noise pollution.

Noise is produced from the engine/s on the dredge which is used to power the pump/s and air compressor. Low rpm four stroke motors are used on eductor dredges and are all fitted before sale with efficient noise suppression devices (mufflers) which conform to regulations.

Professional dredgers tend to purchase motors that have a higher horse power rating than is actually required to run their dredges with sufficient suction. They do this to avoid running the motors at a high rpm which would significantly reduce the operating life of the motors. These motors are run at about $\frac{3}{4}$ power which has the added advantage of a lowering of noise levels. Production dredges can have noise levels further reduced by the addition of extra noise suppression devices, for use in areas where noise levels are at issue.

l) Impact on man-made features.

Any man-made feature contained within an eductor dredging claim such as vehicular crossings, fords, bridge footings, piers, domestic pumps, water supply take offs, ect, ect, can be protected by introducing conditions preventing dredging within a specified distance of the feature. Consequently no impact on these features would occur.

m) Petrol in the river environs.

Dredgers are particularly careful when handling petrol and any spillage is most unlikely. The only time when there is a potential for a spill is when pouring petrol into the motor on the dredge. Care is always a necessity when handling fuel near a dredge as any spillage of fuel onto a dredge sluice box can reduce its effectiveness, and result in costly downtime cleaning the spill. Any petrol spills onto a hot muffler or onto a sparkplug, can have disastrous consequences. A

spill of fuel onto a neoprene wet suit can cause a severe burning of the miner's skin because of a resulting chemical reaction between the neoprene and the petrol, and damage to the wet suit would also result.

n) Visual impact.

There is a visual impact arising from the operation of an eductor dredge in that the dredge can be viewed in the river or stream. There is a minority of people who would object to the introduction of any man-made feature, no matter how temporary, into a "natural" environment. However, most people who come across a dredge are interested and curious about the operation, which they often enquire about. Anglers will keep on fishing – and if they are aware that eductor dredging attracts fish they will throw a line in just a little downstream of the operating dredge.

There can be an additional visual impact arising from the distribution of tailings in the river or stream. Under most conditions there would be no visual impact as all tailings would be contained below water level, and it is only during the low water conditions of the late summer months that some small gravel islands of tailings may appear above the surface. Because of the loose packed nature of these tailings, soon all signs of tailings and any unfilled holes are totally removed by the following high flow. River and stream gravels are never flat or even, nor do they remain static. They consistently change with holes appearing and disappearing naturally, purely as a result of the force of nature.

o) Characteristics of river water.

A Victorian study (T.J. Doeg, 1985) found that the characteristics of river and stream waters are unaffected by eductor dredging. In a study area on Victoria's (Australia) Goulburn River being eductor dredged, all values for temperature, conductivity and dissolved oxygen were found to fall within the range of values normal for that area. Also chemical compositions reflected the values expected.

In an American study (USGS Fact Sheet FS-154-97, October 1997) of two production dredge operations (a 10-inch dredge and an 8-inch) it was stated that "...suction dredging appears to have no measurable effect on the chemistry of Fortymile River within the study area."

p) Examples of eductor dredged rivers.

In Victoria (Australia) the second most heavily eductor dredged river is Big River (a tributary of the Goulburn River). It is a typical wild and scenic mountain river located in State Forest well away from any substantial human habitation. This river was very intensively eductor dredged from the late 1970s up until the 1989/90 season. And during this period this river produced excellent returns of gold for the professional miners who were experienced and willing to put in the

necessary hours each day when weather conditions permitted dredging. There was also a great deal of recreational dredging carried out in the same period.

Although this river was very heavily eductor dredged over nearly its entire length for more than 10 years, there is no evidence, immediately visible or otherwise, to indicate any eductor dredging ever occurred. Trout still thrive, as they did before and during the years of dredging activity, and each weekend during summer anglers still congregate along the river as they always have.

In a report dated August 1985, published by the Biological Survey Department of the Museum of Victoria that investigated concerns about the possible effects of eductor dredging activity on biological aspects of four main catchments draining into the southeastern arms of Lake Eildon, it was stated that "...from the results presented in this report, there is no evidence to suggest that the macro invertebrate communities at sites where eductor dredging has been carried out have been seriously altered by this activity. This is particularly so in Big River which has been fairly heavily dredged over the past four years and is minimally affected by other aspects of human activity. The macro invertebrate populations in this river are typical of those found and expected in relatively undisturbed rivers in the transitional zones between upland and foothill sections of rivers. Such undisturbed areas are characterized by a high species diversity and the presence of representatives of many groups that appear to be associated with clean waters."

Victorias (Australia) Big River can be regarded as an example; as good as any, that eductor dredging has no lingering or any long term detrimental environmental impact on river and stream ecosystems. Also, Australia's most heavily eductor dredged river, the upper Goulburn River (Victoria), can be similarly regarded - taking into consideration that the upper Goulburn River environs have been significantly impacted by the construction of bank side holiday houses and picnic areas, and the cultivation of river flats, which have added sewage seepage, rubbish and fertilizer residues into the river. And because of easy access the Goulburn River is heavily fished which significantly impacts on fish numbers.

In Queensland the two most heavily eductor dredged rivers in that state is the Palmer and Mitchell Rivers in the far north. Many other rivers have been eductor dredged in Queensland including the Russell River which was first dredged in the 1960s (in the Golden Hole), and the Mulgrave River.

Numerous rivers in New South Wales (Australia) have been eductor dredged, including the Mongalaw River, the Turon River and the Sholhaven River. Only a few rivers have been eductor dredged in Tasmania as this state lacks the rich alluvial gold deposits typically found in the other eastern states of Australia.

In New Zealand numerous rivers and streams have, and are being, eductor dredged. The Arrow River has been eductor dredged, almost exclusively by recreational dredgers, since the 1960s. The Lyell Creek was intensively eductor dredged until recent years by a professional dredger (who produced between ½ and 3 ounces of gold a day). The Clutha River, the Mangles River, Winding Creek, Wakamarina River, Foster Creek, Kawarau River, Bannockburn Creek, Alfred River, Waikaia River, Moonlight Creek (on the West Coast), Pell Stream, Waimangaroa River, Little Keyburn River, Pomahaka River, Nevis River, Skippers Creek, Floodburn Stream, Shielburn Stream, Baton River, and the Tadmire River, have also been eductor dredged. The Buller River was extensively eductor dredged in its middle reaches by a few professionals, and many recreational dredgers, during the 1980s, and is presently being eductor dredged on a commercial scale.



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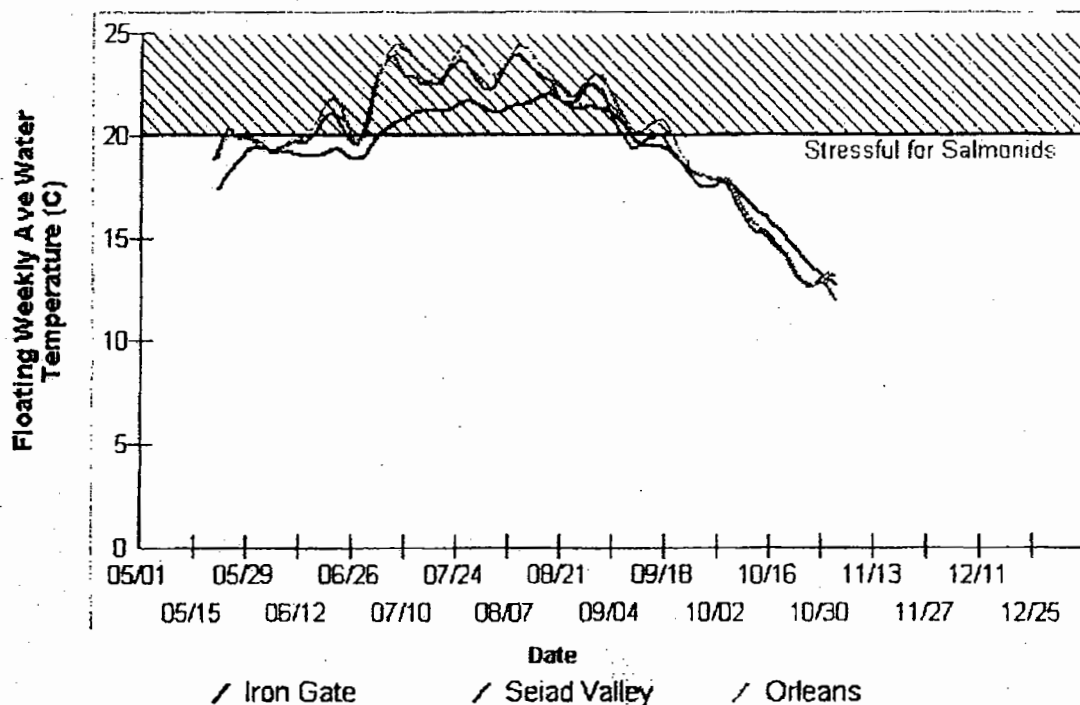
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Area Mainstem Klamath

Topic Temperature: Floating Weekly Average Klamath IG, Seiad, Orleans 2001

Caption: This chart shows the floating weekly average water temperature of the Klamath River at the Iron Gate Bridge, at Seiad Valley, and at Orleans from May to November in 2001. Floating weekly average temperatures were lowest at Iron Gate Dam and increased downstream to Orleans. Temperatures exceeded the stress level for salmonids from mid-June to late-September at Iron Gate and earlier at Seiad Valley and Orleans. Data are from the US Fish and Wildlife Service. See Info links for more information.

Floating Weekly Average Temperature of Klamath River at 3 Sites 2001



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